

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: May 5, 2020**

REGULAR  CONSENT  EFFECTIVE DATE May 5, 2020

**DATE:** April 27, 2020

**TO:** Public Utility Commission

**FROM:** Eric Shierman

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

**SUBJECT:** OREGON PUBLIC UTILITY COMMISSION STAFF:  
(Docket No. UM 2035)  
Recommendation on acceptance of Idaho Power Company's  
Transportation Electrification Plan.

**STAFF RECOMMENDATION:**

Accept Idaho Power Company's (Idaho Power or Company) Transportation  
Electrification Plan (Plan) as having met the requirements of OAR 860-087-0020.

**DISCUSSION:**

Issue

Whether the Public Utility Commission of Oregon (Commission) should accept Idaho  
Power's Transportation Electrification Plan.

Applicable Rule

On April 16, 2019, the Commission issued Order No. 19-134, prescribing the required  
elements of utility transportation electrification plans (TE Plans). These elements were  
adopted as OAR 860-087-0020(3), under which utilities must report:

- a) Current condition of the transportation electrification market in the electric  
company's Oregon service territory, including, but not limited to:
  - A) A discussion of existing state policies and programs;

- B) Market barriers that the electric company can address and the barriers that are beyond the electric company's control, including any identified emerging challenges to transportation electrification;
  - C) Existing data on the availability and usage patterns of charging stations;
  - D) Number of electric vehicles of various sizes in the utility service territory and projected number of vehicles in the next five years;
  - E) Other transportation electrification infrastructure, if applicable;
  - F) Charging and vehicle technology updates; and
  - G) Distribution system impacts and opportunities for efficient grid management.
- b) A summary of the electric company's transportation electrification program(s) and future transportation electrification concepts and actions in its Oregon service territory. The TE Plan must incorporate project learnings and any other relevant information gathered from other transportation electrification infrastructure investments, programs, and actions to ensure that lessons learned are carried forward;
  - c) A discussion of how the electric company's investments, programs, and actions are expected to accelerate transportation electrification, address barriers to adoption, and extend access to traditionally underserved communities;
  - d) Supporting data and analysis used to develop the TE Plan, which may be derived from elements such as review of costs and benefits, rate design, energy use and consumption, overlap with other electric company programs, and customer and electric vehicle user engagement;
  - e) A discussion of the electric company's potential impact on the competitive electric vehicle supply equipment market, including consideration of alternative infrastructure ownership and business models, and identification of a sustainable role for the electric company in the transportation electrification market;
  - f) A discussion of the current and anticipated electric company system impacts resulting from increased transportation electrification and the electric company's portfolio of actions, how transportation electrification can support the efficient integration of renewable energy, and how the TE Plan is designed to address these system impacts; and
  - g) A discussion of how programs and concepts in the TE Plan relate to carbon reduction goals, requirements and other state programs, including expected greenhouse gas emission reductions based on publicly available metrics.

Under OAR 860-087-0020(2), Commission acceptance of a TE Plan means the Commission finds that a plan satisfies the requirements of this rule and does not constitute a determination on the prudence of the individual actions discussed in the plan. Non-acceptance means that the plan does not meet the rule requirements.

## Analysis

### *Background*

Idaho Power filed its Plan on November 1, 2019. In comments filed on February 14, 2020, Staff sought clarification and additional information in several areas. Two other entities also filed comments on Idaho Power's Plan: PGE and ChargePoint. The Company filed reply comments on March 20, 2020. The Company's reply comments addressed most of Staff's concerns. In this Staff report, we will cover each issue in the order they were raised in Staff's comments.

