ITEM NO. RA1

PUBLIC UTILITY COMMISSION OF OREGON
REDACTED STAFF REPORT
PUBLIC MEETING DATE: May 2, 2023

REGULAR X **CONSENT** ____ **EFFECTIVE DATE** N/A

DATE: April 7, 2023

TO: Oregon Public Utility Commission

FROM: Eric Shierman

THROUGH: Bryan Conway, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: IDAHO POWER COMPANY:
(Docket No. UM 2035)
Acceptance of Transportation Electrification Plan.

STAFF RECOMMENDATION:

Accept Idaho Power Company's 2023 - 2025 Transportation Electrification Plan.

DISCUSSION:

Issue

Whether the Public Utility Commission of Oregon (Commission) should accept Idaho Power Company's (Idaho Power, IPC, or the Company) Transportation Electrification (TE) Plan (the Plan).

Applicable Rule or Law

Division 87 of the Commission's Administrative rules provide the requirements for an electric company TE Plan.[1] The objective of the 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.[2] A TE Plan must include:[3]

a) A description of current market conditions
b) A summary of programs and future concepts

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

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
h) Any new Program and Infrastructure Measure applications.

Commission acceptance of the TE Plan grants approval of the TE Budget.

Analysis

Background
Each electric company in Oregon must file a TE Plan for Commission acceptance.[4] Idaho Power filed its first TE Plan on November 11, 2019. On September 8, 2022, the Commission adopted new Division 87 rules that prescribe the required elements of transportation electrification plans.[5]

On December 23, 2022, Idaho Power was the first electric company to file a draft TE Plan under the new rules. Staff hosted a workshop on January 23, 2023, in which the Company presented the Plan to stakeholders and answered questions. Staff filed Comments on this Plan on February 10, 2023. Idaho Power filed Reply Comments on February 24, 2023, and a revised TE Plan for Commission acceptance on March 10, 2023.

Planned TE Programs
Idaho Power intends to further promote EV awareness in the Company's Oregon service territory through outreach and education. The Company seeks to avoid more costly investments until the technology of EVs makes them more appealing to eastern Oregon consumers. Idaho Power is waiting for improvements in range, larger vehicle size, and availability. The Company states: "In developing its Plan, Idaho Power is balancing its goals of supporting electrification with supporting its customers by ensuring prices stay low and program expenditures do not place an undue burden on its small Oregon customer base."[6]

Broadly, Idaho Power's EV outreach and education will be focused on three things: 1) running events (at least three a year); 2) providing resources to customers; and 3) providing targeted technical assistance. The Company considers these to be the most cost-effective activities in eastern Oregon currently.

[4] ORS 757.357(3).
[5] See Docket No. AR 654, OPUC, Order No. 22-336, September 8, 2022, p 1.
[6] See Docket No. UM 2035, Idaho Power, Transportation Electrification Plan, December 23, 2022, p 15.

The kinds of EV outreach events Idaho Power may conduct can be summarized as:

- An EV display at community events
- Training
- Bill inserts

Beyond general EV education, the Company may conduct events that focus on specialized topics such as: electric school buses, fast charging, or agricultural equipment.

In addition to bill inserts and other marketing materials, the resources Idaho Power plans to provide are an EV-promoting webpage, press releases, and social media ads. In the text of the Plan, the Company provides some examples of its past EV-promoting literature.[7]

The technical assistance Idaho Power plans to provide will consist of provision of dedicated employees providing subject matter expertise for customers. In addition to providing answers via email response and a call center, this TE staff will participate in community planning and provide technical assistance to commercial customers that are interested in transportation electrification. This technical assistance may include:

- Providing information on fleet electrification
- Assisting in the selection of the right capacity of charging
- Providing billing evaluations for proposed projects
- Finding funding opportunities
- Promoting existing public charging infrastructure

Idaho Power cites the electrification of the Mountain Rides Transportation Authority's fleet as an example of the Company's technical assistance in the State of Idaho.

Staff finds Idaho Power's description of planned outreach and education activities is very general. Staff has reached out to the Company to discuss these activities in more detail, to assess how extensive the outreach is planned to be. The Company plans to coordinate with Forth on best practices in reaching consumers in eastern Oregon which Staff supports.

[7] See Docket No. UM 2035, Idaho Power, Transportation Electrification Plan, December 23, 2022, pp 99-116.

