Exh. JDD-1T

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET UE-240006

DOCKET UG-240007

DIRECT TESTIMONY OF

JOSHUA D. DILUCIANO

REPRESENTING AVISTA CORPORATION

I. INTRODUCTION

Q. Please state your name, employer, and business address.

A. My name is Joshua D. DiLuciano and I am employed as the Vice President of Energy Delivery for Avista Utilities (Avista or Company), at 1411 East Mission Avenue, Spokane, Washington.

Q. Would you briefly describe your educational background and professional experience?

A. Yes. I am a graduate of Washington State University (WSU), from which I earned a Bachelor of Science degree in Electrical Engineering. I also earned a Master of Science degree in Management and Leadership from Western Governors University and am a licensed electrical engineer in Washington State. I joined Avista in 2006 as an Engineer and have held a variety of technical engineering roles since. I have managed several groups, most recently as Director of Electrical Engineering where I had responsibility for Washington Advanced Metering Infrastructure (AMI), the Company's geographic information system (GIS) Refresh, Transmission Engineering, Distribution Engineering, Protection Engineering, Substation Engineering, Drafting and Edit, Maximo, and Engineering Technical Services. I was awarded my current position in September 2022, where I have responsibility for electric and natural gas engineering, operations, transmission operations and system planning, and shared services.

Additionally, I am a U.S. Navy veteran, and I currently serve on the board of the West Central Community Center.

Q. What is the scope of your testimony?

A. I will provide an overview of the Company's electric and natural gas energy delivery facilities and explain the factors driving our continuing investment in electric distribution infrastructure. I will explain how our efforts to maintain the asset health and performance of our electric transmission system, including compliance with mandatory federal standards for transmission planning and operations, is driving a continuing demand for new investment. Further, I will describe why our investments in natural gas distribution are necessary in the timeframes completed and why each capital investment in our operations facilities and fleet operations is needed to support efficient delivery of service to our customers today, and into the future. Finally, while I address the electric and natural gas distribution, transmission, general plant and fleet related capital additions for the periods July 1, 2023, through December 31, 2026 in detail within my testimony and exhibits, Company witnesses Ms. Benjamin and Ms. Schultz incorporate the capital additions, and incremental expense associated with these investments, within the Company's request for rate relief over the Two-Year Rate Plan effective in December 2024.

A table of the contents for my testimony is as follows:

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring Exh. JDD-2, which are the Capital Business Case documents for each of the 2023-2026 capital projects and programs described in my testimony.

II. OVERVIEW OF AVISTA'S ENERGY DELIVERY SERVICE

Q. Please describe Avista's electric and natural gas utility operations.

A. Avista operates a vertically integrated electric system in Washington and Idaho, and natural gas local distribution operations in Washington, Idaho and Oregon. In addition to the hydroelectric, renewable, and thermal generating resources, the Company has an electric transmission system comprised of approximately 700 miles of 230 kV lines and 1,600 miles of 115 kV lines. Avista has approximately 19,300 miles of primary and secondary electric distribution lines. The Company owns and operates approximately 8,000 miles of natural gas distribution lines, served from the Williams Northwest and Gas Transmission Northwest (GTN) pipelines. A map showing the Company's electric and natural gas service area in Washington, Idaho and Oregon is provided by Company witness Mr. Vermillion.

Q. Please list the Company's operations service centers that support electric and natural gas customers in Washington.

A. The Company has a central office and operations service facilities in Spokane and local operations service centers in the communities of Colville, Othello, Pullman, Clarkston, Deer Park, and Davenport.

Q. Would you please summarize the need for continuing investments in Avista's electric distribution system?

A. Yes. Avista, like utilities across the country, continues to prudently fund the

increasing demand for investment in electric distribution infrastructure. The pattern of our investments bears a striking resemblance to that of the industry, which should not be a surprise, since we are all responding to the same predominant needs: first, the need to supply our customers with safe and reliable electricity which creates the need to annually replace an increasing amount of infrastructure that has reached the end of its useful life (based on asset condition). Second, we are responding to the need for technology investments required to build the integrated energy services grid of the future. To provide better visibility of the factors driving this need for investment, we continue to organize the Company's planned spending over the current five-year planning horizon by "Investment Driver" categories shown below, and as discussed by Company witness Mr. Christie.

1. Respond to customer requests for new service or enhancements;
2. Meet our customers' expectations for service quality and reliability;
3. Meet regulatory and other mandatory obligations;
4. Address system performance and capacity needs;
5. Replace infrastructure at the end of its useful life based on asset condition; and,
6. Replace equipment that is damaged or fails, and support field operations.

Q. Would you please summarize the need for continuing investments in <u>electric transmission</u> infrastructure?

A. The nation's electric utilities are facing unprecedented challenges from many forces that are driving the continuing need for new investment in transmission infrastructure, and Avista is no different. This rapidly growing demand for new investment has challenged our ability to fund all our high priority needs for electric transmission, which, are out of proportion to the investment requirements of our other infrastructure. Drivers for new investment include:

- System improvements required to meet the myriad and expanding federal

regulations governing nearly every aspect of our transmission business. Specifically, the tightening requirements to meet increasingly restrictive transmission operations and planning standards that could potentially result in financial penalties for noncompliance.

- Timely replacement of end-of-life assets based on condition. This need is at an all-time high across the industry and will continue to increase annually for at least the next two decades. This need is tied to the major expansion of new electric infrastructure built during the economic boom following the end of World War II. Because these assets are now at or near the end of their useful lives, a substantial boost in new investment is required to maintain existing systems.

- External demands on our transmission system including new transmission interconnections required for third parties to integrate new variable energy resources, particularly wind and solar. These interconnections require significant capital investment to extend or reinforce our transmission system and often take priority over investments required to provide for native load service on our system.

- A further driver is related to supporting the development of the new energy services grid of the future. Emerging technologies are driving an increase in digitization, distributed generation, energy storage, and other technologies that require adapting and upgrading the existing system, including new ways of engaging with our customers. Though primarily focused on the distribution level, these changes in our energy delivery business model also impact transmission investments. This increased digitalization brings with it the potential for greater cyber vulnerability and the need for continuing investment to provide for the safety and security of our bulk power system.

- Siting, permitting, and constructing transmission assets has become more complex, time-consuming, and expensive. This is due, in part, to increasing environmental regulation, property rights, and land-use requirements. Permitting can extend over several years and typically includes conditions constraining how utilities site, design, construct and maintain these assets.

When it comes to the impact on our customers, who must ultimately pay for these requirements and investments, an exacerbating factor is our relatively low load growth due to declining use-per-customer over time. This translates into nearly flat revenues, which means that new capital investments must be covered by higher customer rates. Historically, annual increases in customer loads produced new revenues that were often sufficient to cover the costs for new investment and inflation without the need to increase rates.

Q. Please describe the Company's process for ensuring it is making timely investments in electric transmission to maintain compliance with mandatory federal standards.