### *Current Conditions of the Transportation Electrification [TE] Market*

Staff asked Idaho Power to address Commissioner Tawney's observation that the Company's electric vehicle (EV) charger demonstration site is not visible to the PlugShare app.<sup>1</sup> The Company replied: "The site is not open to the public for EV charging."<sup>2</sup> Located at Idaho Power's corporate headquarters, the purpose is for educational display, employee workplace charging, and fleet charging. The Company added that: "Idaho Power is willing to list the demonstration site on the PlugShare app with the "Restricted Use" label if the Commission so desires."<sup>3</sup>

### *Existing State Policies and Programs*

Commission Order No. 17-250 did not order Idaho Power to participate in Oregon's Clean Fuels Program (CFP). Instead the Commission ordered Staff to "work with Idaho Power to determine the necessity and extent of its participation in the CFP."<sup>4</sup>

Staff sees Idaho Power's TE Plan as the best mechanism to work with the Company on determining what conditions would determine the necessity and extent of Idaho Power's CFP participation. In our comments, Staff sought the Company's planning perspective on the right threshold of EVs in Idaho Power's Oregon service territory that would justify joining PGE and PacifiCorp in running CFP plans. In reply comments, the Company stated: "Idaho Power's participation in the Clean Fuels Program is not a matter of meeting a specific number of EVs that would warrant the cost of participation, but more so about the general state of the market and the general lack of interest in EVs in Idaho Power's Oregon service area."<sup>5</sup>

In information requests, Staff sought clarification on what other metrics the Company will be monitoring to assess the appropriateness of participating in Oregon's CFP. In a

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<sup>1</sup> OPUC Public Meeting, January 14, 2020 (timestamp 44:47), available at [https://oregonpuc.granicus.com/MediaPlayer.php?view\\_id=2&clip\\_id=445](https://oregonpuc.granicus.com/MediaPlayer.php?view_id=2&clip_id=445) (comments of Commissioner Letha Tawney).

<sup>2</sup> IPC. *Reply Comments* UM 2035, March 20, 2020, page 1.

<sup>3</sup> *Ibid*, page 2.

<sup>4</sup> OPUC. *Order No. 17-250* UM 1826, July 12, 2017, page 1.

<sup>5</sup> IPC. *Reply Comments* UM 2035, March 20, 2020, page 2.

phone call with Staff, Idaho Power said they were not sure how to reply to the information request, because the Company is not sure of the best data to track the general state of the EV market in its Oregon service territory. Staff suggested the total number of EVs is probably the best proxy for the market.

The Company then responded to Staff's information request by stating:

As explained in Idaho Power Company's ("Idaho Power" or "Company") reply comments, the Company has two primary concerns with participating in the Clean Fuels Program ("CFP"). First, given the current number of electric vehicles ("EV") registered in the Company's Oregon service area, the potential revenue generated from the sale of Idaho Power CFP credits would be less than the incremental costs associated with participation in the CFP. Second, even if CFP credit revenue was higher than the incremental costs associated with participation, Idaho Power's customers have shown little to no interest in the Company's EV programs and offerings.

However, Idaho Power understands Staff's desire to identify a metric for assessing the appropriateness of participating in the CFP. While the Company believes that the most appropriate metric is customer interest in EVs, this metric is difficult to measure. For that reason, Idaho Power will use the number of EVs in the Company's Oregon service area as a metric for assessing the appropriateness of participating in the CFP as a credit generator.<sup>6</sup>

The Company went on to provide analysis on the quantity of EVs in its Oregon service territory that would meet the overhead costs of CFP participation. The number Idaho Power found is 90 percent higher than the 29 EVs Idaho Power had in its Oregon service territory at the end of 2019:<sup>7</sup>

Idaho Power's participation in the CFP will be assessed upon meeting a threshold of 55 EVs registered in the Company's Oregon service area. The Company estimates that 55 EVs would generate enough CFP revenues to cover the administrative costs associated with CFP participation. Idaho Power's estimate, provided below, is based on information provided by the Oregon Department of Environmental Quality ("DEQ") for 2019.

$$55 \text{ EVs} \times 2.45 \text{ credits per EV} \times \$147.95 \text{ per credit} = \$19,936$$

Administrative costs would primarily consist of labor associated with registering as a CFP credit generator, registering as a user of DEQ's CFP Online System, identifying buyers for CFP credits, and completing credit transfer transactions,

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<sup>6</sup> IPC. *Response to Staff IR 1* April 14, 2020, page 1.

