# BEFORE THE PUBLIC UTILITY COMMISSION

# OF OREGON

UM 2035

In the Matter of

Idaho Power Company TRANSPORTATION ELECTRIFICATION PLAN

Comments

# Introduction

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

- Identify the background for this filing;
- Summarize the state of the electric vehicle (EV) market in Idaho Power's Oregon service territory;
- Discuss the Company's estimate of charging infrastructure need;
- Summarize the Company's planned TE programs;
- Discuss the Company's estimated emissions reductions;
- Discuss the Plan's impact on underserved communities;
- Discuss the Company's benefit/cost analysis;
- Discus the Plan's impact on rates; and
- Discus how the Plan addresses other performance areas.

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

# Background

Each electric company in Oregon must file a TE Plan for Oregon Public Utility Commission (Commission) acceptance.<sup>1</sup> Idaho Power filed its first TE Plan on November 11, 2019. On September 8, 2022, the Commission adopted new Division 87 rules<sup>2</sup>, which prescribe the required elements of transportation electrification plans. On December 23, 2022, IPC was the first electric company to file a draft TE Plan under the new rules.

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.<sup>3</sup> The TE Plan must include<sup>4</sup>:

- 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
- h) Any new Program and Infrastructure Measure applications.

<sup>&</sup>lt;sup>1</sup> ORS 757.357(3).

<sup>&</sup>lt;sup>2</sup> See Docket No. AR 654, OPUC, Order No. 22-336, September 8, 2022, p 1.

<sup>&</sup>lt;sup>3</sup> OAR 860-087-0020(1).

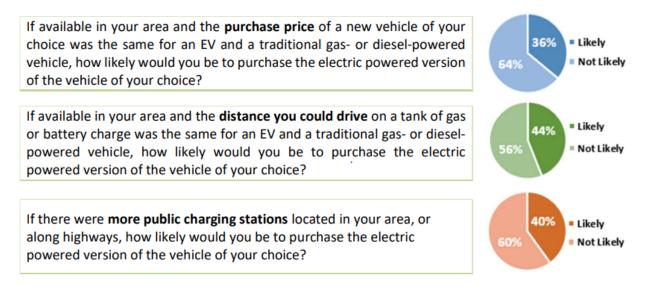
<sup>&</sup>lt;sup>4</sup> OAR 860-087-0020(3)-(4).

# EV Market in Idaho Power's Oregon Service Territory

As of June 2022, 42 EVs were registered in Idaho Power's Oregon service territory. Of those vehicles, 29 were battery electric vehicles (BEV) and 13 were plugin hybrid electric vehicles (PHEV). These were the numbers reported in the Plan. Since then, an additional ten EVs have been registered in the Company's service territory as of October 2022.<sup>5</sup> The Oregon Department of Environmental Quality (DEQ) will report on the final count of EV registrations for 2022 by April of this year.

In Idaho Power's Plan, the Company reports: "interest in transportation electrification continues to be limited in the region of eastern Oregon."<sup>6</sup> IPC bases this conclusion on a July 2022 survey the Company conducted via email of its Oregon customers. 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.<sup>7</sup>

#### Figure 1:Idaho Power's Survey Results



At a workshop on January 23, 2023, several stakeholders inquired about the methods used for this survey, and Idaho Power agreed to share methodological details. In response to this request, the Company states:

TE Workshop Follow-Up: Idaho Power's EV Survey

# <u> 2023 – 2025 TE Plan: EV Survey</u>

Idaho Power modeled the questions in its EV Survey after previous EV surveys that the Company has sent to its Empowered Community [, an online community of Idaho Power customers to gather feedback on customer-related topics through

<sup>&</sup>lt;sup>5</sup> <u>https://www.oregon.gov/energy/Data-and-Reports/Pages/Oregon-Electric-Vehicle-Dashboard.aspx</u>

<sup>&</sup>lt;sup>6</sup> See Docket No. UM 2035, Idaho Power, Draft Transportation Electrification Plan, December 23, 2022, p 2.

