Avista Corp.
1411 East Mission P.O. Box 3727
Spokane, Washington 99220-0500
Telephone 509-489-0500
Toll Free 800-727-9170
Via: UTC Web Portal

April 15, 2021

Mark L. Johnson
Executive Director and Secretary
Washington Utilities & Transportation Commission
621 Woodland Square Loop SE
Lacey, WA 98503

Re: Avista's Proposed Electric Transportation Schedule 77 and Commercial Electric Vehicle Rate Schedules 13 and 23

Dear Mr. Johnson,

Attached for filing with the Washington Utilities & Commission (Commission or UTC) is an electronic copy of Avista Corporation's, dba Avista Utilities (Avista or the Company), filing of its proposed revisions to the following tariff sheets, WN U-28:

Second Revision Sheet 77	Canceling	2nd Substitute First Revision Sheet 77
Second Revision Sheet 77a	Canceling	2nd Substitute First Revision Sheet 77a
Second Revision Sheet 77b	Canceling	2nd Substitute First Revision Sheet 77b
Second Revision Sheet 77c	Canceling	2nd Substitute First Revision Sheet 77c
Second Revision Sheet 77d	Canceling	2nd Substitute First Revision Sheet 77d
		Original Sheet 77e
		Original Sheet 13
		Original Sheet 13a
		Original Sheet 13b
		Original Sheet 23
		Original Sheet 23a
		Original Sheet 23b

The purpose of this filing is to specify the parameters of the Company's proposed Electric Transportation programs, activities, and rates, consistent with the detailed program descriptions

and intent provided in the Transportation Electrification Plan (TEP), acknowledged by the Commission October 15, 2020, Docket UE-200607.

I. BACKGROUND

On April 28, 2016, the UTC issued Order 01 in Docket UE-160882 approving Avista's tariff Schedule 77 for its Electric Vehicle Supply Equipment (EVSE) Pilot Program (EVSE Pilot). The initial two-year installation term of the program began with the first EVSE installation on July 20, 2016.

On June 14, 2017, the UTC issued a Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Stations in Docket UE-160799. The Policy Statement provides background and guiding principles for utility EV charging as a regulated service, and notes that the purpose of Avista's pilot program is to obtain data and experience that will inform future programs and rate designs.

On February 8, 2018 the UTC issued Order 02 in Docket UE-160882 approving Avista's proposed revisions to tariff Schedule 77. This included extending the installation period of the program with additional EVSE installations through June 30, 2019, as well as adding a program benefiting low-income customers and other minor adjustments. The pilot's EVSE installations were concluded in June, 2019, and a final report was completed in October, 2019. A total of 439 EVSE charging ports were installed during the pilot, including AC Level 2 EVSE at 226 residential, 123 workplace, 24 fleet, 20 multiple-unit dwelling, and 39 public locations, and 7 DC fast charging sites. Over 53,000 charging sessions were analyzed to determine EVSE utilization and load profiles, based on different locations and driver types including commuters, non-commuters, and vehicle categories of all-battery (BEVs) and plug-in hybrid (PHEVs).

The primary objectives of the EVSE pilot were to determine (1) light-duty electric EV load profiles, grid impacts, costs, and benefits, (2) how the utility may better serve all customers in the electrification of transportation, and (3) begin to support early EV adoption in its service territories. These objectives were successfully met, with lessons learned and recommendations as stated in the final report:

1. Data and analysis show that grid impacts from light-duty EVs are very manageable over at least the next decade, net economic benefits can extend to all customers, and

significant reductions of greenhouse gas emissions (GGE) and other harmful air pollutants may be achieved with EVs. However, grid impacts and costs resulting from EV peak loads could become significant over longer time horizons, with higher EV adoption, and as other loads and the grid change. The EVSE pilot represents a good start in the Company's ongoing effort to understand how EV loads may be optimally integrated and managed, in an evolving system that brings the most benefit to all customers.

2. Avista was able to cost-effectively install EVSE, resulting in high customer satisfaction, and the pilot correlated with a significant increase in the rate of EV adoption in the area, demonstrating that utility programs can be effective in supporting and enabling beneficial EV growth. Partnerships with industry providers, a focus on providing value for the customer, and contractor performance were keys to success.
3. Workplace charging stands out as a powerful catalyst for EV adoption, while simultaneously providing grid benefits from reduced EV charging at home during the evening peak hours.
4. Low dealer engagement, a lack of EV inventories, and persistent customer awareness and perception issues continue to be a major barrier to mainstream EV adoption in the region. The utility can help overcome these issues with robust education and outreach programs, including dealer engagement.
5. Avista successfully demonstrated the use of EVs to reduce operating costs for a local non-profit and government agency serving disadvantaged customers. The Company expects local stakeholder engagement to continue in the development and expansion of similar programs, as well as other innovative ways to serve communities and low-income customers, consistent with the UTC Policy Statement.
6. Surveys showed a widespread desire for more public AC Level 2 and DC fast charging sites, which may be supported in future utility programs and rate designs. A new rate should be developed to address operational cost barriers resulting from traditional demand charges, while reasonably recovering utility costs.
7. Networked EVSE reliability, uptime, costs, and customer experience are all important opportunities for improvement, reinforcing the importance of utilizing interoperable