<sup>7</sup> ODEQ. "FINAL 2019 EV credits by Utility.xlsx" March 18, 2020.

including contracting with the buyer(s), and submitting the appropriate documentation to DEQ. The Company believes the approximate \$20,000 revenue estimate would be commensurate with the incremental labor associated with participating in the program.

Note, once the Company reaches a threshold of 55 EVs registered in its Oregon service territory it will assess appropriateness of CFP participation. While this threshold is expected to cover overhead expenses, continued designation of the Company's CFP credits to the state aggregator, Forth, may be optimal. Currently, CFP credits generated by EVs registered in the Company's Oregon service area are designated to Forth and used to promote statewide EV education. If customer interest in Idaho Power's EV program and offerings in Oregon has not improved upon reaching the identified threshold, the revenues produced through Idaho Power's CFP credits may be more efficiently used by Forth. The Company will seek to determine this in the future in collaboration with Staff.<sup>8</sup>

Staff now considers this requirement of OAR 860-087-0020 met.

#### *Forecast Number of EVs in the Company's Service Area*

In our comments, Staff sought more detail on how the Company arrived at its assumed growth rate. In reply comments the Company stated it expects the growth of EVs in Idaho Power's Oregon service territory to hold steady at the 13.64 percent rate observed between December 2018 and June 2019.<sup>9</sup> Staff now considers this requirement of OAR 860-087-0020 met.

#### *Future TE Concepts*

In the Plan, the Company mentioned several potential future programs: a residential charging station incentive, rest area electrification, truck stop electrification, and a charging station for TE program events.<sup>10</sup> In our comments, Staff sought the expected timeline and costs for these potential programs if they were ultimately pursued, and how they will be prioritized.

In reply comments, Idaho Power stated:

Given the current state of the EV market in Oregon, and the Company's expected growth rate in local EV ownership, Idaho Power has not determined expected costs or a timeline for implementation. Similarly, the Company has not determined priority of these concepts, but it is likely that a charging station demonstration site and/or a residential charging station incentive would be

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<sup>8</sup> IPC. *Response to Staff IR 2* April 14, 2020, page 1.

<sup>9</sup> IPC. *Reply Comments* March 20, 2020, page 3.

<sup>10</sup> IPC. *Transportation Electrification Plan* November 1, 2019, page 11.

prioritized as these efforts would allow for a continued focus on education, outreach, and home charging, which is where the majority of charging occurs.<sup>11</sup>

Staff does not accept this response. The purpose of a planning document is not solely to describe the current state of the EV market, but also outline the costs and benefits of future utility programs contingent on expected long-term changes in the EV market. However, Staff does not hold this as a reason to recommend non-acceptance of this plan to the Commission. Staff recommends applying to Idaho Power's first TE Plan the same lenience that the Commission applied to PGE's first TE Plan in Order No. 20-047. Staff will expect to see this forward-looking, long-term analysis in Idaho Power's next Transportation Electrification Plan.

#### *Vehicle Technology*

The Plan had an excellent summary of manufacturers' development of electric pickup trucks.<sup>12</sup> In our comments, Staff sought the Company's expectation of how cold weather might affect the range of EVs in its Oregon service territory.<sup>13</sup> The Company replied:

According to the U.S. Department of Energy ("U.S. DOE"), extreme weather – very hot or very cold – impacts range in EVs. The additional heating or cooling needed for passenger comfort requires more energy than moderate temperatures would. Cold batteries also have greater resistance to charging and do not hold a charge as well.