TE Budget
Idaho Power has budgeted approximately $15,000 annually for these TE programs.[8]

Table 1: Table 12 from Idaho Power's TE Plan

Anticipated budget for Idaho Power's 2023 – 2025 TE Plan

TASK DESCRIPTION	2023	2024	2025
Admin Staff Labor (O&M)	$8,376	$8,627	$8,886
Admin Staff Business Expense	$650	$675	$700
Marketing	$2,000	$2,100	$2,250
Training, Education, & Workshops	$3,550	$3,650	$4,000
Total	**$14,576**	**$15,052**	**$ 15,836**

This marks a 160 percent increase in annual TE expenditures from the program Idaho Power discussed in the Company's 2019 TE Plan. The prior expenditures, which the Commission approved in UM 1815 were $17,134 spent over the course of three years.[9]

EV Market in Idaho Power's Oregon Service Territory
The Plan reports 42 total EVs registered in Idaho Power's Oregon service territory as of June 2022. Of those vehicles, 29 were battery electric vehicles (BEV) and 13 were plugin hybrid electric vehicles (PHEV). Since then, an additional 43 EVs have been registered as of December 31, 2022.[10]

In the Plan, the Company reports: "interest in transportation electrification continues to be limited in the region of eastern Oregon."[11] Idaho Power bases this conclusion on a July 2022 survey the Company conducted of its Oregon customers via email. Most respondents replied that they are unlikely to purchase an EV, even if the market barriers of price, range, and charging infrastructure were overcome. These survey results are presented in Figure 1.[12] They show less consumer preference for EVs than similar questions from the survey Idaho Power conducted for the Company's 2019 TE Plan.[13]

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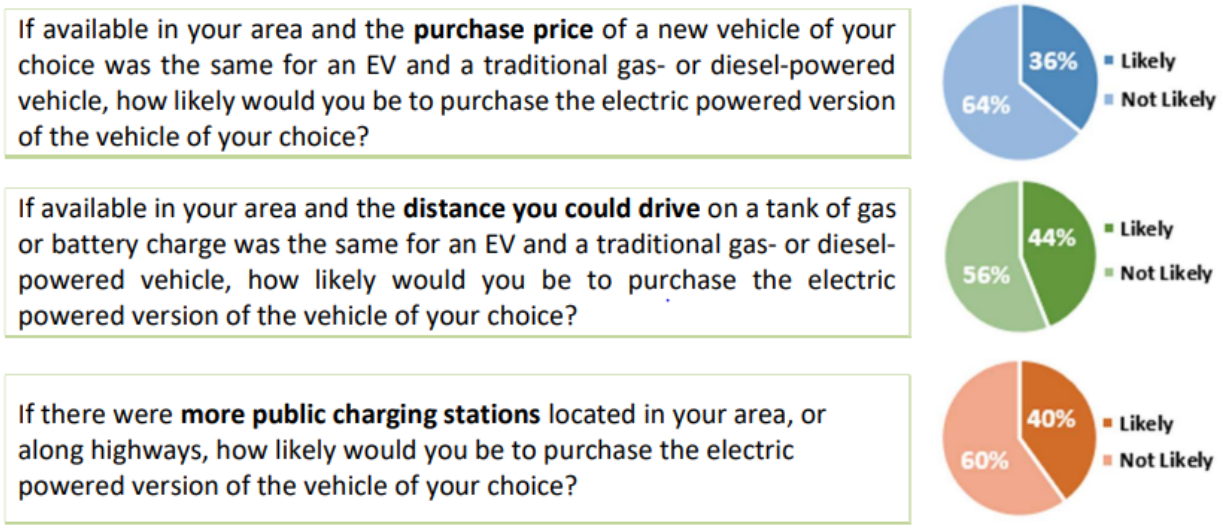
[8] Ibid. p 26.
[9] See Docket No. UM 1815. Idaho Power, Electric Vehicle Awareness & Education Program Evaluation, November 1, 2021, p 9.
[10] DEQ. *Residential EV Credits for the Second Half of 2022* March 2023, Table 1.
[11] See Docket No. UM 2035, Idaho Power, Draft Transportation Electrification Plan, December 23, 2022, p 2.
[12] Ibid. p 2.
[13] Ibid. pp 49-50.

