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UTILITIES COMMISSION

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November 3, 2023

Jan Noriyuki, Secretary
Idaho Public Utilities Commission
11331 W. Chinden Blvd. Bldg. 8, Ste. 201-A
Boise, Idaho 83714

RE: Case No. AVU-E-23-16

Dear Ms. Noriyuki:

Attached for filing with the Commission is Avista Corporation's, doing business as Avista Utilities, application requesting that the Commission authorize the Company to establish a new tariff Schedule 23 for Direct Current Fast Charging (DCFC) of electric vehicles as outlined in the attached Application.

Please direct any questions regarding this filing to Rendall Farley at 509-495-2823 (rendall.farley@avistacorp.com) or me at 509.495.4584 (paul.kimball@avistacorp.com).

Sincerely,

/s/ Paul Kimball

Paul Kimball
Manager of Compliance & Discovery

Enclosure

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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF AVISTA CORPORATION, D/B/A AVISTA UTILITIES, REQUESTING AUTHORITY TO ESTABLISH TARIFF SCHEDULE 23 FOR DIRECT CURRECT FAST CHARGING (DCFC) OF ELECTRIC VEHICLES	))))))	CASE NO. AVU-E-23-16 APPLICATION OF AVISTA CORPORATION

APPLICATION OF AVISTA CORPORATION

I. INTRODUCTION

Avista Corporation, doing business as Avista Utilities (hereinafter "Avista" or "Company"), at 1411 East Mission Avenue, Spokane, Washington, pursuant to Section 61-524 Idaho Code and Rule 52 of the Idaho Public Utilities Commission ("Commission Rules of Procedure"), hereby applies to the Commission for an order authorizing the approval of a proposed electric tariff Schedule 23, "Direct Current Fast Charging (DCFC) Rate Option", effective February 1, 2024.

Avista is a utility that provides service to approximately 406,000 electric customers and 373,000 natural gas customers in a 26,000 square-mile area in northern Idaho, eastern Washington, and Oregon. The largest community served by Avista is Spokane, Washington, which is the location of its corporate headquarters.

The Company requests that this filing be processed under the Commission's Modified Procedure rules through the use of written comments.

Communications in reference to this Application should be addressed to:

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A table of contents for this Petition follows:

II. BACKGROUND

Transportation electrification (TE) is accelerating around the world and in the U.S., due to a number of factors.[1] Over time, this transition will provide substantial economic and environmental benefits, as a result of significantly lower operating and fuel costs for transportation, major reductions in air pollution, and increasing net utility revenue that benefits all electric customers. Today, driving a light-duty electric vehicle (EV) fueled by Avista's electricity costs less than an equivalent $1 per gallon of gasoline, saving an average of $1,772 in fuel costs and $300 per year in maintenance expenses, and resulting in zero tailpipe emissions with total CO_2 emission reductions of 77%.[2] If all 1,681,500 light-duty gasoline and diesel vehicles in Idaho were electric, this would result in regional savings of $3.5 billion per year – creating a positive ripple effect for the economy – and avoided annual emissions of 7.2 million tons of CO_2 using local energy sources.[3] Other forms of electrified transportation beyond light-duty passenger vehicles, including medium- and heavy-duty on-road vehicles, and a number of off-road passenger and freight applications, could result in even greater operational savings and lower air pollution across the state.

In addition, electric transportation provides grid benefits for all utility customers, in the form of net positive revenue that helps pay for fixed utility infrastructure costs. By 2050, electric transportation may represent 20% or more of overall utility electric load, as indicated by the National Renewable Energy Laboratory.[4] In the case of light-duty EVs, modeling

[1] Electric Vehicle Outlook 2023, Bloomberg New Energy Finance. Accessed at https://about.bnef.com/electric-vehicle-outlook/