The Company's Oregon service area does experience very cold temperatures in the winter months. The average low temperatures in December, January, and February in Ontario, Oregon are 22 degrees, 23 degrees, and 27 degrees, respectively. In 2019, Ontario, Oregon had a total of 5,163 Heating Degree Days, as compared to 4,165 for Portland, Oregon. These cold winter temperatures likely reduce the range of EVs, which can be particularly troublesome for the Company's customers who often travel long distances between rural areas and to large metro areas. The U.S. DOE states that EV manufacturers are improving temperature-control technology to compensate for some of these temperature issues. For instance, several models are now available with battery heaters or other technology to heat the battery and improve efficiency in cold climates. Idaho Power is hopeful that advanced technology will minimize weather impacts on EV batteries, and reduce one of the many causes of range anxiety.<sup>14</sup>

This will be an important factor for understanding how the value of EVs to Idaho Power's Oregon service territory might differ from other parts of Oregon.

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<sup>11</sup> IPC. *Reply Comments* March 20, 2020, page 6.

<sup>12</sup> IPC. *Transportation Electrification Plan* November 1, 2019, page 11.

<sup>13</sup> OPUC Staff. *Comments* UM 2035, February 14, 2020, page 3.

<sup>14</sup> IPC. *Reply Comments* March 20, 2020, page 7.

### *Lessons Learned*

In our comments, Staff sought more detailed information on the lessons the Company has learned from its outreach programs. In reply comments, Idaho Power answered the question based on its experience with both Oregon and Idaho customers. The Company has found car shows work the best, but “has not been able to find such an event in its Oregon service area.”<sup>15</sup> The Company finds EV educational booths at fairs and concerts less effective, but more so at events with an environmental theme.<sup>16</sup> Idaho Power noted: “The Company has not been able to find any environmentally-friendly themed events in its Oregon service area.”<sup>17</sup> Staff now considers this requirement of OAR 860-087-0020 met.

### *Impact on the Competitive Electric Vehicle Supply Equipment Market*

In our comments, Staff sought more detail on the Company’s understanding of where growing a charging station business with ratepayer funds would be appropriate, and where it would inappropriately crowd out a competitive market of independent suppliers of public charging stations. Idaho Power replied by noting there is no competitive market for charging services in its Oregon service territory:

Because a competitive vehicle supply equipment market does not exist, any use of ratepayer funds to install public charging would be based on need, locational value, customer benefit, etc. To the extent that a competitive vehicle supply equipment market exists in the future, Idaho Power will be cognizant of crowding out this market and will provide updates to the Commission through the Company’s TE Plan.<sup>18</sup>

Staff now considers this requirement of OAR 860-087-0020 met.

### *Carbon Emissions*

The Plan stated: “The current iteration of the Company’s TE Plan is not likely to have a significant impact on Oregon’s carbon reduction goals.”<sup>19</sup> In our comments, Staff asked the Company to report on the expected marginal reduction in emissions.<sup>20</sup> In reply comments Idaho Power stated:

Although charging the battery may increase emissions from the power plant that is generating the electricity, total emissions associated with driving EVs are still typically less than those for gasoline vehicles. A typical EV in the state of Oregon produces 1,943 pounds of CO<sub>2</sub> equivalent emissions per year, compared to the

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<sup>15</sup> IPC. *Reply Comments* March 20, 2020, page 5.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid., page 8.

<sup>19</sup> IPC. *Transportation Electrification Plan* November 1, 2019, page 22.

<sup>20</sup> OPUC Staff. *Comments* UM 2035, February 14, 2020, page 4.

average gasoline-powered vehicle which produces 11,435 pounds of CO<sub>2</sub> equivalent emissions annually. Based on these figures, the current level of EV ownership in Idaho Power's Oregon service area realizes approximately 275,268 pounds, or 137.6 tons, of CO<sub>2</sub> equivalent emissions reductions annually. As discussed previously, Idaho Power expects that EV ownership will increase to 132 EVs by December 2025, which would contribute to 626.5 tons of CO<sub>2</sub> equivalent emissions reductions annually.<sup>21</sup>

Staff now considers this requirement of OAR 860-087-0020 met, but Staff notes, in future TE Plans, we would like the carbon content of Idaho Power's energy to be used in analogous calculations, rather than a typical EV in Oregon.

