BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

Avista Corporation d/b/a Avista Utilities 2020 Transportation Electrification Plan.	DOCKET UE-200607

COMMISSION STAFF COMMENTS

September 18, 2020

Table of Contents

Introduction 1
Background and Regulatory Compliance 1
2020 TEP Findings 1
Alignment with Statute and Policy Statement 7
Additional Staff Recommendations 9
Public Comments 9
Closing Remarks 9

Introduction

Avista Corporation (d/b/a Avista Utilities; Avista or Company) provides electric and natural gas service to more than 600,000 customers in Washington, Idaho, and Oregon. Avista filed its 2020 transportation electrification plan (TEP) with the Washington Utilities and Transportation Commission (Commission) on July 1, 2020. The 2020 TEP is the first transportation electrification plan filed by a Washington electric utility since enabling legislation was enacted in 2019. This document provides an overview of the enabling legislation, followed by Commission Staff's (Staff) review of the findings and forecasts in the plan, Staff's suggestions for the Company as it implements its 2020 TEP and prepares to file future TEPs, and a summary of public comments from other stakeholders involved throughout the TEP development process.

Background and Regulatory Compliance

Companies are empowered to file a TEP as outlined in Section 4 of Substitute House Bill 1512 (SHB 1512), which the Washington Legislature passed, and Governor Jay Inslee signed into law on April 23, 2019. The TEP language in SHB 1512 was codified in RCW 80.28.365, which allows but does not require electric utilities to submit an "electrification of transportation plan".[1] The purpose of the plan is to lay out how the utility intends to deploy electric vehicle supply equipment (EVSE) or other "programs, services, or incentives to support electrification of transportation."[2] The plan may also include programs the utility intends to run; anticipated benefits of transportation electrification; and the costs of any programs the utility chooses to run.[3] As required by statute, if the utility elects to submit a plan, the Commission must issue an acknowledgement of the plan within six months of its submission.[4]

The 2020 Avista TEP is the first transportation electrification plan submitted by a Washington utility under RCW 80.28.365. The statute does not specify a process that the Commission should follow when acknowledging a TEP. As such, the Commission elected to treat this plan similarly to an integrated resource plan (IRP), with a public comment period and a Company open meeting presentation prior to the Commission issuing an acknowledgement letter.

2020 TEP Findings

In this section, Staff describes the key findings and planned activities that make up the Avista TEP. The TEP covers the years 2021-2025, after which the Company tentatively plans to submit a new TEP.

[1] RCW 80.28.365(1): "An electric utility…may submit to the commission an electrification of transportation plan…".
[2] *Id.*
[3] *Id.*
[4] RCW 80.28.365(3).

Programs and Activities

The TEP describes Avista's planned transportation electrification activities in several different sectors. These activities are described in brief below.

EVSE Installations and Maintenance

Program description: Approximately 45 percent[5] of Avista's budget outlined in the TEP is reserved for installing new EVSE and providing for "make-ready" installations.[6] Avista proposes 60 new direct-current fast charging (DCFC) EVSEs to be installed, beginning in 2021 and lasting through 2025, along with 25 additional public Level 2 chargers per year. Avista commits to work towards a 50/50 split between utility and third-party EVSE ownership. Accordingly, approximately half of the installations would be owned by the utility, with the balance being make-ready installations that would be owned by third parties.

The plan also calls for an unspecified number of residential, workplace, fleet, and multiple-unit dwelling (MUD) installations, to be installed on a first-come, first-served basis.

Staff perspective: Staff understands this 50/50 split to be aspirational and encourages the Company to continually re-assess whether it is an appropriate target as plan implementation progresses. Avista should discuss in its mid-period report (outlined below) whether this split is still the ideal scenario. Staff is pleased with the Company's intention to continue working with its stakeholders, including the State Department of Transportation, to site DCFC and public charging stations.

Education and Outreach

Program description: The Company's TEP calls for a variety of outreach efforts, including auto dealer outreach and collaboration with peer-to-peer interest groups and other stakeholders. It also contemplates establishing an "EV Experience Center" (Experience Center) and a variety of measures to support drivers using transportation network companies (TNCs) such as Uber and Lyft.