A. The Company's process for determining which projects should be recommended for funding each year includes results of comprehensive planning studies, engineering and asset management analyses, and scheduled upgrades and replacements identified in our operations districts and Transmission Engineering. These projects undergo internal review by multiple stakeholders, who help ensure all system needs and alternatives have been identified and evaluated.

As discussed by Mr. Christie, projects advanced for funding enter a formal review process referred to as the "Engineering Roundtable" (ERT). This group carefully reviews the need for each project, the primary business driver, the alternatives considered, and the justification for the approach recommended. During the review, the potential benefits of any cross-business-unit synergies that could better optimize project benefits and scope are also identified and evaluated. The result of this process is a prioritized list of recommended projects that serves as a roadmap of investments sequenced by year for at least a ten-year timeframe. Using this roadmap, each department can plan ahead for the work they will be responsible to execute once projects are approved for funding and implementation. Once evaluated, prioritized, and sequenced, these projects are recommended to the Capital Planning Group (discussed by Mr. Christie) for final review and funding allocation. Representatives from eleven business units participate in the ERT process.

Q. Please summarize the need for ongoing investment in Avista's <u>natural gas distribution</u> system.

A. In 2022, natural gas provided the fuel for approximately 40% for the nation's electric generation fleet,[1] heats more than half of America's homes, and provides the vital energy for cooling, heating, industrial processes, commerce, and industry. The Company has experienced steady growth in natural gas customers in the prior decade, where the annual number of new connects rose dramatically between 2010 and 2022, from approximately 3,000 per year to 5,600 per year. The current gas forecast in Washington expects essentially no growth after 2024 and the very modest growth expected through 2024 is expected to be residential. The current forecast holds the level of Washington commercial/industrial customers constant from this year going forward.

There is also the need for new investments to remain in compliance with federal and state regulatory requirements. We must adequately manage and mitigate the continuing safety risks associated with our natural gas distribution system. Over the last decade, the Company's investments to meet customer requests for new service and to comply with a range of growing regulatory obligations has grown from approximately $15.5 million in 2010 to nearly $80 million in 2022.

Q. Please summarize the need for ongoing investment in Avista's operations, facilities, and fleet resources.

A. Adequate operating facilities are a critical ingredient to the success of utilities like Avista. Avista's operating facilities encompass office space, critical information technology systems, generation facilities, and are the hub for field operations. Our fleet infrastructure includes a wide range of light to heavy trucks specialized for electric and natural gas operations, diverse and specialized equipment, all manner of tools, and extensive material

[1] https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php

and supply storage areas. Though it is easy to take for granted, our office and operations facilities are at the heart of our ability to serve customers effectively and efficiently. In addition to employees supporting our field operations, our facilities are required to support a broad range of technical and administrative staff, including accountants, engineers, attorneys, customer service representatives, and information technology experts. Besides the facilities themselves, our operations depend on extensive information technology infrastructure, diverse and stand-alone communication networks, and a myriad of other support systems (including supporting all the Company's workers who are connecting remotely into the Company's systems).

Q. Did Avista achieve its Service Quality Measures Program benchmarks for 2022?

A. The Company is pleased to report we exceeded all six Customer Service Measure benchmarks for 2022 and reported a continuing relatively stable long-term trend in electric service reliability. The Company reported a decrease in the average occurrence of outages per-customer per-year (not related to a major storm event), thereby decreasing our five-year average for duration of service outages by 7.4 minutes. Table No. 1 below depicts Avista's 2022 Customer Service Measures and Electric System Reliability results:

Table No. 1 – 2022 Results for Avista's Customer Service Measures and Electric System Reliability

Customer Service Measures	Benchmark	2022 Performance	Achieved
Percent of customers satisfied with our Contact Center services, based on survey results	At least 90%	97%	✓
Percent of customers satisfied with field services, based on survey results	At least 90%	97%	✓
Number of complaints to the WUTC per 1,000 customers, per year	Less than 0.40	0.05	✓
Percent of calls answered live within 60 seconds by our Contact Center	At least 80%	81%	✓
Average time from customer call to arrival of field technicians in response to electric system emergencies, per year	No more than 80 minutes	52 minutes	✓
Average time from customer call to arrival of field technicians in response to natural gas system emergencies, per year	No more than 55 minutes	48 minutes	✓

Electric System Reliability	5-Year Average (2018-2022)	2022 Result	Change in 5-Year Average
Frequency of non-major-storm power interruptions, per year, per customer (SAIFI)	0.96	0.92	-0.06
Length of power outages, per year, per customer (SAIDI)	141 minutes	146 minutes	-7.4 minutes

III. JULY 2023 – DECEMBER 2024 PRO FORMA ELECTRIC AND NATURAL GAS ENERGY DELIVERY SYSTEMS, FLEET, AND OFFICE AND OPERATIONS FACILITIES

Q. Are there any specific pro formed investments for 2023/2024 you sponsor that you would like to elaborate on?

A. Yes. As discussed by Company witness Ms. Benjamin, Avista's capital witnesses (including me) have summarized each Business Case with projects or programs completed and pro formed by the Company between July 2023 through December 2024. Provisional Capital investments by Business Case for the periods 2025 and 2026 are also discussed in more detail below in Section IV.

Business Cases with investments between July 2023 through December 2024, that do not have corresponding 2025 and 2026 investments, are listed below with only a summary

description of each Business Case following Table No. 3.[2] However, Business Cases with investments between July 2023 through December 2024 and continuing with corresponding 2025 and 2026 investments (shown in Table No. 4 below), are excluded from being described here. Rather, later in my testimony (Section IV), I'll provide detailed information for all Business Cases with investments in 2025 and 2026, as well as any Business Cases that span 2023 – 2026, which includes a summary of the Business Case project or program, an overview of the need for the investments and detail how those projects benefit our customers.

Q. Please list the Business Cases with projects and dollars transferring to plant between July 2023 and December 2024.

A. Table No. 2 below lists the Business Cases with project or program dollars transferring to plant between July 2023 and December 2024 for investments in my area of responsibility. As explained by Ms. Benjamin and described further below, these projects or programs are summarized by the following categories: (1) Large or Distinct Projects, (2) Mandatory & Compliance Projects, (3) Programs and (4) Short-Lived Assets. This grouping is consistent with past filings. The table also provides where the Business Cases supporting the investment can be found in Exh. JDD-2.

[2] A level of 2023 and 2024 capital investment was approved in Docket Nos. UE-220053, et.al., subject to review and refund based on the annual Provisional Capital Reports to be filed on or before March 31, 2024 (2023 investment) and March 31, 2025 (2024 investment), respectively.