networked EVSE. Non-networked EVSE are very reliable and cost effective, and should be utilized wherever possible unless data collection, user fee transactions, remote monitoring, or other requirements necessitate the use of networked EVSE.

8. Load management experiments showed that the utility may remotely curtail residential peak EV loads by 75%, while maintaining customer satisfaction and without a TOU rate or additional incentives other than the installation of the EVSE owned and operated by the utility. More direct load management, or demand response (DR) experimentation may show the feasibility to shift an even higher percentage of peak loads. While EVSE load management utilizing DR technology appears acceptable from a customer perspective, reliability and costs must be significantly improved to attain net grid benefits and enable practical application at scale.
9. Data and analysis were somewhat limited by the available pool of participants and EVSE sites, however results compared well with other studies using larger population samples, and EVSE data was satisfactorily replicated and verified by telematics data. As the industry evolves, light-duty EVs with larger battery packs may become the norm. In this respect, the EV load profiles developed and examined in this study may under-predict electric consumption and peak loads to some degree.

The valuable experience gained from the EVSE pilot was leveraged along with further research and feedback from industry partners, community leaders and customers to develop a comprehensive TEP, as outlined below. The TEP is aligned with supportive legislation codified in Washington RCW 80.28.360 and 80.28.365, with review and input by the Washington Joint Transportation Electrification Stakeholder group and acknowledged by the UTC on October 15, 2020.

II. TRANSPORTATION ELECTRIFICATION PLAN

The TEP provides a guiding path to realize a better energy future by 2045, where clean electricity powers a transportation sector that is no longer dominated by fossil fuels. This extends beyond near-term opportunities to electrify light-duty passenger vehicles, to other medium and

heavy-duty vehicles on the road, and other off-road applications where major economic and environmental benefits may be achieved for all customers. Assuming ongoing advances in battery technology and costs, future transportation of both people and freight may be accomplished using clean electricity in a way that is cleaner, more affordable, and which provides exciting new performance capabilities and customer choices. Electrification of light-duty passenger vehicles alone would result in more than an 80% reduction of harmful air pollution and greenhouse gas emissions (GGEs) from current vehicles, in addition to over $1 billion per year in fuel and maintenance savings in the local economies served by the Company. By mid-century, transportation electrification could account for over 20% of utility load and revenue, helping to pay for fixed grid costs and thereby keeping electric energy costs more affordable for all customers, particularly if flexible transportation loads may be cost-effectively shifted from on-peak to off-peak times of the day and night.

The TEP outlines guiding principles, strategies, and a clear action plan with detailed program descriptions, cost and benefit estimates, and regular reporting details. New program filings may be submitted for regulatory review on an on-going basis and later incorporated in regular revisions of the TEP every five years. Challenging but achievable objectives identified in the current TEP are listed below:

1. Support sustained entry in the mass market for light-duty EVs;
    a. Greater than 15% of annual vehicle sales by 2030 or earlier;
    b. Install EVSE needed by 2025 for rapid market growth, owned and maintained by Avista and third parties;
    c. Maintain EVSE uptime >99%;
    d. Raise positive awareness of EVs by 500% by 2025;
2. Support electrification of commercial and public fleets;
    a. Implement a commercial EV rate in 2021, removing market barriers imposed by traditional variable demand charges;
    b. Invest in "make-ready" utility upgrades supporting privately owned public charging infrastructure;

c. Deploy and expand fleet support programs, starting with lift trucks and light-duty passenger vehicles in 2021;

3. Meet the aspirational goal of 30% overall spending on programs benefiting disadvantaged communities and low-income customers;
4. Achieve net system benefits from load management programs and new EV rate schedules, with >50% reduction of EV peak load by 2025;
5. Monitor new technologies and markets; implement pilot projects starting with mass transit and school buses in the 2022-2023 timeframe; and,
6. Expand utility fleet electrification with 5% or more of annual fleet budgets, install EVSE at Avista facilities, and by 2025 raise employee EV adoption 300%.