Staff perspective: The TEP does not describe criteria regarding how the Company will determine whether to establish the Experience Center. Staff suggests Avista provide an update on where this project stands in its interim updates. Additionally, the ongoing COVID-19 pandemic may require reimaging how utilities reach their customers. Staff therefore encourages the Company to monitor the effectiveness of its outreach campaign and adaptively manage as necessary, especially if in-person events such as ride-and-drives are no longer feasible.

[5] The plan does not set specific dollar amounts for each activity. Rather, it expresses activity budgets in terms of targeted percentages of the overall budget of $51.5 million. The total annual budget is provided in Table 1 below.
[6] "Make-ready" refers to "the installation and supply infrastructure up to, but not including, the charging equipment." Docket UE-200607, "Transportation Electrification Plan", p. 78 (filed July 1, 2020) (Avista TEP). The customer then procures the equipment itself, collecting a rebate or incentive from utilities or other entities as available.

Community and Low-Income Support

Program description: The Company plans to spend approximately 30 percent of the TEP budget on activities targeted to aid low-income customers and community organizations. Rural communities often fall into this category as well. Activities that fall into this category include providing additional assistance in siting EVSE in places where low-income communities (and the organizations that serve them) can access it; and working with local governments and the Spokane Transportation Collaborative to explore further opportunities with these populations.

Staff perspective: 30 percent of the total budget is significant; as such, Staff requests that Avista develop metrics to:

- assess progress towards this goal, measuring both how the Company focuses its budget on this demographic; and
- assess the effectiveness of activities in providing direct benefits to the targeted customers.

Commercial and Public Fleets

Program description: Avista intends to spend roughly five percent of its TEP budget on commercial and fleet operations, which includes providing information and consultation to customers as they consider fleet electrification. Notably, the Company also plans to work with transit agencies and school districts to develop pilot programs that would support electrification of their fleets. Avista's TEP also introduces an electrified lift truck (forklift) program, which is a sector that has been targeted by other utilities across the nation.[7]

Staff perspective: Given that fleet operators are often guided by total cost of ownership and operation rather than initial costs, Staff agrees that this market segment justifies its own program. Staff is particularly pleased that Avista is pursuing opportunities in transit electrification and believes these types of projects can provide benefits to low-income and highly impacted individuals and communities, such as children and users of public transit.

Planning, Load Management and Grid Integration

Program description: The Avista TEP sets a target of 50 percent peak load reduction from light-duty EVs, with net grid benefits, by 2025. This will initially be accomplished through EV programming and programmable, non-networked EVSE.[8] The TEP also notes the importance of

[7] The TEP cites programs in Jacksonville, Florida; Houston, Texas; and Sacramento, California, as examples. *See* Avista TEP at 63.

[8] "Networked" EVSE are connected to the Internet and "can communicate with the computer system that manages a charging network," which "allows EVSE owners or site hosts to manage who can access EVSE and how much it costs drivers to charge" Avista TEP at 79. Non-networked EVSE have no Internet connection and just provide charging functionality. *Id*.

monitoring the medium- and heavy-duty EV landscape in Avista's territory, as these larger vehicles could have measurable grid impacts sooner than light-duty EVs.

Staff perspective: During its EVSE pilot program, Avista encountered significant communication issues with its networked chargers, causing them to experience significant downtime. Through the pilot, Avista found that, to provide net benefits, the cost to implement managed charging should be no more than $46 per EV per year, which is currently cost prohibitive.[9] Therefore, Staff supports the Company's approach to load management as Avista launches its TEP implementation, but encourages Avista to monitor the networked EVSE landscape and consider shifting strategies should more reliable models come on the market soon. The Company should also monitor how effectively the programmable, non-networked EVSE shifts load. Avista notes in its TEP that it will continue to monitor the networked EVSE landscape and adaptively manage if the technology and costs warrant changes.

Rate Design

Program description: The TEP proposes pilot time-of-use (TOU) rates for both commercial and residential EVSE customers. Avista proposes a commercial TOU pilot first, beginning in 2021, while the residential TOU pilot is anticipated to launch around 2023, after the hardware and software are proven on the commercial side.

Staff perspective: Staff believes this approach to EV load management has potential and looks forward to working with the utility to develop these rate designs.

