BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 2056

In the Matter of PACIFIC POWER Transportation Electrification Plan.	Comments

Introduction
Staff appreciates the work Pacific Power (PacifiCorp or the Company) put into this Transportation Electrification (TE) Plan (the Plan) for 2023-2025. In these comments, Staff will:

- Discuss the procedural schedule of this docket,
- Provide a brief background to electric company TE planning in Oregon,
- Summarize the Company's Plan,
- Summarize the state of the electric vehicle (EV) market in the Company's service territory,
- Discuss the Company's estimate of charging infrastructure need,
- Discuss the Company's benefit/cost analysis,
- Discuss the Company reporting on portfolio performance areas,
- Discuss the Company's impact on the competitive market, and
- Discuss the Company's four infrastructure measure applications.

When Staff finds that additional information is required, we make specific recommendations for Pacific Power's Reply Comments.

Procedural Schedule
The next events for this docket are displayed in Table 1 below.

Table 1: UM 2056 Procedural Schedule

Time	Description
May 5	Pacific Power reply comments due
May 19	Utility final TE Plan filed
May 30	Staff Report filed
June 16	Comments on Staff Report due
July 11	Public hearing and Commissioner work session

If the July 11, 2023 Public Meeting (PM) has insufficient time for Commissioner deliberation, Pacific Power's TE Plan will be put on the regular agenda of the July 25, 2023 PM as a Commissioner work session.

Background
Each electric company in Oregon must file a TE Plan for Oregon Public Utility Commission (Commission) acceptance.[1] Pacific Power filed its first TE Plan on February 2, 2020. On September 8, 2022, the Commission adopted new Division 87 rules,[2] which prescribe the required elements of transportation electrification plans. On February 14, 2022, Pacific Power filed a draft TE Plan under the new rules.

[1] ORS 757.357(3).
[2] See Docket No. AR 654, OPUC, Order No. 22-336, September 8, 2022, p 1.

The objective of the new Division 87 rules is to integrate the electric company's TE actions into one document and to act as a summary of the electric company's investments and activities.[3] The TE Plan must include:[4]

a) A description of current market conditions,
b) A summary of programs and future concepts,
c) A discussion of how the TE Plan advances certain performance area categories,
d) Supporting data and analysis,
e) A discussion of potential impact on competitive EV supply equipment market,
f) Ratepayer impact,
g) A TE Budget, and
h) Any new Program and Infrastructure Measure applications.

At the conclusion of the review of this Plan in UM 2056, the Commission will need to decide whether to accept it. Under the new rules: "Acceptance, or acceptance subject to conditions, shall constitute approval of the electric company's program applications and TE Budget as filed in the TE Plan and its appendices."[5]

Summary of Pacific Power's Plan
The Plan proposes to increase annual TE expenditures from approximately $2 million to approximately $10 million for a total of $30.1 million over the next three years.

Table 2: Annual TE Expenditures by Pacific Power

[END CONFIDENTIAL]

These new expenditures would be distributed over eight activities:

- Commercial EVSE Rebate Pilot,
- Fleet Make-Ready Pilot,
- Grant Programs,
- Managed Charging,
- Outreach and education,
- Residential EVSE Rebate Pilot,
- Public Infrastructure Pilot, and
- Portfolio-wide costs.

[3] OAR 860-087-0020(1).
[4] OAR 860-087-0020(3)-(4).
[5] OAR 860-087-0020(2)(a)

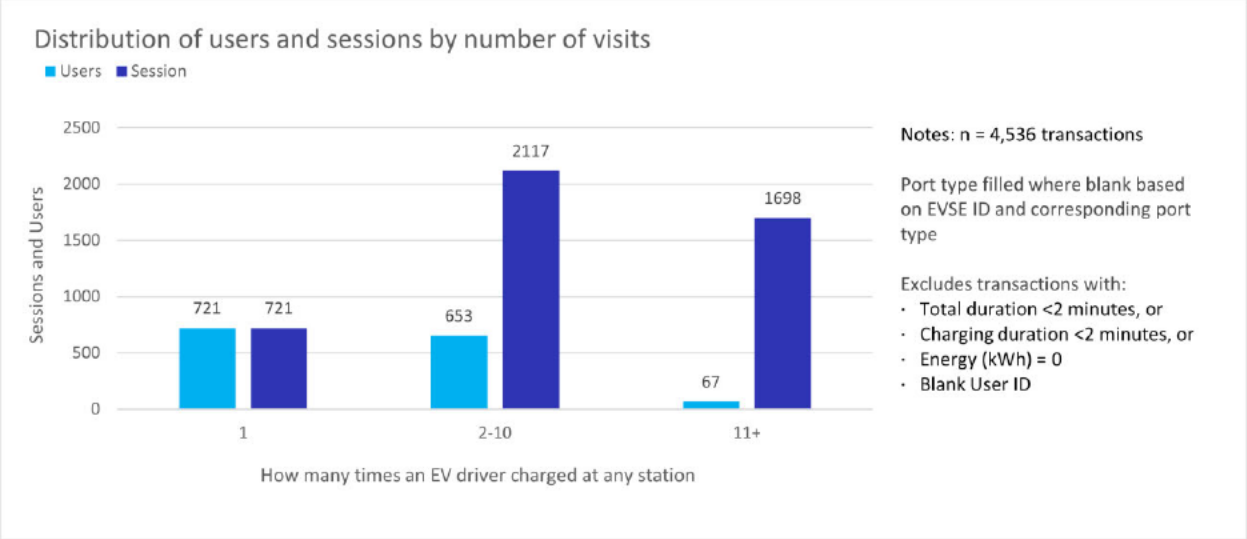
Four are newly proposed infrastructure measures: The Fleet Make-Ready Pilot, Municipal and Community Grant, Residential Managed Charging Pilot, and an expansion of Pacific Power's Company-owned infrastructure pilot.