In order to meet these objectives, the TEP provides detailed rationale, intent and program and activity descriptions in the following areas, with targeted allocations of overall budgeted expenses in the 2020 – 2025 timeframe:

- 45% EVSE Installations and Maintenance
- 30% Community and Low-Income Support
- 10% Education and Outreach
- 5% Commercial and Public Fleet Support
- 5% Load Management, Planning and Grid Integration
- 3% Market and Technology Monitoring & Testing
- 2% Data Management, Analysis and Reporting

Avista proposes to fund these programs and activities over the next five years with an overall capital and expense budget of $2 million to $6 million per year in its Washington service territories. This is the estimated level of activity required to achieve strategic objectives, adjusting to changing market conditions as appropriate. Utility capital investments will result in an increase of less than 0.25% annual revenue requirement in Washington for electric customers through 2030, net of benefits from electric billing revenue, load management and any monetized environmental

benefits that may become available.[1] As stated in the TEP, these are initial budget targets subject to uncertainties in customer participation levels, partner capacities, and diligent adjustments based on regular assessments of program costs and benefits. Respective activity and spending levels will also change over time with new learnings and changes in technology, policy and market conditions. For example, changes in actual EV adoption trajectories would affect EVSE buildout plans; or similarly, as viable markets develop for fleets, supportive utility programs addressing those opportunities would grow as appropriate. Different program elements are related and support each other, requiring integrated management and regular adjustments in order to be most effective.

As stated in the TEP, summary year-end updates will be provided for 2021 and 2023 focusing on expenses, revenues and high-level program results. A more comprehensive mid-period report will be provided in early 2023 including updates on EV adoption and forecasts, program activities, lessons learned, and adjustments. Detailed reporting will also be included with the updated TEP submitted by year-end 2025, along with updated model results for impacts on the environment, the economy and the electric grid, and a detailed analysis of data for those customers participating in new rate designs. Key metrics and other information will be monitored and reported, including but not limited to the following:

1. Utility spending, revenue and net benefits, including any monetized environmental benefits and grid benefits from load management;
2. Customer satisfaction;
3. Number of EVs by type (light passenger, forklifts, buses, etc.);
4. Adoption projections;
5. Customer operating cost savings and avoided CO2 emissions;
6. EV load profiles for cases of uninfluenced, load management and EV rate participation;
7. Electric transportation consumption (kWh) and peak load (kW), by vehicle type;
8. Grid impacts integrated with System Planning including Distribution systems and the Integrated Resource Plan;
9. EVSE installations, costs and % uptime;
10. Stakeholder engagement;
11. Benefits to low-income customers and communities; and,

[1]Per Revised Code of Washington (RCW) 80.28.360 (1).

12. Detailed EV rate participation, analysis and results.

The TEP received strong engagement and support by a number of local community leaders, public and private organizations, and industry partners, in large part deriving from the partnerships and experience working together during the EVSE pilot (see TEP, Appendix C pp. 84-122). This has led to ongoing collaboration with the Spokane Regional Transportation Council (SRTC), Urbanova, the Spokane Transit Authority (STA), the Spokane Tribe, Spokane International Airport, and the cities of Spokane, Spokane Valley, Cheney, Liberty Lake, and Airway Heights, culminating in a successful application led by the SRTC for grant funding from Washington State's Clean Energy Fund. The grant award totaling $2.5 million will help boost funding for regional charging infrastructure buildout in the 2021-2024 timeframe, contingent on matching funds from qualifying Avista EVSE investments per the TEP, and STA investments in battery-electric bus charging infrastructure and equipment.

III. STAKEHOLDER FEEDBACK

Proceeding from the acknowledged TEP, draft tariff documents were provided to the Washington Joint Transportation Electrification Stakeholder group for a 60-day review and comment period concluding February 1, 2021. The Company received questions and comments from Commission Staff, Northwest Energy Coalition, and Climate Solutions, and further discussed with all parties in order to appropriately modify and improve Company proposals.

IV. SCHEDULE 77 – ELECTRIC TRANSPORTATION

Schedule 77 outlines the various Electric Transportation programs and activities including availability, eligibility, limitations, and basic parameters, fully aligned with the more detailed program descriptions, intent and rationale provided in the TEP. Stakeholder discussion topics and further clarification of the Company's proposals as compared to the TEP are summarized below.