Table No. 2 – Pro Formed Investment July 2023 – December 2024[3]

WA GRC Plant Category	Project #	Business Case	07.2023-12.2023 TTP (System)	2024 TTP (System)	Exh. JDD-2 Page #
Large or Distinct Projects	1	Jackson Prairie Natural Gas Storage Facility	$ 1,748,191	$ 2,397,000	3
	2	Local Reps Office Program	$ -	$ 248,981	11
	3	Metro 115kV Substation	$ -	$ 6,000,000	27
	4	Oil Storage Improvements	$ 2,330,000	$ 169,614	46
	5	Palouse Service Center	$ -	$ 746,533	59
	6	Strategic Initiatives - South Landing (Catalyst) - Clean Energy Fund 3	$ 2,997,928	$ -	76
	7	Strategic Initiatives - UIASSIT	$ 149,960	$ -	80
Large or Distinct Projects Total			$ 7,226,080	$ 9,562,128	
Mandatory & Compliance	8	Colstrip Transmission	$ 133,074	$ 650,119	88
	9	Elec Relocation and Replacement Program	$ 3,869,387	$ 7,000,011	95
	10	Gas Above Grade Pipe Remediation Program	$ 339,000	$ 650,004	103
	11	Gas Cathodic Protection Program	$ 788,471	$ 665,000	114
	12	Gas Facility Replacement Program (GFRP) Aldyl A Pipe Replacement	$ 16,423,658	$ 27,187,249	123
		Protocol for Managing Select Aldyl A Pipe in Avista Utilities' Natural Gas System			136
		Study of Aldyl A Pipe Leaks 2022 Update			171
	13	Gas Isolated Steel Replacement Program	$ 1,368,102	$ 2,000,000	182
	14	Gas Overbuilt Pipe Replacement Program	$ 325,731	$ 412,000	195
	15	Gas PMC Program	$ 272,468	$ 3,200,000	200
	16	Gas Replacement Street and Highway Program	$ 2,696,316	$ 3,718,000	209
	17	Gas Transient Voltage Mitigation Program	$ 674,445	$ 500,001	216
	18	Generation Interconnection	$ 108,535	$ -	227
	19	Joint Use	$ 3,203,666	$ 3,999,996	235
	20	Saddle Mountain 230/115kV Station (New) Integration Project Phase 2	$ 2,984	$ 716,783	244
	21	Transmission Construction - Compliance	$ 2,138,505	$ 500,000	253
	22	Transmission NERC Low-Risk Priority Lines Mitigation	$ 2,366,517	$ 1,133,452	261
	23	Westside 230/115kV Station Brownfield Rebuild Project	$ -	$ 4,717,625	269
	24	WSDOT Control Zone Mitigation	$ 580,562	$ 999,998	276
Mandatory & Compliance Total			$ 35,291,423	$ 58,050,238	
Programs	25	Capital Equipment Program	$ 2,179,307	$ 2,074,003	288
	26	Distribution Grid Modernization	$ 1,055,048	$ 987,476	296
	27	Distribution Minor Rebuild	$ 6,779,574	$ 12,999,990	308
	28	Distribution System Enhancements	$ 6,106,491	$ 10,162,656	318
	29	Downtown Network - Asset Condition	$ 1,245,324	$ 2,000,000	333
	30	Downtown Network - Performance & Capacity	$ 2,736,210	$ 1,200,021	349
	31	Electric Storm	$ 6,935,274	$ 4,975,634	361
	32	Fleet Services Capital Plan	$ 3,891,975	$ 6,850,000	369
	33	Gas ERT Replacement Program	$ 302,676	$ 225,000	384
	34	Gas Non-Revenue Program	$ 3,685,505	$ 9,682,000	396
	35	Gas Regulator Station Replacement Program	$ 685,386	$ 1,069,995	409
	36	Gas Reinforcement Program	$ 468,738	$ 1,577,830	421
	37	Gas Telemetry Program	$ 184,132	$ 100,000	433
	38	LED Change-Out Program	$ 162,877	$ 200,003	445
	39	Meter Minor Blanket	$ 152,207	$ 250,001	456
	40	New Revenue - Growth	$ 61,695,518	$ 78,505,094	462
	41	SCADA - SOO and BuCC	$ 1,086,767	$ 700,000	472
	42	Structures and Improvements/Furniture	$ 4,056,748	$ 5,348,646	483
	43	Substation - Asset Condition	$ 17,853,298	$ 25,772,370	503
	44	Substation - Performance and Capacity	$ 3,760,226	$ 8,621,160	518
	45	Transmission - Minor Rebuild	$ 3,674,974	$ 3,343,420	529
	46	Transmission - Performance & Capacity	$ -	$ 100,000	536
	47	Transmission Critical Crossing Reinforcement	$ -	$ 1,000,000	545
	48	Transmission Major Rebuild - Asset Condition	$ 6,558,470	$ 8,250,000	553
	49	Wood Pole Management	$ 7,659,818	$ 13,000,004	564
Programs Total			$ 142,916,541	$ 198,995,303	
Misc. accrual reversals, corrections or additional TTP			$ 25,739	$ 7,442	
Grand Total			**$ 185,459,783**	**$ 266,615,111**	
[1] Includes system pro froma capital for the period July 1, 2023 through December 31, 2023.					
[2] Totals exclude Idaho and Oregon direct business cases from revenue requirement in this case.					

[3] As noted above, projects or programs listed in Table No. 3 with continuing 2025 and/or 2026 investment, are excluded from discussion here, and are discussed later in my testimony in Section IV. "Provisional Capital 2025 – 2026."

Business Cases with 2023 and/or 2024 Project or Program Investment-Only:

Project #4 – Oil Storage Improvements – 2023: $2,330,000; 2024: $169,614

Historically, Avista operated several oil storage tanks contained in an underground vault on the Mission campus. These tanks, which were interconnected with several facilities by underground piping and pumps, contained new oil products, used, but still viable oil, and spent scrap oil, all related to our substation maintenance and electric distribution operations. Over time, the Company experienced spill incidents and leaks in this underground system, and in 2014, we installed two new above-ground scrap oil storage tanks as part of a new Waste and Asset Recovery building. Installation of the new above ground tanks allowed the Company to decommission two of the tanks in the underground vault, however, four of the underground tanks and their associated piping still remain in service. The supporting business case for this project can be found in Exh. JDD-2, starting at page 46.

Project #6 – Strategic Initiatives – South Landing (Catalyst) – Clean Energy Fund 3 – 2023: $2,997,928

The Strategic Initiatives investments that I am sponsoring in this case pertains to the Business Case for the Company's Clean Energy Fund 3 project, for which Avista received a Clean Energy Fund grant from the Washington State Department of Commerce. The Clean Energy Fund 3 project is known as the Eco-District Grid Modernization project. This project seeks to leverage Avista's participation in the Eco-District[4] by utilizing the net-zero, carbon free Catalyst Building constructed in the Eco-District to evaluate how these types of net zero, carbon free developments impact the energy production and delivery system. Avista will

[4] Avista's eco-district, located in the Spokane university district, is an innovative shared energy model that uses a centralized heating, cooling, and electrical system to serve the energy needs of multiple buildings.

deploy advanced thermal and electric storage assets integrated with load control and inverter technology with an overall objective to develop a control strategy within the Eco-District which balances the competing certification requirements of net zero, carbon free developments against grid utilization strategies to reduce unnecessary investment in grid infrastructure.