Utility Fleet Electrification, Facilities and Employee Engagement

Program description: Avista intends to continue transforming its own fleet, while also engaging its employees and providing additional EVSE for employees and guests.

Staff perspective: As with other public and commercial fleet operators, Avista should be able to make vehicle acquisition decisions based on total cost of ownership. In its mid-period report (described under "Analysis and Reporting" below), Staff encourages the Company to track and clearly communicate the cost of EV acquisition and operations relative to internal combustion engine alternatives. Staff presumes that Avista will assign only the incremental added cost of EV adoption, if any, to the EVSE portfolio budget.

Technology and Market Awareness

Program description: Avista contemplates monitoring the vehicle electrification sector to identify opportunities for pilot programs. The Company commits to keeping abreast of

[9] Docket UE-160082, "Electric Vehicle Supply Equipment Final Report", p. 97 (filed October 17, 2019). In the TEP, "managed charging" is defined as allowing a third party (a utility or other party) to enable, disable, or control the power level for charging. Avista TEP at 78.

technological advancements, including medium- and heavy-duty vehicles and bidirectional charging.

Staff perspective: Staff expects that Avista will provide an update on its technology scanning efforts in its TEP mid-period report.

Costs and Benefits

The "Costs and Benefits" section of Avista's TEP details anticipated costs and benefits to the utility from 2021 through 2030.[10] This data has been used to set the TEP budget, with the constraint that the Company may only receive the up to 2 percent additional rate of return allowed under RCW 80.28.360(2), if the EVSE portfolio increases the Company's annual retail revenue requirement by no more than 0.25 percent.[11] The section also outlines benefits to customers from avoided fuel and maintenance, as well as avoided greenhouse gases (GHGs), though the latter does not have a dollar value assigned to it.

Given these constraints, Avista envisions spending $51.5 million from 2021 through 2030 on capital investments and another $12.7 million in operations and maintenance (O&M) expenses. The Company expects to earn $22.9 million in return from the $51.5 million in capital investments (not including O&M) over the same 10-year period. Table 1 below details the anticipated TEP budget.

Table 1: Projected Avista TEP Expenses, 2021-2030

Year	Capital Investments	Allowed Capital Investment Return	O&M Expenses
2021	$2,250,000	$245,400	$650,000
2022	$2,887,500	$535,790	$747,500
2023	$3,620,625	$874,647	$859,625
2024	$4,163,719	$1,233,247	$988,569
2025	$4,788,277	$1,614,555	$1,136,854
2026	$5,506,518	$2,126,422	$1,307,382
2027	$6,332,496	$2,788,434	$1,503,489
2028[12]	$6,332,496	$3,519,512	$1,653,838
2029	$7,282,370	$4,423,257	$1,819,222
2030	$8,374,726	$5,525,567	$2,001,145
TOTAL	**$51,538,726**	**$22,886,830**	**$12,667,625**

[10] Avista includes utility revenues from EV charging as a benefit, as well as benefits to customers in the form of avoided fuel and maintenance savings and avoided greenhouse gas emissions.
[11] RCW 80.28.360(1).
[12] Avista does not intend to increase its capital investments in 2028 to keep the total incremental increase to its annual revenue requirement within the 0.25 percent limit authorized in RCW 80.28.360.

Staff perspective: Staff has reviewed the budget data and finds that it meets the requirements of RCW 80.28.365(b) and (c), is reasonable, and is in the public interest. Staff expects that Avista will provide budget updates in the interim reports described below.

Staff assumes that the costs for the TEP will be recovered in a future general rate case. Staff will review the Company's TEP expenses in that case and takes no other position on prudency in these comments.

Environmental, Economic and Grid Impacts

In the TEP, Avista provides the results of three modeling studies: a grid impact study performed by Avista; a regional (Washington and Oregon) cost-benefit analysis done by Energy+Environmental Economics (E3);[13] and a cost-benefit analysis Avista conducted based on the E3 study specific to its own territory.