1. DCFC connectors. As the CHAdeMO connector will become an obsolete standard and is no longer supported in North America, only CCS-1 connectors are proposed for installation in DC Fast Charging EVSE, instead of both CCS-1 and CHAdeMO connectors as originally proposed in the TEP.[2]

2. Residential EVSE networking and load management. EVSE residential installations will include a customer Site Agreement (Attachment A to Schedule 77) with Terms and Conditions that allow the Company to perform load management by various methods, which may change over time. Initially this will be accomplished at the time of EVSE installation by programming the EV to normally charge off-peak, with a low-cost and reliable non-networked EVSE. A network-capable EVSE utilized in non-network mode to avoid network fees and programmed to charge off-peak without online communications may also be used, provided that adequate testing demonstrates competitive reliability, customer satisfaction including the ability to easily bypass scheduled charging and initiate on-peak charging sessions, and overall cost-benefits are proven satisfactory. In general, the effectiveness of load management methods may be monitored through audits of AMI data and comparison to uninfluenced load profiles.

   As conclusively demonstrated in the EVSE Pilot, customers were very accepting and satisfied with direct load management by the utility via networked EVSE, in the process of successfully shifting 75% of on-peak EV loads to off-peak. However, it was also clearly shown that direct load management using networked EVSE is cost prohibitive as a standard offering to customers due to unreliable communications, EVSE component failures, and network management fees.[3] This may improve over time to become a viable solution over the long term, perhaps in conjunction with load management and optimization of EV charging together with home heating, cooling, water heating, and on-site solar generation. Therefore, the Company will continue limited load management experiments with networked EVSE as the industry develops,

[2] Moloughney, Tom. "Nissan Transitions to CCS for US and Europe, Dealing CHAdeMO a Fatal Blow." InsideEVs, July 15, 2020. https://insideevs.com/news/433929/nissan-switches-to-ccs-in-us-europe/
[3] Avista Corp. EVSE Final Report. pp. 41-2. October 18, 2019.

in order to further test the bounds of customer acceptance and the reliability of networked EVSE that come to market. This approach will enable the Company to achieve strategic objectives with current methods, while enabling the possibility of pivoting to new methods as a standard offering if/when they credibly present a more cost-effective and practical solution at scale.

Installed EVSE will be utilized to the full extent of their normal service life and as shown to be most effective in terms of lifecycle load management costs and benefits. In the event that functioning non-networked EVSE are swapped out with newer programmable and/or networked EVSE, they may be salvaged and redeployed for a variety of commercial installations, including workplace and fleet charging. The possibility of utilizing low-cost and reliable, programmable, but non-networked EVSE to charge off-peak is also of keen interest. Direct communications with the EVs rather than the EVSE should also be explored with initially small test groups, as this method may eventually provide the most cost effective method of shifting peak EV loads.

It is expected that a small percentage of residential customers may desire networked EVSE for added communication and information features. This will be accommodated provided the EVSE meet verified safety, reliability, cost and interoperability requirements. However in these cases unless utilized in utility load management experiments, the Company will not pay for network management fees or maintenance costs associated with restoring network connectivity. This will not preclude such customers from effectively participating in load management programs such as by EV programming, for example.

As stated in the TEP, future programs may be considered for residential customers, such as a lease and/or rebate program offering, maintenance fees, and/or networked EVSE utilizing AMI equipment, provided assurance that effective load management, reliability and cost controls may be achieved. For at least the near term, the proposed residential program achieves desired outcomes of greater EV adoption, EVSE

reliability, dealer engagement and the development of load-management capabilities and benefits from shifting on-peak loads to off-peak at least cost.

3. "Make-Ready" investments for privately owned commercial EVSE. Make-ready utility investments include installation of electric supply infrastructure up to, but not including the EVSE, as a way to encourage private ownership and maintenance of EVSE. The Company determined that limits of $2,500 per AC level 2 port installed and $20,000 per site installed were appropriate for utility make-ready investments serving privately owned and maintained commercial AC Level 2 and DCFC, respectively. This is based on analysis of average costs to install utility supply infrastructure at public ACL2 and DCFC sites. In addition to covering the cost of the transformer, these amounts are intended to remove an up-front cost barrier and thereby encourage more private EVSE investments. By setting a reasonable limit, the make-ready investments are also intended to encourage intelligent siting and designs that minimize grid impacts and total costs. In the future, the Company may propose to extend make-ready investments above these limits, provided greater assurance of cost controls and site host ability and commitment to maintain EVSE uptime, but is not prepared to do so at this time.

4. Costs and Benefits. Detailed estimates of costs and benefits are provided in the TEP on pp. 39-43, including estimates of utility program costs and benefits such as utility revenue and emissions reductions resulting from light-duty EV adoption, and annual net effects of capital investments on customer revenue requirement limited to no more than 0.25%. An in-depth analysis using data obtained from the EVSE Pilot as input produced the regional and customer impact cost test results shown in the TEP on pp. 34-37. Beyond this, a Societal Cost Test (SCT) incorporating financial value attributed to emissions reductions was not performed, but may be incorporated in the future utilizing an agreed upon financial value for emissions reductions as well as updated inputs and key assumptions for a number of plausible scenarios including EV load

profiles, utility investments, EV adoption, EV purchase cost-premiums, and the price of gasoline.