This project is branded the Grid To Green Project (G2G Project). The G2G Project assets and analytics will be designed to measure and value how net zero, and carbon free developments impact the regional and local electrical system production and delivery system. The G2G Project objectives are: (1) to deploy electric and thermal storage assets in the Eco-District to modulate the voltage swings resulting from local intermittent generation; (2) to deploy electric, thermal storage assets with load management control strategies to reduce production, transmission and feeder peak demands; (3) to evaluate the transmission and distribution deferral that may be created through the deployment of the Eco-District combined with control and storage assets; and (4) to develop a social and economic outreach program to incentivize local small business adjacent to the Eco-District to deploy demand response programs. The supporting business case for this project can be found in Exh. JDD-2, starting at page 76.

<u>Project #7</u> – Strategic Initiatives – UIASSIST – 2023: $149,960

The UIASSIST project seeks to better enable and demonstrate the integration of grid automation, energy storage, and renewable energy resources with enhanced cyber security across the energy domains of the United States and India. Avista is one of 30 collaborating entities from the United States and India incorporating 10 different test sites. The partners

include universities, national laboratories, solution providers, and utilities. Avista's role in the project is to leverage the Innovation Lab to provide circuit and power hardware in the loop simulation, demonstration assets in the form of the WSU microgrid, and operational data sharing via Avista's Digital Exchange platform. The total project is $39.7 million with $7.5 million provided by DOE, $7.5 million provided by U.S. partners, $7.5 million provided by the Government of India (GOI), and $17.2 million provided by Indian partners. Avista's capital cost share for the project is $350,000 while the DOE is providing $480,000 grant. The supporting business case for this project can be found in Exh. JDD-2, starting at page 80.

<u>Project #14</u> – Gas Overbuilt Pipe Replacement Program – 2023: $325,731; 2024: $412,000

As a natural gas distribution system operator, Avista is required to operate within the minimum safety standards outlined in Part 192 of the Department of Transportation's Code of Federal Regulations (CFR). These regulations define the laws that all operators must legally comply with in the operation of natural gas distribution systems. There are sections of existing gas piping within Avista's gas distribution system that have experienced encroachment or have been overbuilt by customer-constructed improvements (e.g. living structures, sheds, decks, etc.) and were not designed for these conditions. Overbuilt facilities restrict Company access to the pipe resulting in accessibility issues that interfere with our ability to perform certain maintenance activities required by the federal regulations, such as meter inspections or leak survey. These encroachments also impair our ability to safely operate and maintain these facilities, which can become impossible if access to the ground above the piping is restricted. More importantly, overbuilds present an increased risk to customers due to the threat that leaking gas may be trapped inside a structure, increasing the possibility of potentially

catastrophic accidents. The supporting business case for this program can be found in Exh. JDD-2, starting at page 195.

<u>Project #17</u> – Gas Transient Voltage Mitigation Program – 2023: $674,445; 2024: $500,001

Avista has experienced safety issues including fires at Gas Regulator Stations due to transient voltage spikes from faults on the adjacent electric transmission system. The purpose of this program will be to identify high pressure gas piping systems that are at risk of these conditions, identify systems that have high steady state voltage, and to then install mitigation measures to reduce both these scenarios on the pipelines. These efforts will protect the pipeline and equipment from being damaged and reduce the voltages exposure to below compliance limits keeping our employees safe. Common approaches to this include the installation of gradient mats, solid state decouplers (SSD), and copper counterpoise conductor. The supporting business case for this program can be found in Exh. JDD-2, starting at page 216. Direct offsets associated with this project are estimated at $8,500 in 2024, $8,700 in 2025, and $9,000 in 2026.

<u>Project #20</u> – Saddle Mountain 230/115kV Station (New) Integration Project Phase 2 – 2023: $2,984; 2024: $716,783

The Company's need to construct a new Saddle Mountain substation is described above in the Distribution section of my testimony. Construction of the new substation, however, required a range of other work to be completed in phases in order to integrate it into electric system. The investments I refer to in this section of the project represent improvements to the communication equipment (SCADA backhaul) in order to monitor (i.e., review telemetry), operate, and control the status of the equipment. The supporting business case for

this project can be found in Exh. JDD-2, starting at page 244.

Project #22 – Transmission – NERC Low-Risk Priority Lines Mitigation – 2023: $2,366,517; 2024: $1,133,452

Avista's compliance with this mandatory standard requires that we conduct LiDAR (Light Detection and Ranging) surveys[5] on all subject transmission circuits to determine any discrepancies between the design specifications and field measurements for conductor sag.[6] While the subject NERC standard was offered as a recommendation to the industry, our compliance with minimum clearance requirements is also required by the National Electric Safety Code. NERC, however, is also closely monitoring the progress made by each utility in complying with these requirements, via a required status report filed with them every six months by each subject utility. When Avista identifies discrepancies through the surveys it evaluates a range of actions to be taken to ensure we meet the stated clearance requirements. The actions include reconfiguring insulator attachments, rebuilding or replacing structures and removing earth below the span of line in question. The supporting business case for this project can be found in Exh. JDD-2, starting at page 261.

Project #23 – Westside 230/115kV Station Brownfield Rebuild Project – 2024: $4,717,625

A P1 is a single element failure where we lose one of the two 230/115 kV autotransformers. The existing Westside #1 230/115 kV transformer exceeds its applicable

[5] Light Detection and Ranging (LiDAR) is a method of measuring distances (ranging) by illuminating a target with laser light and measuring the reflection with a sensor. Differences in in laser light return times to the sensor and wavelengths are used to create a digital three-dimension representation of the target. Typically conducted on electric transmission by aerial flights.

[6] Sag refers to the lowest point (closest to the earth) of the electrical conductor between any two supporting structures (poles), measured as the vertical distance from the top of the supports to the lowest hanging point of the conductor between them.

facility rating for the P1 event of the Westside #2 230/115 kV transformer. System performance analysis indicated an inability of the system to meet the performance requirements in Table 1 of NERC TPL-001-4 in scenarios representing 2017 Heavy Summer for P1 events. The problem prior to construction at the Westside Substation was that a P1 resulted in another element exceeding its rated capacity, which is not allowable under NERC TPL-001-4. We mitigated this issue by replacing the transformers with larger-capacity units. In order to facilitate these replacements, construction in the surrounding station also took place. The end result included necessary adjacent upgrades to connect the autotransformers, including increased switching/bus-work capacity, and more reliable and functional protection schemes. While the site is now technically in compliance with the NERC TPL standard, the adjacent construction work to match switching and bus capabilities to the new transformers is still finishing up in 2024. The supporting business case for this project can be found in Exh. JDD-2, starting at page 269.