Of the 345 pages of the Company's filing, about half of it is not searchable. **Staff recommends that, when Pacific Power files a final version for Commission acceptance, the Company make all text searchable.**

EV Market in Pacific Power's Service Territory

The Plan provides a good summary of EV market activity in the Company's service territory. Pacific Power provides helpful depictions of existing usage patterns of charging stations. For example, Figure 1 below is how the Company shows the distribution of charging sessions by user at the five charging stations Pacific Power owns. The light blue bars are the number of charging sessions. The dark blue bars are the number of unique EVs associated with those charging sessions. Pacific Power breaks down the users by EVs that had only one session on the left, EVs with 2-10 sessions in the middle, and EVs with eleven or more sessions on the right. Of the 4,536 charging sessions, almost half of them were transacted by only around five percent of the EVs that visited Pacific Power's public charging stations. This reveals that, for the Company, a small share of EVs account for a significantly disproportionate amount of charging sessions.

Figure 1: Pacific Power's Figure 16 in the TE Plan



This insight raises the question of whether these customers rely entirely on this pilot program for fuel. Staff requested energy outlay data for the top users to investigate this further.[6]

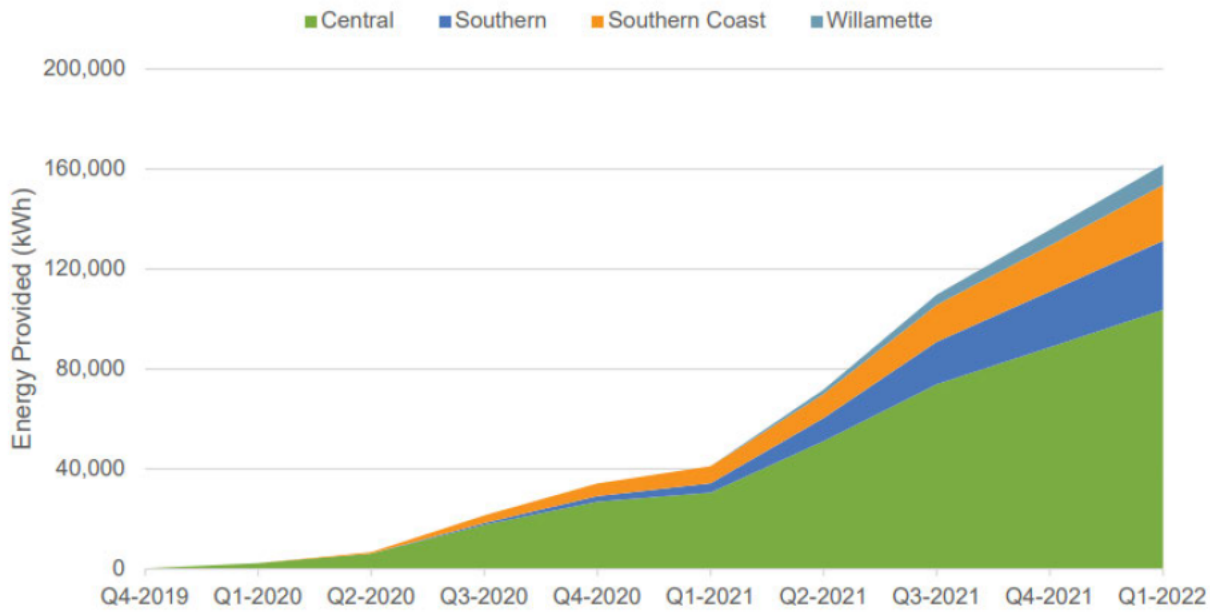
The data suggests **[Begin Confidential]** [redacted]

[6] See Docket No. UM 2056, Pacific Power, Company's Response to OPUC IR 15, March 20, 2023.