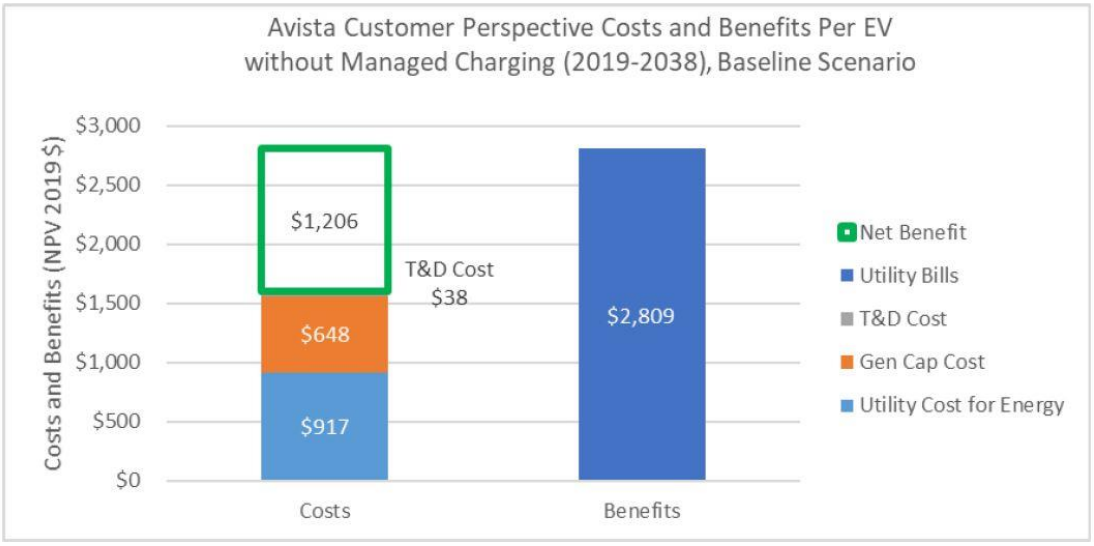
[2] Choose EV Calculator Tool, accessed at https://www.myavista.com/energy-savings/electric-transportation/for-your-home; estimates assume Avista's current mix of electric generation sources, 3.5 miles/kWh and $0.091/kWh for EVs, and $3.91/gallon, 26 mpg for conventional vehicles.

[3] Alternative Fuels Data Center, Vehicle Registration Counts by State, accessed at https://afdc.energy.gov/vehicle-registration

[4] Electrification Futures Study: Scenarios of Electric Technology Adoption and Power Consumption for the United States, p. xiv. National Renewable Energy Laboratory, 2018.

indicates that each EV provides positive net benefits both from a regional and a customer rate-impact perspective, which may be further amplified when charging off-peak, as shown in Figure No. 1 below.

Figure No. 1 – Net Benefits from Light-Duty EVs[5]



Idaho has a lower rate of EV adoption compared to the U.S. average but nevertheless is expected to increase in the future as the overall market matures and accelerates, and certain barriers such as the upfront cost and availability of EVs and charging infrastructure improves.[6] Regarding charging infrastructure, 95% of EV charging may be done very inexpensively and with a minimum of charging infrastructure costs, at home or at work in the case of personal vehicles, or at a commercial facility in the case of fleet vehicles. In these instances, AC Level 2 equipment is often utilized which operates at 240V and delivers 7kW power or less while charging. However, approximately 5% of charging will occur utilizing public chargers, of which direct current fast chargers (DCFC) are especially important to enable longer distance

[5] Avista Economic and Grid Impact Study (2018)
[6] See https://www.atlasevhub.com/materials/state-ev-registration-data/

trips.[7] Today's DCFC generally require access to high voltage, 3-phase utility electricity supply, and deliver 150kW or more power levels – resulting in much higher installation costs, typically over $200,000 per DCFC site. DCFC along travel corridors and in more populated areas is critical to serving Idaho customer needs and enabling beneficial EV market growth.[8]

Northern Idaho currently has nine DCFC sites in operation,[9] compared to an estimated 1,800 DC fast charging port connections required to support 200,000 EVs in Idaho by 2030.[10] However, in areas of low EV adoption and utilization of DCFC such as in northern Idaho, private investment is lacking due to the long timeline required to recover investments in DCFC, let alone earn any reasonable returns on the investments. In order to enable market transformation and service Idaho customers, public investments in the form of federal grants are currently available to offset the costs of DCFC equipment and installation partially or fully.