IV. 2025-2026 PROVISIONAL ELECTRIC AND NATURAL GAS ENERGY DELIVERY SYSTEMS, FLEET, AND OFFICE AND OPERATIONS FACILITIES

Q. Are you supporting 2025 through 2026 capital investments as a part of your testimony in this case?

A. Yes. Table No. 3 below provides a listing of the provisional capital investments for 2025 through 2026 by investment category in my areas of responsibility. The table also provides where the Business Case supporting the project can be found in Exh. JDD-2.

Table No. 3 – Provisional Capital Additions for 2025-2026 (System)

WA GRC Plant Category	Project #	Business Case	2025 TTP (System)	2026 TTP (System)	Exh. JDD-2 Page #
Large or Distinct Projects	1	Jackson Prairie Natural Gas Storage Facility	$ 2,386,000	$ 2,386,000	3
	2	Local Reps Office Program	$ 248,983	$ -	11
	3	Metro 115kV Substation	$ 3,200,004	$ 38,700,000	27
	5	Palouse Service Center	$ 750,011	$ -	59
	50	Central 24 HR Operations Facility	$ -	$ 3,499,757	577
	51	West Plains New 230kV Substation	$ -	$ 3,950,000	594
Large or Distinct Projects Total			$ 6,584,998	$ 48,535,757	
Mandatory & Compliance	8	Colstrip Transmission	$ 569,999	$ 99,997	88
	9	Elec Relocation and Replacement Program	$ 7,000,013	$ 7,000,005	95
	10	Gas Above Grade Pipe Remediation Program	$ 650,004	$ 650,004	103
	11	Gas Cathodic Protection Program	$ 665,000	$ 665,000	114
	12	Gas Facility Replacement Program (GFRP) Aldyl A Pipe Replacement	$ 27,999,995	$ 29,999,998	123
		Protocol for Managing Select Aldyl A Pipe in Avista Utilities' Natural Gas System			136
		Study of Aldyl A Pipe Leaks 2022 Update			171
	13	Gas Isolated Steel Replacement Program	$ 2,000,000	$ 2,000,000	182
	15	Gas PMC Program	$ 3,200,000	$ 3,000,000	200
	16	Gas Replacement Street and Highway Program	$ 3,830,000	$ 3,945,000	209
	18	Generation Interconnection	$ 38,006	$ 554,008	227
	19	Joint Use	$ 3,999,996	$ 3,000,000	235
	21	Transmission Construction - Compliance	$ 500,000	$ 250,000	253
	24	WSDOT Control Zone Mitigation	$ 999,998	$ 2,000,002	276
Mandatory & Compliance Total			$ 51,453,011	$ 53,164,014	
Programs	25	Capital Equipment Program	$ 2,079,010	$ 2,085,001	288
	26	Distribution Grid Modernization	$ 979,842	$ 911,763	296
	27	Distribution Minor Rebuild	$ 12,999,991	$ 12,204,154	308
	28	Distribution System Enhancements	$ 7,499,982	$ 9,999,987	318
	29	Downtown Network - Asset Condition	$ 2,000,000	$ 2,000,000	333
	30	Downtown Network - Performance & Capacity	$ 1,200,022	$ 1,200,753	349
	31	Electric Storm	$ 5,000,005	$ 5,000,008	361
	32	Fleet Services Capital Plan	$ 5,748,784	$ 7,092,857	369
	33	Gas ERT Replacement Program	$ 235,000	$ 245,000	384
	34	Gas Non-Revenue Program	$ 9,972,000	$ 10,272,000	396
	35	Gas Regulator Station Replacement Program	$ 1,069,995	$ 1,069,995	409
	36	Gas Reinforcement Program	$ 1,000,000	$ 1,000,000	421
	37	Gas Telemetry Program	$ 100,000	$ 100,000	433
	38	LED Change-Out Program	$ 199,999	$ 199,999	445
	39	Meter Minor Blanket	$ 250,001	$ 250,001	456
	40	New Revenue - Growth	$ 73,745,609	$ 75,985,327	462
	41	SCADA - SOO and BuCC	$ 700,000	$ 701,014	472
	42	Structures and Improvements/Furniture	$ 4,238,511	$ 4,399,224	483
	43	Substation - Asset Condition	$ 44,265,853	$ 34,666,286	503
	44	Substation - Performance and Capacity	$ 7,399,007	$ 1,350,006	518
	45	Transmission - Minor Rebuild	$ 3,343,420	$ 3,343,419	529
	46	Transmission - Performance & Capacity	$ 1,400,000	$ 500,000	536
	47	Transmission Critical Crossing Reinforcement	$ 1,000,000	$ 2,000,000	545
	48	Transmission Major Rebuild - Asset Condition	$ 9,040,634	$ 10,000,000	553
	49	Wood Pole Management	$ 9,999,994	$ 9,999,994	564
Programs Total			$ 205,467,659	$ 196,576,788	
Grand Total			**$ 263,505,668**	**$ 298,276,559**	

[1] Includes system pro froma capital for the period July 1, 2023 through December 31, 2023.

[2] Totals exclude Idaho and Oregon direct business cases from revenue requirement in this case.

Q. With respect to each business case, where can a more complete discussion of "alternatives" considered, "benefits to customers", "cost controls", and "savings be found"?

A. Because this information can generally be found in each business case itself (See Exh. JDD-2), I have generally only provided a description of the project or program and additional context in my testimony below.