<sup>&</sup>lt;sup>7</sup> See Docket No. UM 2035, Idaho Power, Draft Transportation Electrification Plan, December 23, 2022, p 2.

periodic surveys.] The Company felt that this would be a good starting point to compare answers received in previous years to the feedback from this survey. The survey discussed in Idaho Power's TE Plan was sent to all Oregon residential customers for which Idaho Power has an email for. This resulted in about 49 percent of Oregon residential customers receiving the survey. In total, Idaho Power received 673 responses, resulting in a response rate of about 10 percent. Idaho Power did not ask any demographic-related questions in the survey, so cannot report on the overall demographics of the survey respondents.

#### Future Improvements

Based on feedback and discussion at the January 23, 2023 workshop, Idaho Power plans to make two improvements to future EV surveys. In order to ensure the survey reaches more customers, the Company will plan to send a paper survey to customers without an email address. In addition, the Company will provide the survey in both English and Spanish. In order to be able to report on the demographics of the respondents, the Company will include additional questions in the survey designed to collect demographic data.<sup>8</sup>

Collecting reliable survey research can be difficult for a variety of reasons, and a selection bias in the means of communication is a prominent one. In this instance, the survey method may underrepresent the demographics of people who either lack an email address or do not prefer to share one with their electric company. If this skews the results, a likely outcome was to overestimate the openness to buying an EV because both access to digital communication and EV ownership are positively correlated with income.<sup>9</sup> However, we will not be sure until the sampling method is broadened.

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 IPC's Oregon service territory providing a combined total of 20 ports, 16 of which are high-speed.

IPC states that the Company "cannot report on the usage patterns of these charging stations."<sup>10</sup> Through discovery, Staff obtained the outlay data to the two largest of those six sites: Electrify America in Huntington, OR and Tesla in Ontario, OR.<sup>11</sup> These two sites are separately metered from other commercial load, offering a clean data set to monitor usage patterns of all high-speed charging in the Company's Oregon service territory.

<sup>&</sup>lt;sup>8</sup> Idaho Power. Email to the survey list of UM 2035 from Jessi Brady, February 8, 2023.

<sup>&</sup>lt;sup>9</sup> Roberts, Brian et al. *Income Disparities and Nonresponse Bias in Surveys of Patient Experience* Journal of General Internal Medicine, January 31, 2020, p 35;

Lee, J. H., Hardman, S. & Tal, G. Who is buying electric vehicles in California? Characterizing early adopter heterogeneity and forecasting market diffusion Energy Research Social Science 2019, p 55.

<sup>&</sup>lt;sup>10</sup> See Docket No. UM 2035, Idaho Power, Draft Transportation Electrification Plan, December 23, 2022, p 10.

<sup>&</sup>lt;sup>11</sup> See Docket No. UM 2035, Idaho Power, Response to OPUC IR 8, January 31, 2023.

# Outlay data suggests high-speed charging [BEGIN CONFIDENTIAL]

Beyond capacity utilization, another important use of outlay data is to monitor the load shape of public charging. Staff requests that, in Reply Comments, Idaho Power compare the averaged load shape of charging at these two sites in 2022 with the assumed load shape for charging the Company used in benefit/cost analysis.

# 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 dockets. IPC used the EV adoption forecast developed for UM 2196. The Company performed a range of estimates. As shown in Table 1, even the low forecast estimate expects the quantity of EVs in Idaho Power's Oregon service territory to compound at double-digit rates through the 2020s.<sup>12</sup>

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%

#### Table 1: EV Adoption Growth Rates

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, but that small number appears to be more determined by the small number of existing EVs than having too low of an assumed growth rate.

<sup>&</sup>lt;sup>12</sup> 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."

# Charging Infrastructure Need

While even the Company's high forecast scenario predicts only 512 EVs registered in Idaho Power's Oregon service territory by 2032, local EVs are not the only drivers of infrastructure need. Idaho Power's Oregon service territory has three Alternative Fuel Corridors passing through: the I84, U.S. Rout 20, and U.S. Rout 26.

Idaho Power used the TEINA model to estimate infrastructure need. Inputting the Company's EV adoption forecast and local income, IPC found that Mahler County currently has enough direct current fast charger (DCFC) through 2035.