[redacted] **[End Confidential]**.[7]

In addition to analyzing the quantity of charging stations, the Plan tracks the growth of energy outlays to public charging stations. Data from both Pacific Power's Company-owned electric vehicle service equipment (EVSE) and other DEQ-listed EVSE show steep growth in energy outlays since 2020.[8] Central Oregon shows the most growth, with Pacific Power's charging site in Bend outpacing the Company's others four locations.

Figure 2: Pacific Power's Figure 11 from the TE Plan



Beyond the growth in energy demand, Staff is looking for how high the demand has grown relative to charging infrastructure capacity. Of charging sites that are separately metered from other commercial load, **Staff recommends that, in Reply Comments, the Company provide the percentage of annual nameplate capacity utilization for the charging site location with the highest capacity utilization in 2022, and a list of sites that had at least one hour in 2022 where more than 75 percent of the charging capacity was in use.**

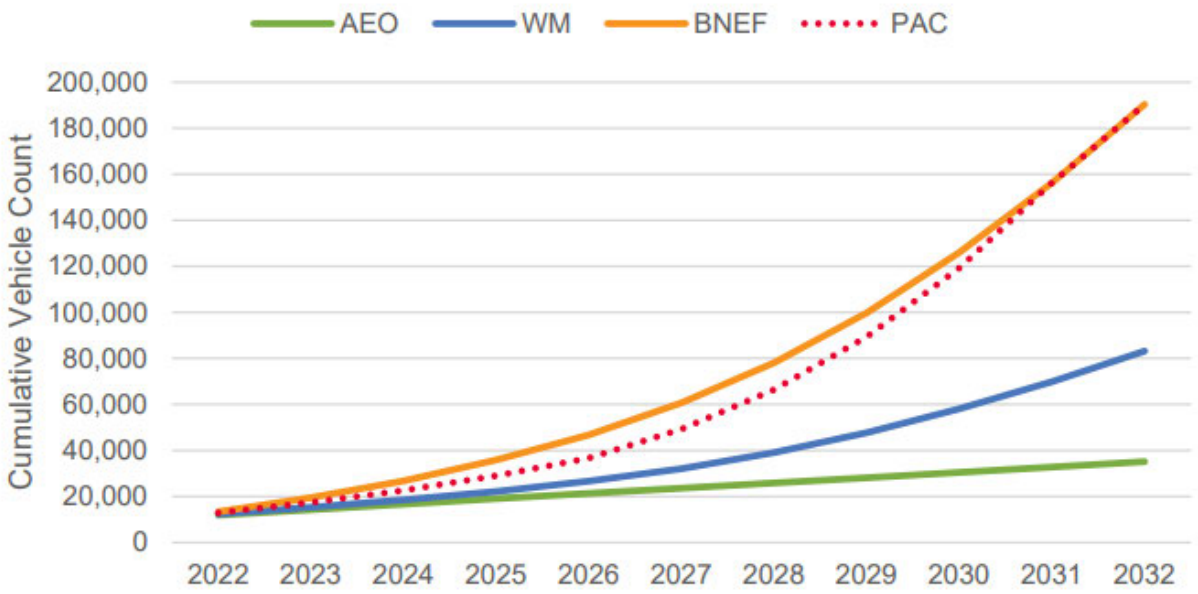
Beyond today's EV market, Pacific Power forecasts significant growth in EV adoption, projecting a range of scenarios. The high scenario uses a growth rate from Bloomberg New Energy Finance (BNEF). The medium scenario comes from Wood-Mackenzie

[7] Attach OPUC 15 CONF ES.xlxs.
[8] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, pp 24-27.

(WM). The low scenario comes from the Energy Information Administration's (EIA) Annual Energy Outlook (AEO).[9]

These scenarios lead to an estimated cumulative number of EVs by 2031 that vary from 31,889 to 152,012 in the Company's service territory.[10] Pacific Power believes the BNEF and WM EV forecasts are most appropriate for planning purposes, given the state's aggressive EV adoption goals and government subsidies promoting EV adoption. The Company then derives the planning case forecast by blending the BNEF and WM growth rates together in the near term and converging the rate to BNEF toward the end of the 2020s.

Figure 3: Pacific Power's Figure 18 in the TE Plan



An exponential shape appears adequate for the timeframe of near-term planning. Since the differences in EV adoption between each scenario do not become particularly pronounced until past 2026, planning for EV infrastructure will have time to reassess if significant deceleration is observed earlier than expected.