Q. These projects, taken as a whole, are all characterized as "provisional" in nature. What does that mean?

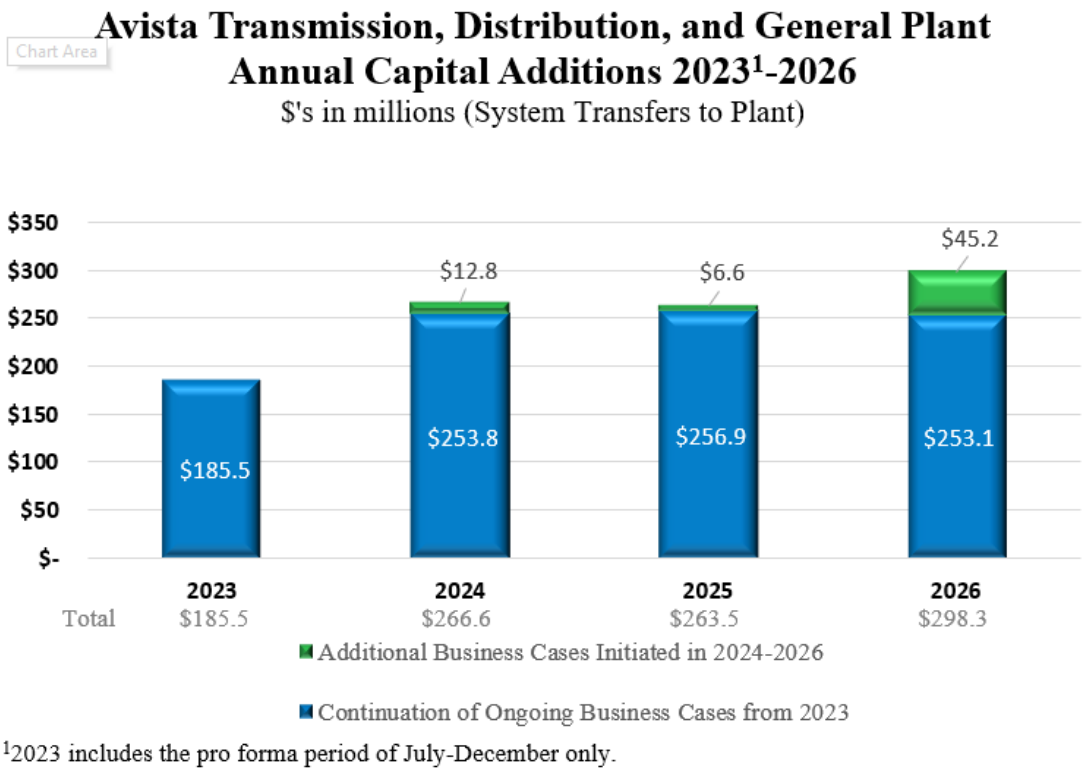
A. As explained by Ms. Benjamin, projects for 2025 through 2026 have been characterized as provisional. First, as provisional, the Company has segregated the capital investments into category designations discussed in the Commission's "Used and Useful Policy Statement," dated January 31, 2020 in Docket U-190531, including capital investments grouped as "Large or Distinct", "Programmatic", "Short-Lived" and "Mandatory and Compliance," for ease of review and audit. Second, "provisional" designates these capital additions as subject to final "review and refund" in a future period. Ms. Benjamin discusses the Company's proposal for Provisional Reporting for capital additions, by year, for 2025 through 2026.

Q. In the following section, are there projects being described that relate to capital investments from July 2023 through 2026?

A. Yes. As described above in Section III, certain business cases with projects having expected transfers in 2023 and/or 2024, as well as expected transfers in 2025 and/or 2026 are consolidated and described below.

Illustration No. 1 below portrays the Distribution, Transmission, and General Plant Capital Investments from 2023 through 2026 included in this case, distinguishing between what are ongoing projects from 2023, and new projects introduced in 2024-2026.

Illustration No. 1: Distribution/Transmission/General Plant Investment



[1]2023 includes the pro forma period of July-December only.

As you can see from this illustration, most of the capital investment relates to ongoing, multi-year efforts that continue over time, at various funding levels. The rationale and justification for these ongoing projects or programs, however, do not change over time, only the funding levels. New incremental projects are discussed below.

Q. Is all of the support for these projects and programs in July 2023 through 2026 the same?

A. Yes, the support is the same, and therefore I will not repeat that same information for these programs in this section of testimony. For those projects not included in Table No. 3 above, I will provide a brief description of each project below.

Q. Regarding 2025 and 2026 capital investment, when will the projects or

programs receive their final review after they are put into service?

A. As discussed by Company witness Ms. Benjamin, provisional capital for 2025 through 2026 will be reviewed through the annual provisional capital reporting, filed on or before March 31st after each completed reporting period, to assure that they are in service, used & useful, and the final expenditures reviewed.

Q. That stated, regarding 2023 and 2024 capital investments, when did, or will, the projects or programs receive their final review after they are put into service?

A. The Commission approved of the level of capital investments through 2024, contingent upon the provisional capital review filings in March 2024 for 2023-capital investments, and in March 2025 for 2024 capital investments, in the Company's last general rate case.

Q. For the 2025 to 2026 capital additions for which you are responsible, is the Company seeking to include all of those investments in rates in this case?

A. Yes.

Q. Please describe Avista's approach for evaluating and managing these project and program investments.

A. Proposals for individual projects and programs are initially developed, reviewed, and evaluated by each responsible business unit often followed by review, evaluation and prioritization by higher-level review committees, such as Avista's ERT discussed earlier, the Aldyl A Pipe Advisory Group, and the Facilities Steering Committee. In this review, projects are evaluated for completeness of the problem statement, the identification and evaluation of reasonable alternatives, applicable risks, and other elements. Once refined the finalized proposals are submitted to the Company's Capital Planning Group

for consideration and recommendation of funding (as discussed by Mr. Christie). If approved for funding, the Project Engineer or Manager identifies critical project milestones and resources needed to achieve them. In this phase, major equipment with long lead times may be purchased, necessary permitting identified and completed, and contracting processes initiated.

During execution, the Company's Project Managers create a detailed work schedule, establish inspection, monitoring, safety, environmental, and invoicing protocols. Standard project management practices are employed to effectively guide the work, identify, and manage project risks, recommend needed changes to scope and budget, and track and report out on overall status. Project results are regularly reviewed with the responsible Department Manager, applicable committee, and/or Director whose review includes budget allocations and variances, internal resource demands, customer care results and issues, and contractor performance.

Q. Are alternatives vetted for these projects before approvals are given?

A. Yes. As mentioned above, where there are reasonable alternatives, the evaluation of those are discussed in each Business Case (Business Case documents for the investments I am sponsoring have been included as Exh. JDD-2).

Q. How is Avista's leadership informed of the project and program status?

A. As described above, project and program status and results are communicated up departmental lines through various committees, and to me via my Director-level direct reports. Program and project results are also reported directly to Avista's Capital Planning Group, and the Company's senior leaders, including myself, through steering committees, various business meetings, and presentations.

Q. Has the Company calculated and included a description of any offsetting benefits to the capital projects in this case?

A. For those capital projects that have direct offsetting benefits, I have included a description of the offsets in the project description. Company witness Ms. Andrews (see Exh. EMA-1T and Exh. EMA-3) provides an explanation of how the direct offsets are factored into the revenue requirement of this case, an explanation of the Company's 2% efficiency adjustment for investments that have no direct offsets and are not a required investment, and a description of indirect offsets associated with the capital projects in this case.

Project #1 – Jackson Prairie Natural Gas Storage Facility

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $1,748,191 for 2023 and $2,397,000 for 2024. In addition, the Company has included the amount of $2,386,000 for 2025 and $2,386,000 for 2026.

Q. Please describe the Company's investments in the Jackson Prairie Joint Project.

A. Avista is one third joint owner in the Jackson Prairie Natural Gas Storage Project and has long relied on this asset to optimize gas prices and supply for the benefit of its customers. Like any asset, investments must be made in the facility each year to ensure the integrity of its safe, efficient, and cost-effective operation. Avista participates with its joint owners to identify and vet upcoming capital needs and to approve annual investments to be made in the facility. Company witness Mr. Kinney provides further information regarding

Avista's ownership in Jackson Prairie. The supporting business case for this project can be found in Exh. JDD-2, starting at page 3.

Project #2 – Local Reps Office Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $0 for 2023 and $248,981 for 2024. In addition, the Company has also included the amount of $248,983 for 2025.

