Avista Corporation
1411 East Mission P.O. Box 3727
Spokane, Washington 99220-0500
Telephone (509) 489-0500
Toll Free (800) 727-9170

November 02, 2023

Kathy Hunter
Acting Executive Director and Secretary
Washington Utilities & Transportation Commission
621 Woodland Square Loop SE
Lacey, WA 98503

RE: Avista Utilities Electric Tariff Schedule 71 – Spokane Connected Communities Pilot Program

Dear Ms. Hunter:

Attached for electronic filing with the Washington Utilities and Transportation Commission (Commission) is the proposed tariff of Avista Corporation, dba Avista Utilities (Avista or the Company), for "Spokane Connected Communities Pilot Program", WN U-28 – Electric Service:

Original Sheet 71
Original Sheet 71A
Original Sheet 71B
Original Sheet 71C

I. INTRODUCTION

The primary purpose of this filing is to introduce Avista's proposed tariff Schedule 71, which outlines customer options under the Company's proposed Spokane Connected Communities Pilot Program (Program), described in the next section. Avista is requesting approval with an effective date of January 1, 2024. If approved, this pilot will be in effect for 3.5 years, from January 1, 2024, through July 31, 2027.

II. SPOKANE CONNECTED COMMUNITIES PILOT PROGRAM

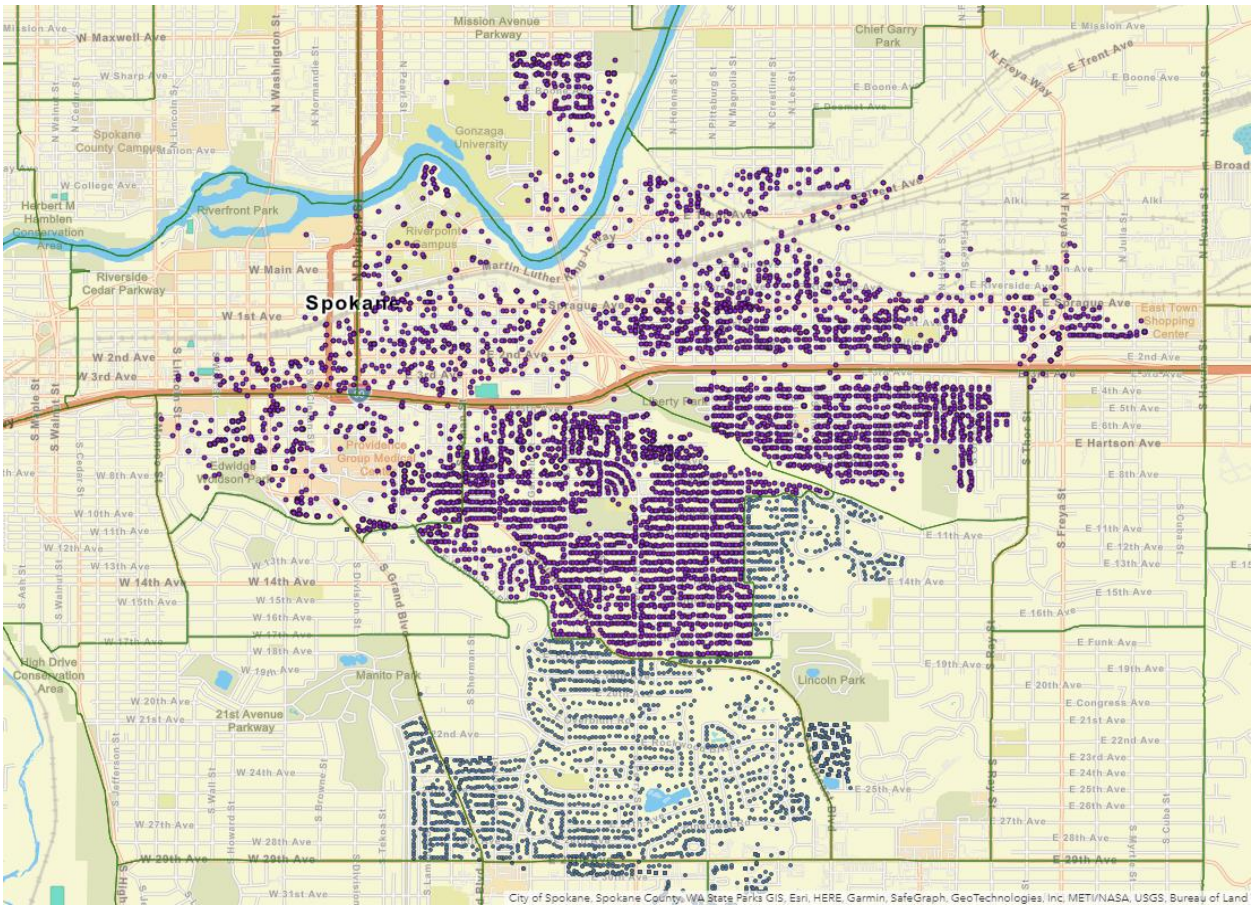
The Spokane Connected Communities Pilot Program will demonstrate non-wires alternatives that support deferring or avoiding major capital investments in Avista's Third and Hatch substation by creating targeted virtual power plants (VPP) from existing buildings, while optimizing power quality and supporting adjacent system needs. Throughout the five-year duration of the Program (planning, development, and execution), the Company expects to unlock demand flexibility between 1-2.25 megawatts (MW) using flexible loads in participating buildings augmented by Distributed Energy Resources (DERs). In addition, the Program's customer product offerings are planned to result in energy efficiency savings of approximately 440-900 MWh annually and emissions reductions between 320,000-650,000 pounds carbon dioxide equivalent (C02e) annually. Each participating building will be measured individually based on actual flexibility achieved during the Program. The full scope of the Program is described in *Attachment A*.