Beyond the shape of the EV adoption growth, Pacific Power has changed the method of its forecast. In the 2020 TE Plan, the Company averaged the growth rates of these different sources. Now, the Company is averaging just the top two growth rates, and in the later years, using just the high case. The prior method did slightly underestimate EV adoption. Pacific Power forecasted 13,427 EVs in its service territory by 2022. At the end of 2022, the Company had 14,274.[11] Though an underestimation, Pacific Power's prior forecast was quite close. In changing the forecasting method, the Company is

[9] See Docket No. UM 2198, Pacific Power, Distribution System Plan, August 15, 2022, p 45.
[10] See Docket No. UM 2198, Pacific Power, Company response to OPUC IR 1, October 19, 2022.
[11] Oregon Department of Environmental Quality. *Residential EV Credits for the Second Half of 2022* March 2023, p 3.

essentially assuming that, rather than prove relatively accurate once again, including the AEO growth rate in the average will lead to a significantly larger underestimation.

Infrastructure Need
Pacific Power used the Oregon Department of Transportation's Transportation Electrification Infrastructure Need Analysis (TEINA) to forecast the required buildout of public charging by use case.

Figure 4: Pacific Power's Table 5 in the TE Plan

Port Type	2025 Cumulative Port Needs	Existing EVSE	Remaining EVSE
Workplace L2	839	663	507
Public L2	524		192
DCFC	495	173	322
Total	**1,857**	**836**	**1,021**

The Company makes a good faith effort to forecast charging infrastructure need using the TEINA model, consistent with Staff Guidance.[12] However, Staff observes three issues.

- Workplace charging is not as prevalent as public charging. By equally distributing the quantity existing Level 2 (L2) charging ports, the Company's forecast of net need may underestimate the required number of workplace ports and overestimate the required number of public L2 ports. **Staff recommends that, in Reply Comments, Pacific Power estimate the quantity of workplace charging in the Company's service territory and net out the existing L2 ports with a more accurate distribution.**
- **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.[13] TEINA tapers from 90 percent access to home charging in 2020 to 60 percent in 2035. Assuming **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.[14] Idaho Power changed the access to home charging assumption to 85 percent due to the more rural nature of its Oregon service territory.[15] **Staff recommends that, in Reply Comments, Pacific Power consider whether a different percentage of access to home charging should be assumed.**

[12] See Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, p 7.
[13] See Docket No. UM 2056, Pacific Power, Company response to OPUC IR 16, March 24, 2023.
[14] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, p 10.
[15] See Docket No. UM 2035, Idaho Power, Reply Comments, February 24, 2023, p 3.

- TEINA estimates charging need down to the census tract level. This granularity is particularly important for Pacific Power's TE planning, because the Company's territory is noncontiguous across Oregon. **Staff recommends that, in Reply Comments, Pacific Power present TEINA results by census tract.**

Benefit/Cost Analysis

Staff has reviewed Pacific Power's analysis of the benefits and costs of the Plan. Pacific Power's analysis finds the TE portfolio has a benefit/cost ratio (BCR) of 1.01 under a Ratepayer Impact Measure (RIM) test. Under the Total Resource Cost (TRC) test, which aggregates the net benefit of program participants with ratepayers, the Company finds the portfolio has a BCR of 2.87. Under the Societal Cost Test (SCT), Pacific Power's analysis finds the portfolio has a BCR of 2.99.[16]

Staff finds Pacific Power performed a standard benefit/cost analysis, meeting the requirements of OAR 860-087-0020. However, Staff observes some issues in the Company's analysis.

- Pacific Power did not consider the societal benefits of emission reductions beyond greenhouse gas (GHG).[17] Other pollutants from combustion engines, such as nitrogen oxide, might also provide a net benefit that could raise the SCT's BCR.
- Pacific Power treats EV subsidies from both the State of Oregon and the federal government as benefits in the Company's SCT.[18] Government subsidies are generally excluded from a SCT. Because they are treated as societal costs, they cancel out the program participant's benefit. However, society could be narrowly defined such that subsidies external to that smaller society are treated as a benefit. That analytic choice would require a consistent scoping of benefits. Because Pacific Power uses a global benefit for the social cost of carbon (SCC), either the social entity should be defined globally, or the SCC should be limited to climate impacts in the smaller entity.
- Pacific Power treats credit revenue from Oregon's Clean Fuels Program (CFP) as a benefit.[19] In the RIM and TRC test, CFP revenue, like all external funding, is neither inherently a cost nor a benefit. It can have the effect of reducing costs, but this comes from a reduction in the size of the ratepayer cost in the RIM test and reductions in program participant cost in the TRC test. External funding can be a cost in the SCT, but CFP credit revenue is not. Were the Company to not monetize its allocated credits, DEQ would transfer the credits to another organization, called the Backstop Aggregator. So, the social cost of Oregon's Clean Fuels Program is not impacted by Pacific Power's monetization of CFP credits.
- **[BEGIN HIGHLY CONFIDENTIAL]** [redacted]

[16] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, p 62.
[17] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, pp 62.
[18] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, Table 22.
[19] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, pp 62.