Avista's grid impact study analyzed how increased light-duty EV penetration would impact the Company's distribution grid. It modeled three EV adoption rates, the lowest of which (25 percent adoption rate) Avista does not expect to occur until after 2030. The analysis showed that grid impacts would be manageable for at least the next decade, assuming the EV penetration rate does not grow much faster than the Company's projections. At a 25 percent EV adoption rate, only six percent of the Company's residential transformers would be overloaded. Once EV penetrations reach 50 or 100 percent (which is not expected soon), though, transformer overload rates increase, which would require tens of millions of dollars of grid investments.

The E3 cost-benefit analysis showed significant net benefits: "regional"[14] net benefits, for instance, came to $1,941 net present value (NPV) per EV, while from a customer perspective,[15] net benefits were $387 NPV per EV. Finally, the Avista cost-benefit analysis calculated net benefits at $1,661 NPV per EV under the regional perspective, and $1,206 NPV net benefits per EV from a customer perspective. Managed charging would provide additional benefits: In Avista's cost-benefit study, net benefits under the customer perspective rise to $1,669 NPV per EV with managed charging.

---

[13] Energy+Environmental Economics, "Economic & Grid Impacts of Plug-In Electric Vehicle Adoption in Washington & Oregon", March 2017. Available at: https://ackermanmunson.com/wp-content/uploads/2019/06/Economic-Grid-Impacts-of-Plug-In-Electric-Vehicle-Adoption-in-Washington-Oregon.pdf. This analysis looked at five different geographic areas: the combined states of Washington and Oregon, and four utility territories. Avista was not one of those territories; the TEP cites data from the combined Washington and Oregon perspective.

[14] *Id*. at 5. "Regional" in this instance refers to the monetized costs and benefits that flow into Washington and Oregon. The E3 study likens this perspective to a Total Resource Cost test, plus the avoided cost of carbon that results from electricity emitting less carbon than gasoline, which E3 assigns a price of $14.05 per ton.

[15] *Id*. "Customer" in this instance refers to how costs and benefits accrue to ratepayers in rates. The E3 study notes that under this perspective, when benefits exceed costs, ratepayers as a whole benefit as the utility can use that money to reduce rates or make other useful grid investments.

Staff perspective: Staff appreciates the effort put into modeling EVSE impacts, and suggests avenues for future modeling in the mid-period report:

- The modeling conducted thus far looks only at light-duty vehicles, but as the medium- and heavy-duty vehicle sectors move towards electrification, Avista will need to model their impacts as well.
- Incorporate data collected through TEP implementation to the extent possible.
- Include the social cost of greenhouse gasses (SCGHG) with a 2.5 percent discount rate in future modeling. The Clean Energy Transformation Act (CETA) established this metric for utility planning,[16] and Staff believes it would be important to include in TEP modeling.
- To the extent possible, modeling should be informed by the cumulative impact analysis called for by CETA.[17] CETA recognized a public interest in reducing environmental health impacts to "vulnerable populations and highly impacted communities".[18] Vehicle electrification is one way to accomplish this goal. Therefore, the data from the cumulative impact analysis could have significant planning benefit to the TEP.

Analysis and Reporting

The plan envisions three interim reports between 2021 and 2025. A comprehensive mid-period report will be filed in early 2023, which will cover updated adoption figures and forecasts, lessons learned, and updated program activities. Brief year-end reports that outline high-level program activities, expenses, and revenue will be filed in early 2021 and early 2023. Finally, an updated TEP to be filed in 2025 will include a detailed report of the current TEP. Staff appreciates Avista's commitment to reporting and will engage with the Company to track metrics and results.

Stakeholder Engagement, Comments, and Support

The TEP ends with an appendix with 16 letters of support from a variety of stakeholders, including local governments, transit agencies, advocacy organizations, and educational institutions. Most letters express their support for the plan; a few express support while also suggesting some modifications. Staff appreciates the breadth of the outreach that Avista has conducted for its TEP and encourages the Company to continue engaging with this stakeholder group.

Alignment with Statute and Policy Statement

Staff reviewed Avista's TEP and finds that it generally meets the requirements of RCW 80.28.360 and 80.28.365, as well as the policy statement issued by the Commission in June

[16] RCW 80.28.405.
[17] RCW 19.405.140.
[18] RCW 19.405.010(6).