5. Load profile data. Telematics data will be collected and analyzed to provide insights on evolving charging behavior and grid impacts, as experience shows this method provides more cost-effective and comprehensive data for load profiles, compared to data from networked EVSE.

6. Transparency and payment methods for EVSE user fees. The Company acknowledges and appreciates the rationale and suggestions provided by the Northwest Energy Coalition and Climate Solutions to support standards that enable greater public access, protect consumers from unknowingly paying hidden EVSE user fees, minimize inconvenient user subscription requirements, and otherwise inconsistent and confusing payment methods for EVSE across different use cases and locations. In general, installed EVSE requiring a user fee may not require a subscription, membership account, or a minimum balance on an account in order to initiate a charging session as the only method of initiating a charging session. The Company will ensure that EVSE requiring user fees clearly indicate the amount of all fees, the cost to the customer on a per kWh basis, that metrology testing of EVSE demonstrates the amount of electricity charged is accurate to the amount dispensed, and that several payment methods are offered to customers thereby providing maximum accessibility to all customers, with clear and consistent instructions for use including smartphone applications, RFID card, and customer service phone call to initiate a charge to the EV. In addition, DCFC will include a credit card reader and payment method. The Company does not agree that AC Level 2 EVSE utilizing user fees should have an installed credit card reader, except for a smaller subset of AC Level 2 EVSE where public utilization is high. This is because the added expense and maintenance is not justified given the typically small financial transactions involved with these charging sessions, and also based on the lack of any related customer complaints to the Company with its existing network of AC level 2 EVSE that do not have credit card readers. Furthermore, a relatively small

percentage of site hosts are expected to require a user fee, and a much more limited number of AC Level 2 EVSE are commercially available that meet this requirement.

In the future, as EV adoption and EVSE utilization increase, a combination of user fees based on kWh consumption, and time-based fees for longer DCFC sessions may be proposed. As the battery of an EV reaches approximately 80% or higher state-of-charge, the dispensed power rate is significantly reduced in order to protect the battery. As a result, unless a time-based fee is introduced at this point, an EV driver may choose to spend a long time "topping off" the EV battery to 100%, monopolizing the DCFC at the expense of other drivers that more urgently need to charge their EV and must wait for unnecessarily long periods of time.

A suggestion was made to implement higher user fees at DCFC during on-peak hours compared to off-peak hours, in order to reduce on-peak DCFC charging as was demonstrated by PGE.[4] Although reduced on-peak DCFC charging could very well occur as a result of implementing higher on-peak user fees, the Company feels that this should be considered in the future as adoption increases and material grid impacts are a greater possibility, rather than at the present time. DCFC charging is currently a very small component of overall light-duty EV charging consumption, and many users may be negatively surprised and forced to pay high fees if imposed in this way. Consider that at $0.35/kWh, this equates to roughly $3/gallon equivalent, and an additional 50% on-peak fee of $0.18/kWh for example, results in a total user fee of $0.53/kWh equivalent to a price of $4.50 per gallon – far higher than the market alternative of driving a vehicle powered by gasoline. EV drivers with a low state of battery charge, upon arriving at the DCFC may be unpleasantly surprised and forced to pay this high price in order to gain the driving range needed to travel to their destination. This may be considered unfair to the EV driver in many circumstances, resulting in a very negative customer experience. The customer may further communicate the negative experience as a warning to others considering an EV, thus defeating the goal of

[4] see PGE Transportation Electrification Plan, September 2019, pp. 41-42.

supporting early growth in EV adoption. Alternatively, the current flat user fee of $0.35/kWh could be kept as the on-peak fee, and a lower amount applied off-peak, for example $0.20/kWh – thus encouraging more off-peak charging without imposing a user fee that makes electricity fuel uncompetitive with gasoline. This approach may be more practical and effective if positively received by customers, as a way to influence DCFC charging behavior and reduce on-peak charging. However, the implications of reduced cost-recovery for operational expenses and capital investments as well as overall cost/benefit must also be considered and well understood before implementing such changes.

Although the Company is not proposing changes to the DCFC user fees at the current time, future proposals will be made with stakeholder input, in consideration of fees based on kWh consumption, length of charging session, on/off peak pricing, and expected impacts on the grid. Such a proposal may be most appropriate when DCFC utilization has increased beyond the current early adoption phase, and based on a robust cost/benefit analysis of longer-term implications for DCFC cost recovery, charging load profiles, and grid impacts.