The Program goals will be met through a diverse mix of customer products consisting of smart thermostats, residential energy storage batteries, building control systems, and heat pumps. The Program will test the consumer adoption of the product offerings to support location-based demand response outcomes. Additionally, Avista will gain insights into how a connected community can benefit low-income residential customers and small businesses while simultaneously contributing to the quantitative goals of the Program.

The Company aims to recruit 50-75 residential customers, including low-income customers, and 25-50 commercial customers to install and deploy the product offerings as described in the Customer Packages section below. The Program is anticipated to demonstrate scalable solutions that will reduce emissions between 10 to 20 percent through energy efficiency improvements, reduction/shifting of peak load, and strategic deployment of DERs. Resiliency benefits will be demonstrated through the ability to reliably reduce and shift load to alleviate specific system constraints by calling on the customers' flexible assets without adverse effects to comfort at times of need, such as future "heat domes".

The geographic area selected for this Program receives service from the distribution feeders sourced from the Company's Third and Hatch substation, which is illustrated in Figure No. 1 below.

Figure 1: Spokane Connected Communities Geographic Area



Avista's Third and Hatch substation was selected because it is approaching electrical constraints based on forecasted customer loadings. The Program will demonstrate how to utilize what currently exists on the grid within customer buildings to modulate load without, in the short-term, needing to build additional grid infrastructure.

Avista provides service to customers in this area including residential, multi-family, small-medium businesses, and commercial/industrial customers. This part of Avista's service territory contains two Named Communities.[1] An important goal of this Program is to demonstrate how buildings and their residents play a unique role in decarbonation, resiliency, and equity. By recruiting customers in Named Community that have a high energy usage profile, the Company expects to gain insights into how the benefits of the Program can benefit low-income customers.

[1] Named Communities consist of Highly Impact Communities and Vulnerable Populations as defined in WAC 480-100-605.

Equity will be demonstrated by recruiting customers with a low-medium household income. By the end of Program Year 2 (July 31, 2024), approximately 15% of the customers recruited will consist of low-medium income customers.