However, ongoing operating costs for electricity, equipment maintenance and repair, and site upkeep are typically not covered by grants and must be borne by the owner-operator of the DCFC. This presents a problem as the operating costs typically are much higher than the revenue acquired from DCFC user-fees, primarily due to existing utility rates structures that result in high variable demand charges on a customer's monthly bill. The table below illustrates an example DCFC where the owner-operator incurs negative net revenue as a result

[7] Consumer Guide to Electric Vehicle Charging. Electric Power Research Institute (2019). Accessed at https://www.epri.com/research/products/000000003002016961

[8] "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for EV Charging Infrastructure," pp. v-x. National Renewable Energy Laboratory (2023). Accessed at: https://driveelectric.gov/files/2030-charging-network.pdf

[9] see www.plugshare.com

[10] "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for EV Charging Infrastructure," p. 43. National Renewable Energy Laboratory (2023). Accessed at: https://driveelectric.gov/files/2030-charging-network.pdf

of operating a public DCFC.[11]

Table No. 1 – Example Monthly DCFC Operator Costs and Revenue in Idaho on Avista's Rate Schedule 11

Average No. of Charging Sessions per Month	30
Energy Consumption	900 kWh
Max Electricity Power Demand for the DCFC Site	180 kW
Monthly Electricity Bill - Basic Charge	$18.00
- Energy Charge	$84.15
- Demand Charge	$1,040.00
Other Operating Costs (Networking/Comms, Maintenance, etc)	$150.00
Total Monthly Operating Costs	**$1,292.15**
User Fee Rate	$0.45/kWh
User Fee Revenue	**$405.00**
Net Monthly Revenue (Cost)	**($887.15)**

Using current rate schedules, the example DCFC operator must achieve an average of four charging sessions per day just to break-even on direct operating costs. This level of utilization is uncertain and therefore owner-operators are likely to incur direct losses of nearly $1,000 or more per month for a long period of time. In this situation, private enterprises are greatly discouraged from owning and operating DCFC, even if the site acquisition and construction costs are covered by federal grants. As demand charges represent nearly 80% of the total operating cost, this barrier to investment and operation may only be addressed by a new utility rate structure that is better suited to accommodate DCFC operation while supporting reasonable utility cost recovery. Such an improvement will further the interests of attracting capital funding and supporting a network of reliable DCFC in Idaho that is critical to achieving market growth and the significant economic and environmental benefits it will enable.

[11] this example is based on a customer's monthly electricity bill and user-fee revenue as reported by the customer operating a DCFC on rate schedule 11, at a moderate utilization level

III. DCFC RATE DESIGN

In order to achieve the objective of supporting a reliable network of DCFC in North Idaho, the Company proposes a new optional commercial EV rate schedule primarily as a way to address the significant market barrier associated with high variable demand charges in existing rates. The EV rate schedule for general service (Schedule 23) customers will encourage greater investment in public DCFC, while also continuing to recover utility costs through a higher per kWh charge.

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.[12] In the last few years, a number of new commercial EV rate schedules have been proposed and/or approved, for example Pacific Gas and Electric's Business EV rate plans,[13] Portland General Electric's Schedule 53 for heavy-duty EV charging,[14] and a number of other rate designs such as for Dominion Energy, DTE Energy, Florida Power & Light, and Xcel Energy.[15] In Washington, Pacific Power was approved for an optional rate applicable to public DCFC sites with less than 1 MW maximum demand,[16] and Avista received approval for its commercial EV Time-of-Use (TOU) rate in 2021.