7. The Company appreciates a number of other supporting comments and helpful suggestions regarding Charging Infrastructure, Education and Outreach, Low-Income and Community Support, Commercial and Public Fleet Support, Load Management, Planning and Grid Integration, and Technology and Market Awareness, which align with the Company's intent and specific plans in these program areas as detailed in the TEP.

V. COMMERCIAL EV RATES – SCHEDULES 13 AND 23

In order to achieve the objective of supporting electrification of commercial and public fleets the Company proposes new optional commercial EV rate schedules primarily as a way to address the significant market barrier associated with high variable demand charges in existing

rates[5], while encouraging more off-peak charging. The EV rate schedules for general service (Schedule 13) and large general service (Schedule 23) commercial customers will encourage greater investment in public DCFC, larger workplace charging installations for employees, and electrification of commercial fleet vehicles of various types while also providing a price signal for higher costs during peak periods.

As an example, consider the case of the Spokane Transit Agency (STA), the main provider of public transit in the greater Spokane metro area. STA has purchased four battery-electric buses (BEBs) for a new route serving the Moran Prairie and Monroe Street areas, to be placed in service in 2021 and, if successful, followed by another five to seven BEBs on this route. In addition, another ten BEBs will be purchased and operational beginning in 2022, serving a new central "City Line" connecting the urban core of Spokane with rapid, zero-emission mass transit. All of these BEBs will be housed in a new depot facility near downtown Spokane. With current technology, plans are to charge the BEBs for up to ten minutes at one end of the route using a high powered 450 kW overhead charger, and staggered charging at the depot mostly overnight, with additional high-power chargers each providing 450 kW. Purchase premiums are still very high for electric buses, typically $250,000 or more than the base cost of $500,000 for a diesel bus which may serve most routes in the Spokane area, plus additional EVSE costs, utility service upgrades, and backup generation facilities. STA has estimated these additional costs to serve up to 20 buses at over $2 million, or approximately $100,000 per bus. With low projected costs for diesel fuel, STA projects monthly diesel fuel expenses for nine diesel buses on the new Moran-Prairie-to-Monroe-St. route at $18,100. This compares to $15,300 monthly electricity bills for BEBs using existing rate Schedule 21 for large general commercial service, approximately 45% of which comes from variable demand charges. With savings of only $3,000 per month in fuel costs, payback on the large BEB upfront costs does not occur under current electric rate schedules. Federal and state grants have mostly enabled early electrification plans at STA; however, the operational business case must be dramatically improved in order to fully electrify the entire fleet of over 140 coaches and many other smaller passenger vehicles.

[5] "Peak Demand Charges and Electric Transit Buses." CALSTART. US Dept of Transportation, Federal Transit Administration (2014).

The path to full electrification at STA will depend on technology and cost improvements that eventually allow for greatly reduced purchase costs and batteries with sufficient energy to operate a full day without in-route charging, using only depot charging. Additionally, more substantial operational cost savings could be realized by STA if a new rate schedule provides relief from variable demand charges, while encouraging off-peak charging. This is in fact a necessity to enable an expanded and sustained electrification of STA's fleet and other similarly situated transit providers or large customers looking to convert their fleet to electric.

In another example, the important buildout of DCFC infrastructure and investment by third-parties is inhibited by high operating costs, particularly in the early stages of market growth where utilization is low. EVSE Pilot data shows that a typical DCFC is effectively billed $0.41/kWh under current general service rate Schedule 11. This makes it impossible to recover electric billing costs from market-based user fees of $0.35/kW, roughly equivalent to the alternative of gasoline at $3 per gallon. In addition, as discovered in the EVSE Pilot, DCFC typically require $1,500 per year in other operational expenses including site inspections and maintenance, EVSP networking fees, communication fees, and unplanned EVSE repairs.

In a 2018 study of 51 EV rate options from 21 electric utilities in the U.S., it was found that relatively few rate options were available to commercial customers, and that additional on-peak energy charges without demand charges, combined with monthly fixed charges and seasonal adjustments were most common.[6] In the last few years, a number of new commercial EV rate schedules have been proposed and/or approved, including Pacific Gas and Electric Business EV rate plans,[7] and most recently Portland General Electric's proposed Schedule 53 for heavy-duty EV charging.[8] In Washington State, Pacific Power was approved for an optional rate applicable to public DCFC sites with less than 1 MW maximum demand.[9] Pacific Power's Schedule 45 includes an additional on-peak energy charge between 6 am and 12 pm, and 5 pm and 9 pm in winter, and between 1 pm and 8 pm in summer

[6] "Review and Assessment of Electric Vehicle Rate Options in the United States." EPRI Report 3002012263 (2018).
[7] See https://www.pge.com/en_US/small-medium-business/energy-alternatives/clean-vehicles/ev-charge-network/electric-vehicle-rate-plans.page
[8] PGE Advice No. 21-03, February 10, 2021.
[9] PacifiCorp Advice No. 18-03, September 6, 2018.