The benefits provided by DERs will support distribution system capacity, which will increase the resiliency of the feeders on Avista's Third and Hatch Substation. This is important on extreme peak days because it can provide the Company with flexible resources to lower peak load, instead of necessitating a feeder or substation upgrade to increase capacity. The planning horizon for feeder upgrades is a multi-year process. Feeders are designed to support the services directly connected to them and be available to support adjacent feeder(s). Supervisory Control and Data Acquisition (SCADA) variable limits are set at 80% of rated equipment capacity but rated capacity changes with temperature. Exceeding this loading limit on any feeder increases the risk of brownouts to the entire substation service area. Therefore, in addition to providing individual feeder capacity, there is a use case of deferring infrastructure buildouts for substation transformers and feeders interconnected with the Third and Hatch substation. To be considered meaningful for system planning, the distributed energy assets that will be implemented in the Program must deliver reliable and measurable kW demand flexibility at specific times.

A control platform will be deployed to support the delivery of flexible demand, for commercial customers with building automation systems (BAS), Edo (an energy and demand optimization company, and a partner in the Department of Energy grant as described below) will install an onsite gateway and control service that will be used to monitor and improve the energy efficiency of buildings and write new operating schedules for specific equipment systems and behind-the-meter DERs to shift and shed load during demand flexibility events. For small and medium sized businesses, Pacific Northwest National Laboratory's (PNNL) will install an onsite gateway to similarly monitor and improve building energy efficiency and write new operating schedules for specific equipment systems and behind-the-meter DERs using their VOLTTRON platform. This platform offers many of the benefits of standard commercial BAS systems at a fraction of the cost, enabling small and medium businesses to realize a new and significant source of energy efficiency savings while maintaining or improving comfort. For residential customers, Avista will deploy smart thermostats to monitor and improve energy efficiency and send new operating schedules to shift and shed load while staying within pre-determined comfort ranges set by the customer. All customers will have the ability to opt-out of Demand Flexibility events.

To coordinate control schedules sent to commercial and residential buildings, control systems will be deployed across a secure and distributed system called Open Distributed Systems Operations (OpenDSO). OpenDSO is a software platform developed by Open Energy Solutions (OES) to support utility applications such as distributed energy resource management and location-based demand response aggregation services. The aggregation services will be hosted on a secure server in Avista's private network and will securely communicate optimal operating schedules to control service applications in onsite gateways (for commercial customers) or to network connected thermostats (for residential customers). These operating schedules will be coordinated across specific feeders to be called upon to address delivery and supply constraints on the system when needed. The OpenDSO platform will be coordinated with the Company's distribution management system to support safe and reliable operations on the grid. The OpenDSO platform will integrate Avista, customer, and third-party DER assets to be centrally coordinated and managed by the Company.

III. DEPARTMENT OF ENERGY GRANT

In October of 2020, the office of Energy Efficiency and Renewable Energy within the U.S. Department of Energy (DOE) introduced a Funding Opportunity Application (FOA) to select connected community projects that will "…demonstrate how groups of buildings combined with other types of distributed energy resources, such as electric vehicle charging and photovoltaic generation, can reliably and cost-effectively serve as grid assets by strategically deploying efficiency and demand flexibility. By demonstrating the ability of groups of buildings and DERs to modify load, the FOA outcomes will enable increased energy efficiency, reduced energy demand, and reduced environmental impact." The full FOA is included as Attachment B.

Upon review of the FOA and in combination with the PNNL building technology office, Avista recognized the need for a commercial partner with expertise in building management systems and equipment which led to a partnership with Edo, McKinstry, PNNL, and Urbanova to apply for a DOE Connected Communities grant. The application was one of 10 awarded out of 900 applications across the United States. In total, a $6.6M grant, of which Avista is the recipient of $1.35M, was awarded. Edo is the primary recipient of the DOE grant and Avista, McKinstry, PNNL, and Urbanova are all sub-recipients to Edo. All partners will work together as a single program team to deliver the scope of the Program.