[redacted] **[END HIGHLY CONFIDENTIAL]**.[20]

- Pacific Power includes the same public charging cost in the Plan's SCT as was used in the RIM and TRC costs.[21] In contrast, Idaho Power included the full cost to society for the required charging infrastructure in its SCT. Staff finds Idaho Power's SCT infrastructure cost assumption more reasonable, because a significant amount of charging infrastructure construction cost remains outside Pacific Power's proposed TE Budget. The SCT generally captures all material costs to society.

Beyond the identification of some issues, Staff has no recommendation for Pacific Power on the topic of benefit/cost analysis in this proceeding. Staff's highlight of methodological issues above is only meant to contribute to the conversation that will develop a jurisdictional specific test before the Company files its next TE Plan. Pacific Power has fully met the current requirement in this Plan.

Portfolio Performance Areas

Under the new Division 87 rules, the Plan must provide a "discussion of how programs and infrastructure measures in the TE Plan holistically advance" a list of performance areas.[22] During the AR 654 proceeding, a group of stakeholders and utilities met to prescribe specific metrics. The Commission approved these metrics with minor changes from Staff in Order No. 22-314.[23] Those metrics are listed below after the respective performance area category:

(A) Environmental benefits including greenhouse gas emissions impacts – This requires an assessment of net reductions of GHG and tailpipe emissions. The Plan meets this requirement for GHG emissions.[24] At a minimum, the Staff Guidance also calls for an assessment of the net reduction in particulate matter of 2.5 micrometers ($PM_{2.5}$), sulphur oxides (SO_X), and nitrogen oxides (NO_X). **Staff recommends that, in Reply Comments, Pacific Power present the net reduction of $PM_{2.5}$, SO_X, and NO_X.** Staff has coordinated with other state agencies to develop a broader list of emissions from the combustion of fossil fuels. **Staff recommends that, in Reply Comments, Pacific Power provide the Company's average emission per kWh of total hydrocarbons, carbon monoxide, NO_X, $PM_{2.5}$, PM_{10}, SO_X, volatile organic compounds, benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, mercury, nickel, arsenic, and chromium.**

[20] See Docket No. UM 2056, Pacific Power, Response to OPUC IR 18, March 24, 2023, 2022 TE Oregon_CE_Portfolio HIGHLY CONF.xlxs, Sheet titled "Assumptions", Rows 20-23.
[21] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, pp 62.
[22] OAR 860-087-0020(3)(c).
[23] See Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, Appendix A, pp 9-13.
[24] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, Figure 30.

(B) Electric vehicle adoption – This requires a qualitative description of how the Plan is expected to impact EV adoption. The Plan meets this requirement.[25]

(C) Underserved community inclusion and engagement – This requires the Plan provide a qualitative description of outreach and capacity building for underserved communities. Pacific Power adequately meets this requirement. Staff notes that the Company is performing particularly ground-breaking work in its engagement with Tribal communities. A portion of residential credit revenue from Clean Fuels Program credits has been allocated for a special Tribal-specific grant program. The details of this grant program remain under development as Pacific Power learns the best channels to build a Tribal program.

(D) Equity of program offerings to meet underserved communities requires:

a. The percentage of program-enabled ports by use case located within and/or providing direct benefits and services to underserved communities. The Plan does not include this. **Staff recommends that, in Reply Comments, Pacific Power provide the current percentage of program-enabled ports by use case located within and/or providing direct benefits and services to underserved communities.**
b. Types of electric transportation technology supported by a utility portfolio as a percent of total investments, organized into categories such as micromobility, passenger vehicles, light-duty fleet vehicles, medium- and heavy-duty fleet vehicles, school buses, and transit buses. The Plan does not include this. **Staff recommends that, in Reply Comments, Pacific Power provide the current types of electric transportation technology supported by a utility portfolio as a percent of total investments, organized into categories such as micromobility, passenger vehicles, light-duty fleet vehicles, medium- and heavy-duty fleet vehicles, school buses, and transit buses.**

(E) Distributions system impacts and grid integration benefits requires:

a. Percent of program-enabled charging load that occurs off-peak, by use case. The Plan meets this requirement.
b. Total EV load enrolled in managed charging and potential for managed charging with the estimated percent of EV load enrolled in managed charging. The Plan meets this requirement.

(F) Program participation and adoption requires:

a. Number of program-enabled ports by use case. The Plan meets this requirement.
b. Percent of total public ports by use case within utility service territory that are program-enabled. The Plan does not include this. **Staff recommends that, in Reply Comments, Pacific Power provide the current number of program-enabled ports by use case as a percentage of total public ports.**
c. Number of participants in utility programs, broken down by program and underserved community status. The Plan does not include this. **Staff recommends that, in Reply Comments, Pacific Power provide the**

[25] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 14, 2023, p 17.

current number of program-enabled ports of participants in utility programs, broken down by program and underserved community status.