Figure 1:Idaho Power's Survey Results



Another important aspect of the current state of the EV market in Idaho Power's Oregon service territory is the buildout of charging infrastructure and its observed utilization. Six public charging stations are sited in Idaho Power's Oregon service territory providing a combined total of 20 ports, 16 of which are high-speed. Outlay data suggests high-speed charging **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

EV Adoption Forecast

Idaho Power's forecast growth rate of EVs is comparable to both PGE and Pacific Power. Staff had an advanced look at all three electric companies' EV adoption forecast through the distribution system planning (DSP) dockets. IPC used the EV adoption forecast developed for its DSP (UM 2196) for the Company's TE Plan. Idaho Power performed a range of estimates. As shown in Table 1, even the low forecast estimate

[14] UM 2035 - Confidential Attachment 1 - Response to Staff's DR 8 ES.xlsx.

expects the quantity of EVs in Idaho Power's Oregon service territory to compound at double-digit rates through the 2020s.[15]

Table 2: EV Adoption Growth Rates

Year	Low	Base	High
2023	17%	29%	57%
2024	16%	24%	39%
2025	14%	21%	30%
2026	13%	18%	24%
2027	12%	16%	34%
2028	12%	15%	27%
2029	11%	14%	23%
2030	11%	13%	20%
2031	10%	12%	18%
2032	10%	12%	16%

These growth rates lead to a range of 78 to 512 EVs by 2032. Even the high end of Idaho Power's forecast represents a modest amount of EVs. That small number appears to be determined primarily by the small number of existing EVs rather than use of an assumed growth rate that is too low.

Charging Infrastructure Need

Idaho Power used the Oregon Department of Transportation's Transportation Electrification Infrastructure Needs Analysis (TEINA) model to forecast charging need consistent with the Staff Guidance.[16] Idaho Power's modeling finds the current infrastructure buildout exceeds TEINA requirements for the rest of the decade, as shown in Table 3.[17]

Table 3: Idaho Power's Table 6 from the Company's TE Plan

Current Total		Additional Ports Required			Ending Total
Type	**2022**	**2025**	**2030**	**2035**	**2035**
Level 1/2	7	0	0	33	40
DCFC/Corridor	16	0	0	7	23

[15] See Docket No. UM 2196, Idaho Power, Response to OPUC IR 11, October 18, 2022, columns W, X, and Y in the sheet titled "FORECAST."
[16] See Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, Appendix A, p 8.
[17] See Docket No. UM 2035, Idaho Power, TE Plan, March 10, 2023, p 14.

Benefit/Cost Analysis
In comparing the benefits and costs of the Company's TE programs, Idaho Power finds the benefits to exceed the costs for both the program participant (PCT) and ratepayer (RIM). In contrast, Idaho Power found the costs to exceed the benefits from a societal perspective (SCT), with a benefit cost ratio less than one.

Table 4: Table 13 from Idaho Power's TE Plan

Results of benefit/cost analysis

TASK DESCRIPTION	PCT	RIM	SCT
Benefits	$4,196,759	$435,033	$3,028,289
Costs	$1,906,056	$248,947	$3,908,336
Ratio	**2.20**	**1.75**	**0.77**

Consistent with Staff Guidance in UM 2165, Staff does not intend to use the results of benefit/cost analysis as a basis for its recommendation to the Commission on whether to accept Idaho Power's Plan.[18] Instead these comments are intended to continue engagement with electric companies and stakeholders on how to implement this part of the TE investment framework when the next TE plans are filed in 2025.

Staff notes some areas of the Company's analysis may underestimate benefits and underestimate costs. Idaho Power may have underestimated benefits by only including the social cost of GHG emissions. While not all tailpipe pollutants present material social cost from automobiles, reduction of particulate matter of 2.5 micrometers ($PM_{2.5}$) and nitrogen oxides are examples of two emissions with a robust scientific literature from which to estimate a social benefit. Regarding costs, IPC may have underestimated the social cost of federal and state EV subsidies by only treating them as a benefit to the program participant but not canceling them out from the societal perspective as a societal cost. However, in the absence of clear guidance on how to perform this analysis, Staff finds Idaho Power's good-faith application of standard techniques of benefit/cost analysis to be sufficient to meet this requirement for this Plan.

Staff also notes that Idaho Power used a reasonable method of estimating the incremental EV adoption attributable to the Company's Plan. Idaho Power used the difference between the Company's high and medium EV adoption forecast to estimate attribution. Staff finds this simple approach adequate and more reasonable than assuming all new EV adoption in the Company's Oregon service territory will be the result of Idaho Power's Plan.

[18] See Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, Appendix A, p 8.