IV. PROGRAM PHASES AND EXPECTED OUTCOMES

The Program officially began on August 1, 2022, with the first project year completing on July 31, 2023. A summary of the Program phases and expected outcomes is outlined below.

Outcomes From of Year 1 ending July 31, 2023:

A strategy proposal was submitted to the DOE on how the Program will deliver demand flexibility and energy efficiency measures for residential and commercial customers and compared them to the proposed flexibility (1-2.25 MW), energy efficiency savings (440-900 MWh), and Greenhouse Gas (GHG) emissions reductions (320,000 – 650,000 lb CO2e). The proposal included how it addresses DOE and grant objectives and how technology will be used to coordinate DERs and energy efficiency. The proposal also included a measurement and verification (M&V) plan and preliminary cybersecurity and data privacy plan. The M&V plan demonstrates the process of planning, measuring, collecting, and analyzing data for the purposes of verifying and reporting energy savings and flexibility for the buildings participating in the Program. The cybersecurity and data privacy plan outlines the approach that will be used to protect the information systems throughout the Program's lifecycle, proactively ensuring the Program's success, scalability, and replicability in the energy sector. Avista will also complete an Institutional Review Board (IRB) review prior to conducting surveys and behavioral research.

Expected outcomes of Year 2 ending July 31, 2024:

During the second year of the Program, recruitment of buildings and DERs will be completed. The Company anticipates to demonstrate to the DOE that the Program has 1) commitment (through signed customer agreements) for at least 1 MW of load flexibility; 2) has the potential for at least 440 MWh energy savings and 320,000 CO2e reduced annually; 3) the mix of buildings includes new and existing single and multi-family homes as well as small and large commercial buildings,; 4) at least 15% of the customers are low- and medium-income; and 5) at least four types of DERs/controllable loads are installed. In addition, Avista expects to complete the installation of energy efficiency operational measures in the first cohort of residential and commercial buildings (at least 2 residential, 2 small or medium businesses, and 2 large commercial).

Expected outcomes of Year 3 ending July 31, 2025:

The Program will compile preliminary results from tests conducted on all participating buildings, demonstrate how they compare with the minimum Program targets (1 MW of load flexibility, have the potential for 440MWh energy savings, and 320,000 lb CO_2e reduced annually) and suggest any course corrections, if needed. The Company will also compile preliminary savings from operational energy efficiency measures and provide the DOE with a draft Playbook that outlines the strategies and best practices for how others can implement a similar program.

Expected outcomes of Year 4 ending July 31, 2026:

During the fourth year, to show progress in the Program, the Company will compile Program results from grid services tests and energy efficiency measures from all buildings and show that they are within 10% of the Program goals.

Expected outcomes of Year 5 ending July 31, 2027 (End of Project Goal):

The Connected Communities Playbook will be completed during the fifth year and will detail the business model and activities needed to deploy and manage packages of data sensors/control devices, energy efficiency measures, and DERs efficiently and effectively.