(G) Infrastructure performance, including charging adequacy, reliability, affordability, and accessibility requires:

a. Price ($/kWh) to charge at program-enabled ports by use case. The Plan does not include this. **Staff recommends that, in Reply Comments, Pacific Power provide the current price ($/kWh) to charge at program-enabled ports by use case.**

b. Uptime at utility-owned and supported ports by use case. The Plan does not provide this. **Staff recommends that, in Reply Comments, Pacific Power provide the uptime during calendar year 2022 at utility-owned and supported ports by use case.**

Impact on the Competitive Market

Pacific Power provides an adequate discussion on how the Plan may impact the market for original equipment manufacturers (OEM). However, the Company did not provide a discussion on the potential impact of the Plan on the competitive market providing charging services to EV operators. This is particularly important, because the Schedule 60 price that EV operators pay at Pacific Power's Company-owned charging stations is less than the cost of the service. **Staff recommends that, in Reply Comments, Pacific Power discusses the Company's potential impact on the competitive market of the EV charging business.**

Ratepayer Impact

Pacific Power provides an analysis of ratepayer impact that finds no impact on rates in the first two years of the plan.[26] In the third year, the Company's analysis finds an expected increase of .04 percent in rates. In OPUC Information Request (IR) 29, Staff has requested the analysis behind this estimate. The Company explains that projections of CFP credit revenue and budget expenditures have since changed. Pacific Power will update the Plan's Table 21 prior to filing a final TE Plan.[27] Staff would like to know if the revenue forecast could be updated as well with a comparison of forecasted revenue with actual revenue collection in the first months of 2023. Reviewing the accompanying workpaper, Staff observes that two different forecasts of System Benefit Charge (SBC) revenue are contained in two different revenue sections. One is called "Funding Source," and the other is called "Collections Summary." **Staff Recommends, in Reply Comments, the Company provide:**

- **The updated CFP and budget numbers with an explanation for the changes,**
- **The most recently approved rates from UE 399,**
- **A comparison of the difference between forecasted revenue collection and observed revenue collection in 2023,**
- **An explanation of why two different forecasts of SBC collection were presented in the Company's response to OPUC IR 29, and**

[26] See Docket No. UM 2056, Pacific Power, Draft TE Plan, February 2023, p 64.
[27] See Docket No. UM 2056, Pacific Power, Response to OPUC IR 29, April 3, 2023, p 1.

- **An explanation of the difference between the Funding Source and the Collections Summary in the Company's response to OPUC IR 29.**

Program and Infrastructure Measure Applications
The Plan includes applications for four infrastructure measures. They are a Fleet Make-Ready Pilot, a Public Utility-Owned Infrastructure Pilot, a Municipal and Community Grant, and a Residential Managed Charging Pilot.

The Fleet Make-Ready Pilot would provide an incentive for charging infrastructure construction behind a nonresidential customer's meter. Pacific Power's analysis finds a RIM test BCR of 0.46, a TRC test BCR of 2.77, and a SCT BCR of 2.84.

This infrastructure measure may have an ancillary benefit Pacific Power does not mention in the Plan. In Staff's engagement with stakeholders, we have learned about a growing concern from the heavy-duty EV manufacturer's perspective: the risk that they may deliver vehicles to customers faster than electric companies can build out distribution system capacity. With Pacific Power invested in the fleet customer's side of the meter, this may create an internal advocate within the utility for projects that might not otherwise get prioritized when labor and materials run short.

The Public Utility-Owned Infrastructure Pilot would expand Pacific Power's ownership of charging sites to distributions system pole-mounted L2 sites. The Company already owns five charging stations. This pilot would expand this ownership in a qualitatively different direction with the ability to better target underserved communities. Pacific Power's analysis finds a RIM test BCR of 0.46, a TRC test BCR of 2.02, and a SCT BCR of 2.15.

In reviewing this application, Staff is looking for a discussion of how to adjust Schedule 60's rate to recoup more of the marginal cost of providing charging services. **Staff recommends that, in Reply Comments, Pacific Power provide the marginal cost of the Company's existing five charging stations; the percentage of marginal cost recovered under Schedule 60; and the percentage of the Company's marginal cost expected to be recovered under Schedule 60 at its current rate. Staff recommends that Pacific Power explain how the pilot's expansion of Company-owned infrastructure is expected to alter the percentage of marginal cost that Schedule 60 recovers; what the revenue-maximizing price of Schedule 60 is expected to be; and, after performing this analysis, a fresh proposal for Schedule 60's rate.**

The Municipal and Community Grant would provide an earmarked portion of CFP credit revenue from residential customers toward micromobility and school bus projects. Pacific Power's analysis finds a RIM test BCR of 0.04, a TRC test BCR of 0.39, and a SCT BCR of 0.45. Staff finds this application meets the requirement.