#### Table 2: Idaho Power's Table 5 from the Company's TE Plan

	Current Total		Additional Ports Required		
Туре	2022	2025	2030	2035	2035
Workplace	0	0	5	14	19
Public	3	0	0	7	10
DCFC	8	0	0	0	8

#### Starting Forecast Results

\*Ending total excludes corridor charging

However, IPC did not estimate the charging infrastructure needed to fuel the passage of EVs through the Company's Oregon service territory. In advance of the Company's TE Plan workshop on January 23, 2022, Staff notified the Company of this discrepancy. At the workshop, Idaho Power included the port estimates from TEINA's corridor model. This resulted in the estimated need for DCFC ports to increase by 16.

In the general inputs for TEINA, Idaho Power assumes only 60 percent of the Company's EV-owning customers will have access to home charging in 2035.<sup>13</sup> That default setting for all of Oregon may not be appropriate for a rural setting. TEINA starts at 90 percent and tapers down to 60 percent to capture EV adoption among residents that lacks off-street parking. **Staff requests that, in Reply Comments, Idaho Power consider whether a higher percentage of off-street parking should be assumed**.

A final issue in Idaho Power's use of TEINA is the scope of the territory modeled. The Company performed the infrastructure assessment only for Mahler County. This has two unfortunate consequences. First, it leaves out Electrify America's 8 DCFC ports in Baker County. Second, in addition to not covering all of Idaho Power's Oregon service territory, using the county estimates rather than TEINA's census tract estimates loses spatial granularity. Staff requests that, in Reply Comments, Idaho Power present TEINA results using the census tract estimates.

<sup>&</sup>lt;sup>13</sup> See Docket No. UM 2035, Idaho Power, Response to OPUC IR 7, January 31, 2023, Attachment 1, Cell H10 in the sheet titled "Inputs."

# Planned TE Programs

Idaho Power intends to further promote EV awareness in the Company's Oregon service territory through outreach and education. IPC seeks to avoid more costly investments until the technology of EVs makes them more appealing to eastern Oregon consumers, such as 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."<sup>14</sup>

Broadly, IPC's 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.

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 IPC's past EV-promoting literature.<sup>15</sup>

The technical assistance IPC plans to provide will consist 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.

<sup>&</sup>lt;sup>14</sup> See Docket No. UM 2035, Idaho Power, Transportation Electrification Plan, December 23, 2022, p 15.

<sup>&</sup>lt;sup>15</sup> See Docket No. UM 2035, Idaho Power, Transportation Electrification Plan, December 23, 2022, pp 99-116.

# Idaho Power has budgeted around \$15 thousand a year for these TE programs.<sup>16</sup>

#### Table 3: 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

Idaho Power's description of planned outreach and education activities is very general. Staff notes that Forth is participating in this docket. Forth is DEQ's Backstop Aggregator for Oregon's Clean Fuels Program, meaning that Forth monetizes unclaimed credits to fund EV outreach. This includes the credits generated from EVs owned by residential customers in IPC's service territory. Staff sees an opportunity for specific ideas to emerge from the public review of this Plan and the potential for further engagement with stakeholders like Forth to come up with creative ways to promote the adoption of electricity as a motor fuel in eastern Oregon.

#### Emissions

Idaho Power uses the Oregon Department of Energy's (ODOE) estimates of greenhouse gas (GHG) emission reductions from electric vehicles. ODOE compares the difference in annual GHG emissions from a Hyundai Kona's standard drive train with that model's EV version. Using the Kona as a proxy, this estimates the average annual GHG savings to be 7,996 pounds of carbon dioxide equivalents (CO2e) per BEV. Idaho Power assumes no emissions reduction from PHEVs.

Staff appreciates that Idaho Power not only estimates CO2e emissions reductions but reductions in non-GHG exhaust emissions as well. Getting a better quantification of the societal benefit of all emission reductions from transportation electrification is a detail that Staff will be focused on for all three electric companies.

Idaho Power presents reduced emissions from a variety of criteria pollutants, break wear, and tire wear. Staff finds this to be a good start.

<sup>&</sup>lt;sup>16</sup> See Docket No. UM 2035, Idaho Power, Transportation Electrification Plan, December 23, 2022, p 26.