V. CUSTOMER ENGAGEMENT PLAN

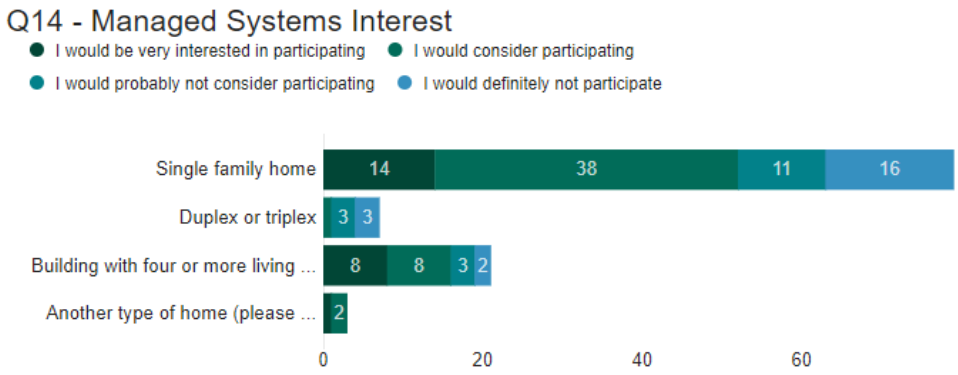
A Customer Engagement Plan, provided in Attachment G, describes the approach the Company will undergo to understand the perceptions, motivations, and behaviors of customers affected by new DER solutions. This common understanding will aid in determining how customer packages may be accepted and ultimately adopted on a wider scale. Ongoing and intentional feedback will help the Program team learn how the benefits and costs are shared with the underlying goal of ensuring that new technologies work across customer types. This plan includes the demographics in the Program geographic area, how and when surveys will be conducted, and provides an outreach and recruitment strategy.

The geographic area of the Program is approximately 6.5 square miles with approximately 4,900 residential homes, with nearly 4,500 classified as single-family households, 255 duplexes or multiplexes, and 161 apartments (5+ unit buildings). This area has over 900 commercial businesses

of which 800 are concentrated in the retail, service, and wholesale sectors. The geographic area consists of five census tracts and each have distinct socio-economic characteristics. As an example, medium income is more than twice as high for residents in the Manito census tract at $49k compared to those living in East Central and the Sprague tracts at $17k and $25k, respectively. The percentage of people living under the federal poverty level is also 24% and 42% higher in these two tracts.

The Program team delivered a mixed-mode survey (online and mailed paper booklet) to a sample of residential and small/medium business customers in the Program area. The survey included questions on perceptions and experiences related to comfort and convenience of energy options, knowledge, and awareness of the benefits/costs for specific distributed energy solutions, sensitivity to energy bill and rate changes, and more. The initial survey was sent in July 2023 to a random sample of 2,200 residential and 500 small/medium business customers. An additional paper survey was sent in September 2023; 125 residential customers have responded. The results of the survey are included in Attachment C – Residential Survey Results. As seen in Figure No. 2 below, most customers who responded to the survey are interested in participating in the Program.

Figure No. 2: Customer Survey – Managed Systems Interest



VI. PROGRAM OPERATIONS AND CUSTOMER PACKAGES

The Program will be available on a "first-come first serve" basis to residential, commercial, and industrial customers receiving electricity from the feeders served by Avista's Third and Hatch substation, until available grant funds from the DOE are fully allocated. Recruitment and installation of equipment for residential and small business customers will be conducted by Avista. Recruitment and installation for commercial and industrial customers will be performed by Edo

on behalf of Avista. Heating, cooling, and control equipment within the customer's home will be inspected to determine Program eligibility.

Once a building is deemed eligible, the installation contractor and customer will agree on an appropriate package and equipment will be ordered, as necessary. The equipment in residential buildings will be primarily smart thermostats and heat pumps. The pilot will strategically deploy energy storage battery systems, controllable electric vehicle (EV) charging stations, and connected thermostats. Energy efficiency measures are also included in the customer packages and will be installed depending on customer and building needs. All Program equipment will be paid for utilizing the DOE grant funds. After the equipment is installed, Avista will begin dispatching customer assets to flex customer demand when events occur.

Demand Flexibility Events: Demand flexibility events will be determined by Avista and delivered/executed by Edo. Events will last between 2-8 hours, depending on season and grid needs. Demand flexibility events will not be communicated directly to residential, multi-family, and small/medium business customers. Large commercial and Industrial customers will receive event notifications approximately 1 to 24 hours in advance. During demand flexibility events, participants thermostat temperature may be adjusted +/- 4 degrees based on what the grid needs at that point in time. At the end of the event, the thermostat would go back to original operating mode.