### *System Impacts*

The Plan stated that the OAR 860-087-0020 requirement to report on the system impacts of transportation electrification was "[n]ot applicable" because "[i]t will be many years before the Company's Oregon service area achieves a level of TE that will materially impact the system."<sup>22</sup> In our comments, Staff sought a description of what level of EV penetration would materially impact Idaho Power's system.<sup>23</sup>

In reply comments, the Company identified three of its transformers approaching maximum capacity, which are expected to require an upgrade in fewer than three years. For reference, Idaho Power identified one, the Jameson substation transformer (JMSNT061), as capable of taking on between 14 and 40 EVs charging during peak hours.<sup>24</sup> Thus, even the more strained transformers could take on most EVs in the Company's Oregon service territory.

Staff thanks Idaho Power for this detailed demonstration. We now consider this requirement of OAR 860-087-0020 met.

### *Stakeholder Comments*

PGE filed comments. PGE considers collaboration with other utilities to be a means to foster a competitive electric vehicle service equipment (EVSE) market. PGE encouraged Idaho Power to support the development of highway rest area charging infrastructure, which would benefit PGE's customers too.<sup>25</sup>

PGE raised an important point. Public charging stations inside a utility's service territory can be very important for EV owners who reside outside that service territory.

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<sup>21</sup> IPC. *Reply Comments* March 20, 2020, pages 8, 9.

<sup>22</sup> IPC. *Transportation Electrification Plan* November 1, 2019, page 22.

<sup>23</sup> OPUC Staff. *Comments* UM 2035, February 14, 2020, page 4.

<sup>24</sup> IPC. *Reply Comments* March 20, 2020, pages 8, 9.

<sup>25</sup> PGE. *Comments* UM 2035 January 8, 2020, page 2.



ChargePoint filed comments. ChargePoint would like to add another barrier to EV adoption to the identified list for Idaho Power's Plan: the capital cost of EVSE. ChargePoint urges Idaho Power to consider offering make-ready infrastructure incentives for public level 2 chargers and DC fast chargers.<sup>26</sup> ChargePoint would also like to see Idaho Power prioritize low and moderate income customers in outreach programs.

Staff considered this barrier implied in the Company's reference to the lack of public charging station availability.<sup>27</sup> Staff thanks ChargePoint for highlighting how the high fixed cost of EVSE helps explain why this infrastructure is scarce.

#### *Reason for Staff Recommendation*

OAR 860-087-0020 requires comprehensive planning for transportation electrification by a regulated utility. In Staff's opinion, parts of Idaho Power's Plan do not rise to the level of planning anticipated by the Commission's rule. However, Staff extends the same recommendation of lenience for Idaho Power's first Transportation Electrification Plan as we supported for PGE.

Staff is convinced Idaho Power has made a good faith effort to disclose its current state of EV planning to the public. The Company has not previously produced some of the analysis required by OAR 860-087-0020. Staff finds the current small size and remaining uncertainty of the EV market as reasonable explanations for Idaho Power's current level of EV planning. Staff expects a more mature EV market in two years and will expect more mature planning from Idaho Power when we review the Company's next TE Plan.

#### Conclusion

After engaging with Staff in the Company's reply comments and information requests, Idaho Power has reasonably met the requirements of OAR 860-087-0020, given the current state of the EV market in Idaho Power's Oregon service territory.

#### **PROPOSED COMMISSION MOTION:**

Accept Idaho Power's Transportation Electrification Plan.

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<sup>26</sup> ChargePoint. Comments UM 2035, February 14, 2020, page 1.

<sup>27</sup> IPC. *Transportation Electrification Plan* November 1, 2019, pages 7, 8.