The Residential Managed Charging Program Application would provide incentives to EV owning residential customer to participate in a demand response (DR) program. The Company will control vehicles either via telematics on the vehicle itself or via the Electric

Vehicle Supply Equipment (EVSE) used for charging. Pacific Power's analysis finds a RIM test BCR of 0.15, a TRC test BCR of 0.22, and a SCT BCR of 0.22.

Staff would like to better understand why the Company considers the program's peak hour window wide enough to prevent load shifting to other high loss of load probability (LOLP) hours on PacifiCorp's system. This DR program's peak hours are 5 pm to 9 pm. **Staff recommends that, in Reply Comments, Pacific Power explain how peak hours are derived, such that January mornings from 7 AM to 8 AM and August evenings from 9 PM to 10 PM can reliably receive a shift in charging demand as more households own EVs.**

This concludes Staff's Comments on Pacific Power's TE Plan for 2023-2025. In our review of this Plan, Staff has the following recommendations for the Company's Reply Comments and final TE Plan:

1. **Make all text searchable.**
2. **Provide the percentage of annual nameplate capacity utilization for the charging site location with the highest capacity utilization in 2022 and a list of sites that had at least one hour in 2022 where more than 75 percent of the charging capacity was in use.**
3. **Estimate the quantity of workplace charging in the Company's service territory and net out the existing L2 ports with a more accurate distribution.**
4. **Consider whether a different percentage of access to home charging should be assumed.**
5. **Present TEINA results by census tract.**
6. **Present the net reduction of $PM_{2.5}$, SO_X, and NO_X.**
7. **Provide the Company's average emission per kWh of total hydrocarbons, carbon monoxide, nitrogen oxides, particulate matter of 2.5 micrometers, particulate matter of 10 micrometers, sulfur oxides, volatile organic compounds, benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, mercury, nickel, arsenic, and chromium.**
8. **Provide the current percentage of program-enabled ports by use case located within and/or providing direct benefits and services to underserved communities.**
9. **Provide the current types of electric transportation technology supported by a utility portfolio as a percent of total investments, organized into categories such as micromobility, passenger vehicles, light-duty fleet vehicles, medium- and heavy-duty fleet vehicles, school buses, and transit buses.**
10. **Provide the current number of program-enabled ports by use case as a percentage of total public ports.**
11. **Provide the current number of program-enabled ports of participants in utility programs, broken down by program and underserved community status.**
12. **Provide the current price ($/kWh) to charge at program-enabled ports by use case.**
13. **Provide the uptime during calendar year 2022 at utility-owned and supported ports by use case.**

14. **Discuss the Company's potential impact on the competitive market of the EV charging business.**
15. **Provide an updated ratepayer impact analysis with:**
    - **Updated CFP and budget numbers with an explanation for the changes,**
    - **The most recently approved rates from UE 399,**
    - **A comparison of the difference between forecasted revenue collection and observed revenue collection in 2023,**
    - **An explanation of why two different forecasts of SBC collection were presented in the Company's response to OPUC IR 29, and**
    - **An explanation of the difference between the Funding Source and the Collections Summary in the Company's response to OPUC IR 29.**
16. **Provide the marginal cost of the Company's existing five charging stations, what percentage of that marginal cost Schedule 60 has been recovering, what percentage of the Company's marginal cost Schedule 60 is expected to recover at its current rate, how the pilot's expansion of Company-owned infrastructure is expected to alter the percentage of marginal cost that Schedule 60 recovers, what the revenue-maximizing price of Schedule 60 is expected to be, and, after performing this analysis, a fresh proposal for Schedule 60's rate.**
17. **Explain how peak hours are derived for the Residential Managed Charging Program, such that January mornings from 7 AM to 8 AM and August evenings from 9 PM to 10 PM can reliably receive a shift in charging demand as more households own EVs.**

Dated at Salem, Oregon, this 7th day of April, 2023.