Residential and small or medium business customers can opt-out of events simply by manually adjusting the set degree threshold on their thermostat. During the summer, for example, if a 4-degree variance from the original threshold setting is too warm for their house, customers can simply manually adjust the set degree threshold of the thermostat back down to the previous setting that was established prior to the event occurring. Opting out of more than three events in a calendar year prohibits the customer from receiving the annual opt-out bonus described below.

Commercial and industrial customers can opt-out through the Edo user interface located within their building. By opting out of the event, the commercial and/or industrial customer will not be paid a performance incentive for that event.

Customer Incentives: The customer incentive budget totals $300,000 and will be paid for by DOE grant funds. The program incentives were determined by estimating the number of

participants in each program, ensuring to not exceed the budget or total grand amount available. Research was also conducted to ensure that the connected communities customer incentives were similar to other programs across the energy industry.

Customer Agreement: Each customer will sign an agreement outlining the components of the Program. The agreement describes the terms of the Program, incentives, and the process for installation of equipment. The agreement also describes what information the customer agrees to share with the Company and its third-party affiliates working directly with this Program. Avista will be working with third-party installers and will need to share the customer's name, address, and phone number for the installer to contact them for equipment installation. By signing the agreement, customers authorize Avista to share their usage data of the property with third parties (like Edo) for analysis. The agreement also outlines what will occur in the case of either party terminating the agreement during the 3-year pilot demonstration project. An agreement will be put into place with each customer that decides to participate. There are three separate agreements; the commercial and industrial agreement is provided in Attachment D; the residential and small or medium business agreement is provided in Attachment E; and a residential battery customer agreement is provided in Attachment F. Each agreement includes eligibility criteria, as follows:

Commercial and Industrial Eligibility Criteria:

- Customer must be an Avista electric customer residing in one of the following zip codes and connected to Avista's Third and Hatch substation feeders: 99201, 99202, 99203, 99204, 99206, 99207, 99218, 99223, 99224. Avista verification of eligibility is required.
- Customer must be willing to allow the installation of the Edo gateway device at his/her property.
- Customer must have internet service.
- Customer must agree to participate for a minimum of thirty-six (36) months.
- If customers are disconnected for non-payment during their participation in the pilot, they are no longer eligible.

Residential/Small or Medium Business Eligibility Criteria:

- Customer must be an Avista electric customer residing in one of the following zip codes and connected to Avista's Third and Hatch substation feeders: 99201, 99202, 99203, 99204, 99206, 99207, 99218, 99223, 99224. Avista verification of eligibility is required.

- Customer must be willing to allow the installation of an Ecobee smart thermostat and other equipment, depending on the Program Customer chooses to participate in at his/her property.
- Customer must have internet service.
- Customer must agree to participate for a minimum of thirty-six (36) months.
- If customers are disconnected for non-payment during their participation in the pilot, they are no longer eligible.

Residential/Battery Eligibility Criteria:

- Customer must be an Avista electric customer residing in one of the following zip codes and connected to Avista's Third and Hatch substation feeders: 99201, 99202, 99203, 99204, 99206, 99207, 99218, 99223, 99224. Avista verification of eligibility is required.
- Customer must be willing to allow the installation of a residential battery at the property or allow for the dispatch of a residential battery already installed at the property.
- Customer must have internet service.
- Customer must own their home.
- Customer must agree to participate for a minimum of thirty-six (36) months.
- If customers are disconnected for non-payment during their participation in the pilot, they are no longer eligible.

Program Packages

1. Customer Owned Equipment Packages:

Customers can participate in the following package options utilizing their own existing equipment. Incentives will vary based on event participation levels.

Residential Package 1: Customer Owned Smart Thermostat

- Customer agrees to allow Avista to control their smart thermostat without prior notification.
- Incentives will be from $0/month up to $50/month, including an annual bonus up to $100 if the customer does not opt out of events. Incentives will be applied as a bill credit to the customer account monthly and an annual bonus to be applied 1 year after the initial signing of the customer agreement.
- If needed, the customer will also receive weatherization at no cost.