Portfolio Performance Areas

TE Plans must document how the company's planned portfolio of TE investments and activities advances a set of performance areas and metrics. Idaho Power meets the requirements of the portfolio performance areas and metrics as prescribed by the Division 87 rules and Staff Guidance.[19] Some of the metrics apply only to infrastructure measures, such as utility-owned charging stations, rebates for charging stations, or demand response programs for EV operators. Idaho Power has no infrastructure measures in its proposed 2023-2025 TE Plan, and as such these metrics will not be tracked.

Table 5: TE Portfolio Performance Areas

Performance Area	Metric	How Addressed in Idaho Power 2022-2025 TE Plan
Environmental Benefits including Greenhouse Gas Emissions Impacts	Greenhouse gas (GHG) emission and other air pollution reductions estimated from all EVs registered in a utility service area	• Net reduction in pounds of 2,042 GHG, 228 total hydrocarbons, 3,549 carbon monoxide, and 89 nitrogen oxides • Net increase of 3 pounds of particulate matter of 2.5 micrometers ($PM_{2.5}$) • Note: net increase in $PM_{2.5}$ not necessarily a net social cost due to the remote siting of generation resources
Electric Vehicle Adoption	Qualitative description of the TE Plan's expected impact on EV adoption	• Raise awareness, educate residential customers and support commercial customers, including by reducing range-related barriers • Expects a lag in adoption resulting from these efforts and expects to see increases in adoption rates after the 2023-2025 planning period and NEVI funding is spent

[19] See OAR 860-087-0020(3)-(4); Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, Appendix A, p 9.

Performance Area	Metric	How Addressed in Idaho Power 2022-2025 TE Plan
Underserved Community Inclusion and Engagement	Outreach, capacity building to, and participation of underserved communities, low-income service providers, community-based and community service organizations, non-profit organizations, small businesses (particularly minority and women owned businesses), and Tribes in the development and implementation of a utility TE portfolio	• Entire Oregon service territory underserved, with a significant percentage of non-white customers and customers experiencing below state median income levels • Aims to continue to engage all customer groups through surveys, outreach for workshops and events, leverage existing networks and utilize multilingual customer service to respond to non-English speaking customers
Equity of program offerings to meet underserved communities	Percent of program-enabled ports by use case located within and/or providing direct benefits and services to underserved communities or communities identified using a Commission-approved tool	Not Applicable – for infrastructure measures such as utility-owned charging stations, rebates for charging stations or demand response programs for EV operators
	For transit agencies who have participated in a utility EV program during the portfolio period, the transit agencies' annual service hours, number of routes, and number of routes serving underserved communities, to the extent this information is provided to the utility.	Not Applicable – for transit-related infrastructure measures

Performance Area	Metric	How Addressed in Idaho Power 2022-2025 TE Plan
	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	Not Applicable – for infrastructure measures such as utility-owned charging stations, rebates for charging stations, or demand response programs for EV operators
Distribution system impacts and grid integration benefits	Percent of program-enabled charging load that occurs off-peak, by use case	Not Applicable – requires program-enabled charging
	Total EV load enrolled in managed charging, and potential for managed charging. Estimated percent of EV load enrolled in managed charging	Not Applicable – for infrastructure measures such demand response programs
Program Participation and Adoption	Number of program-enabled ports by use case	Not Applicable – for infrastructure measures such as utility-owned charging stations, rebates for charging stations, or demand response programs for EV operators
	Percent of total public ports by use case within utility service territory that are program-enabled	Not Applicable – see above
	Number of participants in utility programs, broken down by program and underserved community status	100 percent of participants in the Company's outreach and education program are considered underserved communities
Infrastructure performance including charging adequacy, reliability, affordability, and accessibility	Price ($/kWh) to charge at program-enabled ports by use case	Not Applicable – for infrastructure measures such as utility-owned charging stations, rebates for charging stations, or demand response programs for EV operators

Performance Area	Metric	How Addressed in Idaho Power 2022-2025 TE Plan
	Uptime at utility-owned and supported ports by use case	Not Applicable – see above

Ratepayer Impact
Idaho Power plans for the 2023-2025 TE Budget to have no impact on rates.

Conclusion

Staff recommends the Commission accept Idaho Power's TE Plan. The Plan meets the requirements of OAR 860-087-020. Staff finds the proposed TE Budget is reasonable under the new TE investment framework.

PROPOSED COMMISSION MOTION:

Accept Idaho Power Company's 2023 – 2025 Transportation Electrification Plan.