Eric Shierman

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Eric Shierman
Senior Utility Analyst
Energy Resources and Planning Division

CERTIFICATE OF SERVICE

UM 2056

I certify that I have, this day, served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 7th day of April, 2023 at Salem, Oregon

_____

Kay Barnes
Public Utility Commission
201 High Street SE Suite 100
Salem, Oregon 97301-3612
Telephone: (971) 375-5079

UM 2056 Service List

PACIFIC POWER	825 NE MULTNOMAH ST, STE 2000 PORTLAND OR 97232 oregondockets@pacificorp.com
THOMAS ASHLEY GREENLOTS	925 N. LA BREA AVE,, 6TH FL LOS ANGELES CA 90038 tom@greenlots.com
KATE AYRES OREGON CITIZENS' UTILITY BOARD	610 SW BROADWAY STE 400 PORTLAND OR 97205 kate@oregoncub.org
JARED BALLEW CHARGEPOINT	jared.ballew@chargepoint.com
GRAHAM BATES OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY	graham.bates@deq.oregon.gov
NEIL BAUNSGARD THE ENVIRONMENTAL CENTER	16 NW KANSAS AVE BEND OR 97703 neil@envirocenter.org
MARY BRAZELL OREGON DEPARTMENT OF TRANSPORTATION	355 CAPITOL ST NE SALEM OR 97301 mary.brazell@odot.state.or.us
BETSY BRIDGE **(C)** **(HC)** OREGON DEPARTMENT OF JUSTICE	1162 COURT STREET SALEM OR 97301-4520 betsy.bridge@doj.state.or.us
CORY BULLIS FLO	cbullis@flo.com
CAROLINE CILEK GREEN ENERGY INSTITUTE	carolinecilek@lclark.edu
JOSEPH DALLAS PACIFIC POWER	825 NE MULTNOMAH, SUITE 2000 PORTLAND OR 97232 joseph.dallas@pacificorp.com
MATTHEW DEAL **(C)** CHARGEPOINT INC	254 E HACIENDA AVE CAMPBELL CA 95008 matthew.deal@chargepoint.com
EVA DECESARO PORTLAND GENERAL ELECTRIC	eva.decesaro@pgn.com
ANNABEL DRAYTON NORTHWEST ENERGY COALITION	811 FIRST AVE NO. 305 SEATTLE WA 98104 annabel@nwenergy.org
SCOTT DUNBAR **(C)** KEYES & FOX	1580 LINCOLN ST, STE 880 DENVER CO 80203 sdunbar@keyesfox.com

INGRID FISH CITY OF PORTLAND - PLANNING & SUSTAINABILITY	ingrid.fish@portlandoregon.gov
MICHAEL GOETZ OREGON CITIZENS' UTILITY BOARD	610 SW BROADWAY STE 400 PORTLAND OR 97205 mike@oregoncub.org
ERICK KARLEN GREENLOTS	925 N LA BREA AVE LOS ANGELES OR 90038 ekarlen@greenlots.com
GERIK KRANSKY OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY	gerik.kransky@deq.oregon.gov
NICK LENSSEN	nick_lenssen@esource.com
LINDSAY MCCLURE MID-COLUMBIA ECONOMIC DEVELOPMENT DISTRICT	802 CHENOWITH LOOP THE DALLES OR 97058 lindsay@mcedd.org
HANNAH MORRISON PBOT	hannah.morrison@portlandoregon.gov
MASON MURPHY CONFEDERATED TRIBES UMATILLA INDIAN RESERVATION	masonkmurphy@ctuir.org
AMANDA MYERS WEAVEGRID	amanda@weavegrid.com
CORRINE OLSON DAVISON VAN CLEVE	1750 SW HARBOR WAY, STE. 450 PORTLAND OR 97201 coo@dvclaw.com
Share OREGON CITIZENS' UTILITY BOARD OREGON CITIZENS' UTILITY BOARD	610 SW BROADWAY, STE 400 PORTLAND OR 97205 dockets@oregoncub.org
MICHAEL ORMAN OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY	michael.orman@deq.oregon.gov
TYLER C PEPPLE DAVISON VAN CLEVE	1750 SW HARBOR WAY STE 450 PORTLAND OR 97201 tcp@dvclaw.com
MATY SAUTER CITY OF PORTLAND	maty.sauter@portlandoregon.gov
CARLA SCARSELLA PACIFIC POWER	825 MULTNOMAH STREET STE 2000 PORTLAND OR 97232 carla.scarsella@pacificorp.com
ERIC SHIERMAN **(C)** **(HC)** PUBLIC UTILITY COMMISSION OF OREGON	201 HIGH ST SE SUITE 100 SALEM OR 97301 eric.shierman@puc.oregon.gov

MAL SKOWRON **(C)** CHARGEPOINT	254 EAST HACIENDA AVE CAMPBELL CA 95008 mal.skowron@chargepoint.com
ELIZABETH TURNBULL PORTLAND GENERAL ELECTRIC	eturnbull@franklinenergy.com
CORY ANN WIND DEPARTMENT OF ENVIRONMENTAL QUALITY	cory.ann.wind@state.or.us
BRUCE ZIMMERMAN CONFEDERATED TRIBES OF UMATILLA INDIAN RESERVATION	46411 TIMINE WAY PENDLETON OR 97801-9467 brucezimmerman@ctuir.org