Small Business Package 1: Custom – may include Smart Thermostat + Rooftop Controls

- Customer agrees to allow Avista to control their smart thermostat without prior notification.
- Incentives will be from $0/month up to $50/month, including an annual bonus up to $100 if the customer does not opt out of events. Incentives will be applied as a bill credit to the

customer account monthly and an annual bonus to be applied 1 year after the initial signing of the customer agreement.
- If needed, the customer will also receive weatherization (insulation) at no cost.

2. *Customer Provided Equipment Packages*:

Customers can participate in the following package options utilizing equipment that is provided to them at no additional cost. The Company will pay for the equipment through grant funds received from the DOE. Incentives will vary based on event participation levels.

Residential Package 2: Smart Thermostat + Weatherization
- Customer receives a smart Thermostat and agrees to allow Avista to control the thermostat without prior notification.
- Incentives will be from $0/month up to $50/month, including an annual bonus up to $100 if the customer does not opt out of events. Incentives will be applied as a bill credit to the customer account monthly and an annual bonus to be applied 1 year after the initial signing of the customer agreement.
- If needed, the customer will also receive weatherization (insulation) at no cost.

Residential Package 3: Smart Thermostat + Weatherization + Heat Pump
- Customer receives a smart thermostat and agrees to allow Avista to control their thermostat without prior notification.
- Incentives will be from $0/month up to $50/month, including an annual bonus up to $100 if the customer does not opt out of events. Incentives will be applied as a bill credit to the customer account monthly and an annual bonus to be applied 1 year after the initial signing of the customer agreement.
- Customer receives a dual fuel heat pump at no cost. The primary source of heat will be electric; during cold temperatures (below approximately 20 degrees) the heat pump will switch to the customer's existing natural gas supply.
- If needed, the customer will also receive weatherization (insulation) at no cost.

Residential Package 4: Energy Storage
- Customers will be eligible to purchase a residential energy storage battery. They will be provided a one-time incentive of up to $400/kw (based on the size of the battery). The customer will also be paid an annual incentive of up to $15/kw for participating in events.

Multi-Family Package 1: Custom – may include common space HVAC controls + storage
- Customers will receive equipment depending on the makeup of the building, this could include a smart thermostat and subsidized energy storage.
- Customers will be eligible to purchase a residential energy storage battery. They will be provided a one-time incentive of up to $400/kw (based on the size of the battery).

The customer will also be paid an annual incentive of up to $15/kw for participating in events.
- If needed, the customer will also receive weatherization (insulation) at no cost.

Small Business Package 2: Smart Thermostat + LED relamping (if applicable)
- Customer receives equipment at no cost and will include a smart thermostat and LED relamping.
- Incentive will be from $0/month up to $50/month including an annual bonus up to $100 if the customer does not opt out of events.
- If needed, the customer will also receive weatherization (insulation) at no cost.

Commercial Industrial Package: Custom – may include connecting to existing building management system, sensor equipment, connecting to existing lighting controls, etc.
- Customer will receive an annual capacity incentive.
- Customer will receive a performance incentive based on the demand flexibility achieved during an event.

VII. REPORTING

Reporting on the Program is provided to the DOE at the end of each Program year starting in August 2023 (report on Program year 1 that occurred from August 1, 2022 – July 31, 2023). If the Program is approved, the annual report provided to the DOE will also be filed with the Commission no later than December 1 of each project year starting in 2024 (at the end of Program year 2).

VIII. CONCLUSION

As outlined in the attached Schedule 71, Avista hereby requests that the tariff proposed becomes effective January 1, 2024. If you have any questions regarding this filing, please contact me at (509) 495-2782 or shawn.bonfield@avistacorp.com.

Sincerely,

/s/ Shawn Bonfield

Shawn Bonfield
Sr. Manager of Regulatory Policy & Strategy