Avista proposes optional commercial EV rate schedule 23 for DCFC charging general commercial service. In addition to the fixed demand charge, the Company proposes to increase the

[12] "Review and Assessment of Electric Vehicle Rate Options in the United States." EPRI Report 3002012263 (2018).
[13] See https://www.pge.com/en_US/small-medium-business/energy-alternatives/clean-vehicles/ev-charge-network/electric-vehicle-rate-plans.page
[14] PGE Advice No. 21-03, February 10, 2021.
[15] "Electric Transportation Rate Design Principles for Regulated Utilities." p. 19. Alliance for Transportation Electrification (2021).
[16] PacifiCorp Advice No. 18-03, September 6, 2018.

per kWh charge and eliminate the variable demand charge for this new rate schedule. The table below details a comparison of both the existing Schedule 21 base rates and the proposed Schedule 23 DCFC base rates.

Table No. 2 – Schedule 21 and 23 Base Rate Comparison

Monthly Bill Component	Schedule 023	Schedule 021
Fixed demand charge	$ 500.00	$ 500.00
Demand charge over 50 kw	$ 0.00	$ 6.50
First 250,000 kWh	$ 0.08509	$ 0.07135
Over 250,000 kWh	$ 0.07386	$ 0.06012

The calculations of the increase in the per kWh charge for Schedule 23 base rates were derived from the billing determinants and base rates associated with rate Schedule 21 from the Company's most recent general rate case filing (AVU-E-23-01), the same rate schedule a large new DCFC customer would likely take service from absent the approval of this new rate schedule. The new rate schedule is priced in a way that would derive the same total revenue as currently being recovered under Schedule 21, under current usage patterns. The Company derived the increase in the per kWh rate by taking the total variable demand revenue for Schedule 21 and dividing it by the first block usage for all Schedule 21 customers. This rate design will remove the variable demand charge barrier that exists for DCFC customers today until such time that the Company deploys new AMI meters in Idaho which will then allow the Company to offer other rate design options such as TOU rates.

Schedule 23 base rates are proposed to be shown as a stand-alone rate class for purposes of cost of service studies and rate spread and rate design proposals in future general rate case filings. Schedule 23 base rates will be updated based on approved Schedule 21 rates, 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 Schedule 23 have been provided as workpapers to this filing.

Commercial EV rate schedule 23 will be subject to the same adder schedules (DSM, PCA, FCA, etc.) and miscellaneous charges consistent with existing schedule 21, 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 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 third-party ownership of public DC fast charging. In addition, the proposed rates provide a significant benefit to customers. Table No. 3 below compares the example from Table No 1 above if the proposed rates are approved.

Table No. 3 – Example Monthly DCFC Operator Costs and Revenue in Idaho on Avista's Rate Schedule 11 compared to proposed Rate Schedule 23

	Schedule 11	Schedule 23
Average No. of Charging Sessions per Month	30	30
Energy Consumption	900 kWh	900 kWh
Max Electricity Power Demand for the DCFC Site	180 kW	180 kW
Monthly Electricity Bill - Basic Charge	$18.00	$500.00
- Energy Charge	$84.15	$76.58
- Demand Charge	$1,040.00	$0.00
Other Operating Costs (Networking/Comms., Maint., etc)	$150	$150.00
Total Monthly Operating Costs	**$1,292.15**	**$726.58**
User Fee Rate	$0.45/kWh	$0.45/kWh
User Fee Revenue	**$405.00**	**$405.00**
Net Monthly Revenue (Cost)	**($887.15)**	**($321.58)**

A relatively small number of customers are expected to adopt this optional rate schedule over the next few years. However, it 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.

IV. REQUEST FOR RELIEF

WHEREFORE, Avista respectfully requests that the Commission issue a final Order authorizing the Company to establish tariff Schedule 23, "Direct Current Fast Charging (DCFC) Rate Option" on February 1, 2024. The Company requests that the matter be processed under the Commission's Modified Procedure rules through the use of written comments.

DATED at Spokane, Washington, this 3rd day of November 2023.

AVISTA CORPORATION

By 

Patrick Ehrbar
Director of Regulatory Affairs