Based on these assessments and feedback from UTC Staff on the draft commercial EV rate submitted for stakeholder review, Avista proposes optional commercial EV rate schedules 13 and 23 for general and large general commercial service, respectively. In addition to a fixed charge, a flat off-peak and on-peak energy charge are applied on a seasonal basis, during the hours of 7 am to 10 am and 5 pm to 8 pm from November through March, and 3 pm to 7 pm from April through October.

Monthly Bill Component	**Schedule 013**	**Schedule 023**
Fixed charge	$ 20	$ 550
Off-peak energy charge	$ 0.08588	$ 0.06742
On-peak energy charge	$ 0.21108	$ 0.16333

The calculations of the Schedule 13 and 23 off-peak and on-peak base rates were derived from the billing determinants and base rates associated with rate Schedule's 11 and 21 respectively, the same rate schedules any new customers would take service from absent the approval of these two new optional rate schedules. The new rate schedules were priced in a way that would derive the same total revenue as currently being recovered under Schedules 11 and 21, under current usage patterns. The proposed off-peak energy charge for Schedule's 13 and 23 are proposed to be priced at the tail block rates for both Schedule's 11 and 21 respectively. The on-peak energy charge is calculated by taking all remaining unrecovered revenue and dividing it by the estimated Schedule 11 and 21 on-peak energy usage. The on-peak price is approximately 2.5 times higher than the off-peak price, which provides a meaningful price signal and incentive for customers to reduce their on-peak usage in order to achieve bill savings. Schedules 13 and 23 base rates are proposed to be shown as stand-alone rate classes for purposes of cost of service studies and rate spread and rate design proposals in future general rate case filings. Schedule 13 and 23 base rates will be updated based on approved Schedule 11 and 21 rates respectively, and any future modifications to the pricing of these new rate schedules will be evaluated in the context of a future general rate case filing. The full calculation of the proposed rates for both Schedule's 13 and 23 have been provided as workpapers to this filing.

Commercial EV rate schedules 13 and 23 will be subject to the same adder schedules (DSM, LIRAP, etc.) and miscellaneous charges consistent with existing schedules 11 and 21, respectively, which will similarly change over time in accordance with regular system-wide adjustments. The new EV rate schedules will be made available to commercial customers, provided that EV charging loads are metered separately from other facility loads and peak demand does not exceed 1 MW. Above this threshold, it must be demonstrated that all reasonable measures are being taken to mitigate impacts and required upgrades to the local distribution grid as a condition of utilizing the EV rate, and load management will be required where practical.

The proposed rates provide reasonable recovery of utility costs based on a simple flat rate for on-peak and off-peak energy charges, while eliminating demand charges that currently inhibit market growth. In this way, they establish easily understood and sensible electric billing rates, encouraging early and sustained fleet adoption, larger workplace charging facilities, and third-party ownership of public DC fast charging. Higher on-peak energy charges also encourage more off-peak charging, which is beneficial to all customers.

Usage data and other in-depth analysis of each customer utilizing rates 13 and 23 will be performed and reported, as part of the overall regular reporting described in the TEP. This includes individualized and detailed on-peak and off-peak consumption analysis over time, the effectiveness of load management efforts, load profiles of various use categories, and future projections of electric transportation loads and grid impacts based on this analysis and other industry research. A relatively small number of customers are expected to adopt these optional rate schedules over the next few years. However, they may still be effective in removing a key market barrier to early adoption, while also providing a means to acquire utilization and cost data to inform revisions to the commercial EV rate schedules in the future.

For DCFC sites assuming 2% load factor, use of Schedule 13 results in an all-in rate of $0.15/kWh, in contrast with $0.41/kWh under current rate Schedule 11. Compared to the competitive market-based user fee of $0.35/kWh, the owner of a DCFC may then begin to recover operational costs for electric billing and additional maintenance costs estimated at $1,500 per year, per DCFC. In the case of a transit agency such as STA operating 10 BEBs, assuming 19% load factor results in an all-in rate of $0.097/kWh utilizing rate Schedule 23, compared to $0.12 under current rate Schedule 21. This provides for approximately 19% fuel cost savings, on an order

necessary to make widespread fleet electrification more viable. It is also expected that STA will charge off-peak at the depot to the maximum extent possible, in order to take advantage of the lower off-peak energy charge.