Q. Please describe the Company's investments made under the Local Reps Office Program.

A. Both the Ritzville and Chewelah locations require extensive updates to the existing structures. As these buildings were not designed for Avista's needs, we proposed replacing these buildings with a new construction building on the existing sites rather than investing in structures that do not meet the requirements. The Ritzville and Chewelah buildings and the sites have many critical systems that need replacement including, HVAC, plumbing, and roof systems. There are many worn assets in dire need of replacement, as many of the capital projects have been put on hold until the future state of the site is known. Due to budget constrains we are moving forward with targeted transfers to plant for 2024 and 2025 to maintain the existing assets by addressing asset condition concerns and operational needs. The supporting business case for this program can be found in Exh. JDD-2, starting at page 11.

Project #3 – Metro 115kV Station Rebuild

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $0 for 2023 and $6,000,000 for 2024. In addition, the Company has also included the amount of $3,200,004 for 2025 and $38,700,000 for 2026.

Q. Please describe the Company's investments made under the Metro 115kV Station Rebuild project.

A. The selected choice for the Metro 115kV Substation rebuild includes four 115kV lines, ring bus configuration with 6 breakers, two 30 MVA power transformers, 9 network feeders and 2 distribution feeders, 8 air core reactors with enclosures, and switchgear in its own enclosure. Also included in the substation cost is an architectural security wall enclosure to provide security around the site, an underground cable vault for the large amount of network cables, a control and battery enclosure to house the control panels, and multiple underground duct banks that provide pathways in/out of the site for distribution, network, and transmission. The location of the new Metro substation in the Spokane's downtown core requires the security wall enclosure to adhere to a design review and permitting process that also includes architectural, landscaping, and other requirements to meet the downtown aesthetic. This site's smaller footprint requires unique layouts and designs to accommodate all the structures and equipment needed. The substantial cost increases in equipment and materials of the past few years have impacted the overall project budget and long-lead time equipment has had a negative impact on the timeline resulting in a longer construction period as well. The supporting business case for this project can be found in Exh. JDD-2, starting at

page 27.

Project #5 – Palouse Service Center

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $0 for 2023 and $746,533 for 2024. In addition, the Company has also included $750,011 for 2025.

Q. Please describe the Company's investments made under the Palouse Service Center Project.

A. The proposed solution is to relocate the Pullman Service Center to an entirely new location, where we will locate the office, line dock, pole yard and the warehouse. We will then sell the existing building to offset the cost. This will allow for future growth. Having all materials, supplies and staff in one location allows for improved use of resources and response times. The Pullman building and the site have many critical systems that need replacement, including electrical, HVAC, plumbing and roof systems. There are many worn assets in dire need of replacement, as many of the capital projects have been put on hold until the future state of the site is known. Due to budget constrains we are moving forward with targeted transfers to plant for 2024 and 2025 to maintain the existing assets by addressing asset condition concerns and operational needs. As funds become available in the future there will be a design completed for the building of a New Pullman Service Center to transfer to plant in 2029-2030. The supporting business case for this project can be found in Exh. JDD-2, starting at page 59.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. This will be realized once the project is fully completed, but we anticipate seeing direct offsets related to energy savings from more efficient equipment. This is estimated at about $501 yearly savings ($50,108 yearly energy costs x 1% per sqft = $501 yearly savings). We also anticipate the future sale of existing building and yard as a direct offset of $3,000,000 to $5,000,000. This is the estimated value but may vary based on the market at the time of the sale. Given these are future offsets, nothing has been included in this case.

Project #8 – Colstrip Transmission

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $133,074 for 2023 and $650,119 for 2024. In addition, the Company has also included the amount of $569,999 for 2025 and $99,997 for 2026.

Q. Please describe the Company's investments made under the Colstrip Transmission Program.

A. Investment in the assets associated with the Colstrip Transmission System is necessary to continue safe and reliable operation of the electric transmission equipment associated with the System, of which the Company retains an ownership share. The System maintains the Company's ability to integrate its Colstrip generation assets for service to bundled retail native load customers and provides the Company with a future transmission alternative to integrate prospective renewable resources located in Montana. The supporting business case for this project can be found in Exh. JDD-2, starting at page 8.

Project #9 – Electric Relocation and Replacement Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $3,869,387 for 2023 and $7,000,011 for 2024. In addition, the Company has also included the amount of $7,000,013 for 2025 and $7,000,005 for 2026.

Q. Please describe the Company's investments in the Electric Relocation and Replacement Program.

A. The Electric Replacement and Relocation (Road Moves) program is driven by compliance that is mandated by the Franchise Agreement contracts with local city and state entities, and permits issued by railroad owners. Within each agreement, there are provisions for relocation of utilities at the request of the right-of-way (ROW) owner. Under a Franchise Agreement or Permit, Avista is allowed to occupy space within a ROW owned by the respective jurisdiction in order to serve its customers but must relocate utilities at the request of the ROW owner. Electric relocations occur every year, mainly during construction season, but are primarily unplanned, so historical trends are used to estimate the annual cost to fully fund all the relocation projects.

This is mandatory work in order for us to remain in compliance and be allowed to continue operating in the public right-of-way. Due to the nature of the work there are no alternatives. If unfunded, Avista would not be able to perform necessary work and would be out of compliance with established franchise agreements and/or permits. The continued collaboration with state and local entities benefits our customer by allowing us to install electric equipment along ROW's so we can continue to provide our customers with safe,

reliable, and affordable service. The supporting business case for this program can be found in Exh. JDD-2, starting at page 95.

Project #10 – Gas Above Grade Remediation Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $339,000 for 2023 and $650,004 for 2024. In addition, the Company has also included the amount of $650,004 for 2025 and $650,004 for 2026.

Q. Please describe the Company's investments in Gas Above Grade Remediation Program.

A. Within Avista's natural gas distribution system there are sections of gas pipelines located above grade at crossings such as bridges, small ditches, irrigation canals, and other crossings where it is difficult to install buried pipelines. These above grade facilities vary in age, condition, design, compliance, and overall risk. The Company's investment in the Gas Above Grade Remediation Program provides capital funding for remediating the highest risk locations that cannot be sufficiently mitigated or resolved through O&M maintenance activities (e.g. pipe support replacement, coating/wrap repairs, etc.). The supporting business case for this program can be found in Exh. JDD-2, starting at page 103.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. Remediating high risk above grade pipelines using capital funding from this program will eliminate future O&M maintenance and pipeline quarterly patrolling activities. It's estimated that this will provide a direct cost offset of approximately $331,500

over the next 20 years, with approximately $29,000 over the Two-Year Rate Plan.

Project #11 – Gas Cathodic Protection Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $788,471 for 2023 and $665,000 for 2024. In addition, the Company has also included the amount of $665,000 for 2025 and $665,000 for 2026.