2017.[19] Specific provisions of statute and the policy statement that are addressed in the plan include:

- *Portfolio approach*: The TEP satisfies the policy statement's call for a "portfolio approach" to EVSE services,[20] meaning that utilities should provide multiple charging options for multiple customer sectors. The TEP, building off Avista's pilot program, and envisions charging services for residential and commercial customers; low-income and rural customers; fleets and apartment dwellers; and includes pilot programs and an outreach plan.
- *Load management*: Avista fulfills the policy statement's directive to prioritize load management through, for instance, TOU pilots and the use of programmable charging stations.[21] Staff accepts the load management program in the TEP but urges Avista to continue to monitor opportunities to more directly control EV load.
- *Services to low-income customers*: In its policy statement, the Commission required utilities to provide EVSE services to low-income customers.[22] The Company aspires to spend as much as 30 percent of its TEP budget providing such services to low-income customers. Additionally, Avista has built a stakeholder group that includes several organizations that provide services to low-income customers. As mentioned elsewhere in these comments, Staff requests that Avista develop metrics to track its progress in this sector.
- *Interoperability*: The TEP includes an analysis of interoperability from the hardware, software, and customer experience perspectives, as required by the policy statement.[23]
- *Reporting requirements*: The TEP satisfies the policy statement's requirement of a robust reporting requirement[24] through three interim reports before filing an updated TEP in 2025. Staff approves of the reporting plan and has suggested metrics to report on elsewhere in these comments.
- *Education & outreach*: The TEP satisfies the policy statement's education and outreach requirement[25] with a variety of outreach opportunities. Staff approves of this plan, though notes that the ongoing pandemic may necessitate new approaches to public outreach, so Avista should remain flexible and explore innovative ways to reach its customers.
- *Calculation of costs and benefits*: Avista has done a good job of calculating the costs and benefits of its TEP. Elsewhere in these comments, Staff has requested that the Company explore including the SCGHG as part of its mid-plan modeling in 2023.

---

[19] Docket UE-160799, "Policy and Interpretive Statement concerning Commission Regulation of Electric Vehicle Charging Services", (filed June 14, 2017). Part 1 of the policy statement is largely concerned with topics applicable to general rate cases and tariff filings. In its TEP, Avista does not address these topics; tariff filings will follow approval of the plan. Staff will analyze both tariff filings and rate cases considering the provisions of the policy statement but does not directly address them in these comments.
[20] *Id*. at 33.
[21] *Id*. at 35.
[22] *Id*. at 37.
[23] *Id*. at 39.
[24] *Id*. at 40.
[25] *Id*. at 41.

- *Grid impacts and system reliability*: RCW 80.28.365(2) calls out impact on load and system reliability as two items the Commission may consider when reviewing a TEP. The grid study Avista provides is solid and shows little risk of grid impacts in the immediate future. Staff suggests several changes regarding future modeling in these comments, including using updated data to the extent possible and modeling medium- and heavy-duty vehicles.

Additional Staff Recommendations

Many of Staff's comments highlight the need for flexibility and adaptive management throughout implementation. These are still the early days in the transportation electrification sector, with much still to learn. Avista has shown admirable flexibility, research, and willingness to work with stakeholders in developing its plan thus far, and Staff urges the Company to change tactics as technology and situations change.

Public Comments

The Commission posted a Notice of Opportunity to File Written Comments in Docket UE-200607 on August 20, 2020, with a comment deadline of September 18, 2020. As of September 16, only one other party, Climate Solutions, had submitted comments.

Climate Solutions' comments were supportive, and the organization urged acknowledgement of the TEP. Climate Solutions had several suggestions for Avista as the Company implements the TEP:

- Remember that plans are iterative and can be reevaluated
- Develop a stakeholder engagement metric
- Look at benefits comprehensively (by including broader social impacts and the SCGHG, for example, and incorporating equity into all programs)
- Further foster and expand community partnerships
- Siting public chargers near multifamily buildings
- Consider potential lease and rebate plan programs for residential customers rather than utility EVSE ownership
- Consider commercial fleet electrification opportunities such as garbage trucks
- Partner with municipalities seeking to electrify their fleets

Closing Remarks

Staff recommends that the Commission issue a letter acknowledging Avista's TEP by Dec. 31, 2020.