VI. RESIDENTIAL EV RATE

A new rate for residential customers may be one of the more effective ways to shift on-peak loads from light-duty EVs, as well as other on-peak household loads. In conjunction with cost-effective load management methods, off-peak charging may be maximized thereby providing net benefits for all customers and reduced emissions from electric power sources. In this regard, experience with the commercial EV rates as explained above should be helpful when implementing a residential rate, in terms of validating back-end system capabilities, billing accuracy, and the effort required to properly test and implement new rate designs using recently deployed advanced metering infrastructure (AMI). The Company is not prepared to offer a new residential rate at this time, but as stated in the TEP, intends to do so in the near future. In order to minimize costs and maximize benefits, it is anticipated that the new residential rate will incorporate whole-house loads supplied by the existing meter, as opposed to an EV-only rate supplied by a new meter installed for the exclusive use of the EV. A high percentage of participants in the residential EVSE program are expected to also participate in the new residential rate when introduced and may be beneficially utilized as an initial test group prior to wider deployment.

VII. COMMUNITY AND LOW-INCOME SUPPORT

Programs and activities providing benefits to low-income customers and communities are a significant area of focus, with an aspirational goal to effectively spend 30% of overall budget in this area. As detailed in the TEP starting on page 58, the Company intends to build on its successful experience in the EVSE pilot program, which demonstrated effective collaboration with a network of local service organizations, ultimately providing cost-effective electric transportation to those

in need for medical appointments, job skills training, and shuttle services for overnight shelter and food deliveries. This model may be expanded to a larger network of partner organizations across the region, leveraging collective resources and implementing a number of new activities as summarized below:

- Provide EV and EVSE for community service organizations through collaborative and competitive proposals;
- Provide EVSE to underserved communities including rural towns, low-income multi-unit dwellings, and to residential customers receiving low-income bill assistance;
- Develop and implement pilot programs with public transit agencies, school districts and/or TNC platforms; and
- Consider partnering with Envoy and other organizations to provide ride-sharing and car-sharing services for low-income communities and individuals.

VIII. CUSTOMER EDUCATION & OUTREACH

Once authorized, the Company plans to diligently engage and inform its customers and stakeholders about available programs and solicit partnerships through a variety of communication channels and forums as part of its ongoing Education and Outreach activities. Beginning on page 55 of the TEP, the Company provides further details about its education and outreach plans. Highlights of the Company's plans include, but are not limited to the following:

- EV educational campaigns in partnership with area auto dealers and local media channels;
- Support and engagement of local peer-to-peer interest groups leveraging social media;
- Potential information kiosks at area auto dealerships;
- Consideration of establishing an EV Experience Center in the Spokane metro area;
- Support EV drivers using transportation network company platforms such as Uber and Lyft;

- Maintain Avista's electric transportation webpage with the latest information and tools, including state and federal incentives, utility programs, cost calculators, program information and application links, and FAQs;
- Support of community events such as locally sponsored EV drives during National Drive Electric Week;
- Provide informative presentations in a variety of forums, including community events and meetings with local government, industry groups and non-profit organizations, and public webinars;
- Promulgate important information about the benefits of electric transportation through various media channels, including earned news and trade media interviews, social media, bill inserts, newsletters and public signage; and,
- Partnership with Community Action Agencies and Community Based Organizations on providing EV education and opportunities surrounding electrification that benefit low-income customers.

IX. CONCLUSION

As detailed in the TEP, Transportation Electrification is clearly one of the most, if not the most impactful opportunity for the Company to better serve customers and society over the next several decades. Strong and effective support for Transportation Electrification is fully aligned with the Company's Clean Energy goals, and lays the groundwork for sustained, major economic and environmental benefits over the long term, while responsibly managing grid impacts and intelligent system planning – providing net benefits for all customers. Partnering with industry experts, policymakers, regulators, and community leaders, we look forward and are committed to the hard work and innovation that will lead to a better energy future for all. The Company's strategic approach is informed by industry and customer research; the current landscape of policy, technology and market forces; projected impacts on the economy, the environment and the grid; and the valuable experience gained through the EVSE Pilot. The acknowledged TEP and the proposed tariff schedules 77, 13 and 23, which proceed from the detailed intent and descriptions

provided in the TEP, represent informed proposals to continue and sustain this work in a cost-effective manner.

The Company respectfully requests that the proposed tariffs described herein be allowed to take effect on April 26, 2021. If you have any questions regarding this filing, please contact Rendall Farley at 509-495-2823 or myself at 509-495-2782 or shawn.bonfield@avistacorp.com.

Sincerely,

/s/ Shawn Bonfield

Shawn Bonfield
Sr. Manager of Regulatory Policy & Strategy