#### Table 4: Table 11 from Idaho Power's TE Plan

Emissions from average light duty vehicle	Grams/ Mile <sup>22</sup>	Grams/ Year	Reductions from 29 BEVs (Grams)	Reductions from 13 PHEVs (Grams)	Total lbs. Reduced
Total Hydrocarbons (HC)	0.25	2,901	84,116	n/a	185.44
Exhaust CO	3.81	44,051	1,277,493	n/a	2,816.39
Exhaust NOx	0.16	1,814	52,614	n/a	115.99
Exhaust PM2.5	0.00	46	1,340	n/a	2.96
Brake wear PM2.5	0.00	35	1,005	450.68	3.21
Tire wear PM2.5	0.00	12	335	150.23	1.07

Transportation emissions reductions in Idaho Power's Oregon service area

\* Average miles/vehicle per year in 2022: Oregon 11,556<sup>23</sup>

Staff has three observations from this helpful table in the Plan. First, PHEVs are assumed to provide no reduction in emissions. That is a conservative estimate that could benefit from further scrutiny, such as the average difference in fuel economy between a PHEV and the average combustion engine as well as the average percentage of vehicle miles traveled (VMT) fueled by electricity.

Second, Staff has seen no evidence that EVs produce less particulate matter of 2.5 microns (PM2.5) emissions from brake and tire ware. **Staff requests that, in Reply Comments, Idaho Power provide the basis to support the claim that EVs reduce emissions from brake and tire wear.** In discussions with the Company, Idaho Power has become less sure electrification will provide a net reduction, but this possibility is worth considering if it can be supported with evidence.

Third, Idaho Power presents a full reduction of four additional pollutants (total hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and exhaust PM2.5), However, Idaho Power's system of power plants emits these pollutants as well. Staff would like to see the net reduction in emissions.

Understanding both the GHG and tailpipe emission reductions from transportation electrification requires a comparison of the average emissions per mile of combustion engines and the average emissions per mile of EVs from the electricity generated from power plants. Idaho Power already reports the Company's carbon intensity to DEQ. This allows for a more general comparison than ODOE's use of the Kona as a proxy. Idaho Power's system emits 0.000333 metric tons of CO2e per kWh (MTCO2e/kWh).<sup>17</sup> A 2023 Chevy Bolt has a fuel economy of 3.9 miles per kWh. Therefore, fueling on Idaho Power's electricity, which includes coal plants, one mile still emits only 0.000085 MTCO2e. That is substantially less than a 2023 Toyota Prius which has a fuel economy of 57 miles per gallon.<sup>18</sup> The combustion of one gallon of gasoline emits 0.008887

<sup>&</sup>lt;sup>17</sup> See Docket No. UM 2035, Idaho Power, Response to OPUC IR 3, January 31, 2023, p 1.

<sup>&</sup>lt;sup>18</sup> <u>https://www.toyota.com/prius/</u>

MTCO2e.<sup>19</sup> Thus, the Prius emits .0001559 per mile, almost twice that of the Bolt. Even when charging from electric systems with a significant mix of fossil fuels, EVs generally reduce GHG emissions.

While GHG emission reduction from EVs is demonstrably robust, Staff would like to know if the same principle holds for tailpipe emissions. To make this comparison, we would need to know the intensity per kWh from the other pollutants beyond GHGs.

Staff requested this metric in OPUC IR 3. Idaho Power needed more time to provide this information than the two-week response of an information request. Staff met with Idaho Power on January 31, 2023 to discuss how this metric can be estimated.

Because the Company already reports GHG intensity to DEQ, the most difficult analytic problem has already been solved: estimating an average resource mix for an average unit of energy. The Company has sought guidance on how to estimate the portion of 10-15 percent of load that is met from market purchases. Staff does not ask IPC to apply more rigor toward estimating these emissions from market purchases than is already required for GHG reporting. DEQ requires a default emissions factor of 0.000428 metric tons of CO2e per kWh, which is the emissions associated with a gas plant.<sup>20</sup> Idaho Power could use the same resource assumption to estimate pollutants beyond carbon dioxide. Or, if the Company prefers, IPC could estimate emissions based on a reasonable estimate of the average resource mix associated with market purchases. With this clarification on market purchases, Staff recommends that, in Reply Comments, Idaho Power provide the Company's average emission per kWh of total hydrocarbons, carbon monoxide, nitrogen oxides, particulate matter of 2.5 microns, particulate matter of 10 microns, sulfur dioxide, volatile organic compounds, benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, mercury, nickel, arsenic, and chromium.

# Equity

Idaho Power's entire Oregon service territory falls within the definition of underserved communities for TE investments under Oregon law.<sup>21</sup> However, looking for gaps within those communities remains important. Measuring the distribution of charging infrastructure build out can identify locational gaps. By modeling charging infrastructure need in TEINA using census tracts rather than county, the added granularity allows a comparison of which census tracts have a higher buildout of charging infrastructure as a percentage of the estimated need. Census tracts with significantly lower percentages could indicate less access to public charging. **Staff recommends that, in Reply Comments, Idaho Power compare each census tract in the Company's Oregon service territory by the percentage buildout of current charging needs.** 

# 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

<sup>&</sup>lt;sup>19</sup> https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle

<sup>&</sup>lt;sup>20</sup> https://www.oregon.gov/deq/ghgp/Documents/HB2021EFGuidance.pdf

<sup>&</sup>lt;sup>21</sup> See Oregon Laws 2021, chapter 95 Section 2(6)(b), compiled as a note after ORS 757.357 (2021).

(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 5: Table 13 from Idaho Power's TE Plan

#### Results of benefit/cost analysis

TASK DESCRIPTION	РСТ	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, we do not intend to use the results of benefit/cost analysis as a basis for our recommendation to the Commission on whether to accept Idaho Power's Plan.<sup>22</sup> Instead these comments are intended to continue our 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 criteria pollutants present material social cost from automobiles, PM2.5 and nitrogen oxides are examples of two tailpipe emissions with a robust scientific literature from which to estimate a 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 that 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.

# Rate Impact

Idaho Power did not perform a rate impact analysis. Perhaps the relatively small size of the Company's 2023-2025 TE Budget will be immaterial to rates, and the benefit/cost ratio greater than one from the Company's RIM test confirms this. **Staff recommends** 

<sup>&</sup>lt;sup>22</sup> See Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, Appendix A, p 8.

# that, in Reply Comments, Idaho Power confirm Staff's conclusion, that the Plan will be *de minimis* to rates.

# Other Performance Areas

The Performance Areas are a part of the TE investment framework developed in UM 2165 that highlight specific aspects of the electrification of transportation that are important to stakeholders.<sup>23</sup> In AR 654, the performance areas were included in the administrative rules for both the TE Plan and the TE Plan Report.

Staff has already discussed the Plan's coverage of four of the seven performance areas:

- environmental benefits including greenhouse gas emissions impacts,
- electric vehicle adoption,
- underserved community inclusion and engagement, and
- distribution system impacts and grid integration benefits

Staff has not yet discussed Idaho Power's coverage of the other three:

- equity of program offerings to meet underserved communities,
- program participation and adoption, and
- infrastructure performance including charging adequacy, reliability, affordability, and accessibility.

Stakeholders developed specific metrics for the performance areas, and these three were narrowly prescribed with metrics applying only to infrastructure measures. Idaho Power covered these topics by explaining that the Company does not currently run infrastructure measures in Oregon.<sup>24</sup> Given the metrics from the Staff Guidance, Staff finds Idaho Power has sufficiently covered these three areas.

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

- 1. Compare the averaged load shape of charging at these two sites in 2022 with the assumed load shape for charging the Company used in benefit/cost analysis.
- 2. Consider whether a higher percentage of off-street parking should be assumed than TEINA's default setting of 60%.
- 3. Present TEINA results using the census tract estimates.
- 4. Provide the basis to support the claim that EVs reduce emissions from brake and tire wear.
- 5. Provide the Company's average emission per kWh of total hydrocarbons, carbon monoxide, nitrogen oxides, particulate matter of 2.5 microns, particulate matter of 10 microns, sulfur dioxide, volatile organic compounds, benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, mercury, nickel, arsenic, and chromium.

<sup>&</sup>lt;sup>23</sup> See Docket No. UM 2165, OPUC, Order No. 22-314, August 26, 2022, Appendix A, pp 9-13.

<sup>&</sup>lt;sup>24</sup> See Docket No. UM 2035, Idaho Power, TE Plan, December 23, 2022, pp 24.

- 6. Compare each census tract in the Company's Oregon service territory by the percentage buildout of current charging needs.
- 7. Confirm whether the Plan will be *de minimis* to rates.

Dated at Salem, Oregon, this 10<sup>th</sup> day of February, 2023.

Eric Shierman

Eric Shierman Senior Utility Analyst Energy Resources and Planning Division