Q. Please describe the Company's investments in the Gas Cathodic Protection Program.

A. Avista uses cathodic protection anode systems to reduce corrosion on buried steel gas piping. There are approximately 250 anode systems in use throughout our service territory. The anodes used in these systems corrode over time and need to be replaced every 20 – 30 years. Additionally, as pipe coating degrades over time, additional anode systems must be added. The investments made under this program include installing new and replacement anodes and electronic equipment used to remotely control and monitor the anode systems. The supporting business case for this program can be found in Exh. JDD-2, starting at page 114.

Project #12 – Gas Facility Replacement Program (GFRP) Aldyl A Pipe Replacement

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $16,423,658 for 2023 and $27,187,249 for 2024. In addition, the Company has also included

the amount of $27,999,995 for 2025 and $29,999,998 for 2026.

Q. Please describe the Company's investments GFRP Aldyl A Pipe Replacement.

A. The Aldyl A Pipe Replacement Program[7] is a 20-year structured pipe replacement effort with dedicated internal and external resources focused on reducing natural gas system risk on a prioritized basis, by replacing priority Aldyl A pipe throughout Avista's natural gas distribution system. The Gas Facility Replacement Program (GFRP) was initiated in 2012 and is planned to continue for 20 years in Washington, until the end of 2031. The supporting business case for this program can be found in Exh. JDD-2, pages 123 - 181.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. Aldyl-A gas main is leak surveyed on an annual basis rather than the standard five-year cycle of other intermediate pressure natural gas mains. The 2023 contracted cost to survey one linear foot of gas main is $0.0458. When factoring in the 402 miles of Aldyl-A that has been removed from Avista's system since 2012 and the forecasted replacement scheduled between 2024-2028 we anticipate a direct cost savings of $104,630 in 2024, $112,037 in 2025, and $119,389 in 2026.

<u>Project #13 Gas Isolated Steel Replacement Program</u>

Q. What is the level of capital investment being made by Avista for this project through 2026?

[7] This pipe replacement program is managed by the Company's Gas Facility Replacement Program, which is the organizational program responsible for managing all aspects of replacement planning and execution of all individual replacement projects. Multiple individual projects are carried out across our natural gas service area each year.

A. The total capital investments proformed for July 2023 through 2024 are $1,368,102 for 2023 and $2,000,000 for 2024. In addition, the Company has also included the amount of $2,000,000 for 2025 and $2,000,000 for 2026.

Q. Please describe the Company's investments in the Isolated Steel Replacement Program.

A. Related to our cathodic protection systems, the Company is required to identify portions of its natural gas system where we have "cathodically isolated" sections of steel piping, including natural gas service risers, and to replace them with non-corrosive pipe within a specified timeframe. Isolated steel sections are just that, they are electrically separated from the cathodic protection system by sections of non-corrosive (plastic) pipe or by fittings that are insulated and prohibit the transmission of cathodic protection. Because these sections are not connected to the cathodic protection system, they are not afforded the extra level of protection beyond their protective coating. Identifying and replacing isolated steel sections of pipe is required by federal and state regulations.[8] The supporting business case for this program can be found in Exh. JDD-2, starting at page 182.

<u>Project #15 – Gas PMC Program</u>

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $272,468 for 2023 and $3,200,000 for 2024. In addition, the Company has also included the amount of $3,200,000 for 2025 and $3,000,000 for 2026.

[8] Docket PG-100049.

Q. Please describe the Company's investments in its Natural Gas PMC Program.

A. Avista is required by Commission rules and tariffs in its three state jurisdictions to annually test a portion of its natural gas meters for accuracy, and to ensure overall meter performance. This program is known as the Planned Meter Changeout Program (PMC) and uses a statistical sampling methodology[9] to determine the number of meter changeouts that must be completed each year. If samples from a meter "family" are not meeting accuracy standards, then the Company will remove that population of meters from service. Conversely, if the results meet our standards of accuracy, then the sample size for that meter family may be reduced in the future. These analytics help control costs and remove meters quickly when not performing well. The supporting business case for this program can be found in Exh. JDD-2, starting at page 200.

Project #16 – Gas Replacement Street and Highway Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $2,696,316 for 2023 and $3,718,000 for 2024. In addition, the Company has also included the amount of $3,830,000 for 2025 and $3,945,000 for 2026.

Q. Please describe the Company's current investments in the Gas Replacement Street and Highway Program.

A. Nearly all Avista's natural gas pipelines are located in public utility easements

[9] ANSI Z1.9 "Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming."

set aside for this purpose, which are controlled by jurisdictional franchise agreements. Avista is required under these agreements to relocate its facilities, at our cost, when local jurisdictional projects, typically transportation, require the move. In some instances, the Company will have a substantial lead time to plan, budget, design, and permit for the move, but in most cases, we're notified of the need to move during the year the project must be completed. The supporting business case for this program can be found in Exh. JDD-2, starting at page 209.

Project #18 – Generation Interconnection

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $108,535 for 2023 and $0 for 2024. In addition, the Company has also included the amount of $38,006 for 2025 and $554,008 for 2026.

Q. Please describe the Company's investments made under the Generation Interconnection Program.

A. Pursuant to the Company's mandatory federal compliance requirements under Avista's Open Access Transmission Tariff (Tariff) and applicable Federal Energy Regulatory Commission (FERC) rules and regulations, the Company must fund the design and construction of new and/or upgraded transmission facilities to provide generation interconnection service. The Interconnection Customer provides initial advanced funding for Network Upgrades, the Company must ultimately provide repayment (or Transmission Service credits) to the Interconnection Customer over a specified period of time, not to exceed

20 years after the generating facility commences commercial operation. The supporting business case for this program can be found in Exh. JDD-2, starting at page 227.

Project #19 – Joint Use

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $3,203,666 for 2023 and $3,999,996 for 2024. In addition, the Company has also included the amount of $3,999,996 for 2025 and $3,000,000 for 2026.

Q. Please describe the Company's investments in Joint Use projects.

A. Joint Use is the regulated use of utility poles and other structures by third-party telecommunications companies in order for them to provide their services to the customers we have in common. Avista licenses 73 unique entities that are attached to over 150,000 poles across Avista's service territory and is required by federal, state, and local laws to allow non-discriminatory access to those assets. Even though this relationship is mandated by law and is compliance driven, Avista agrees that this practice provides a direct benefit to our customers who desire those services.

Part of this requirement includes the obligation of Avista to replace infrastructure to taller stronger structures in order to accommodate or "make ready" those facilities for new attachments. This make ready work falls under capital expense and Avista is allowed to recover the actual costs from the requesting attacher. Avista is also allowed to recover a portion of the cost of replacing & maintaining shared infrastructure via a regulated yearly pole rental fee. Avista would face potential regulatory and or civil legal action if timelines and

obligations are not met due to a lack of funding. The supporting business case for this project can be found in Exh. JDD-2, starting at page 235.

Project #21 – Transmission Construction – Compliance

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $2,138,505 for 2023 and $500,000 for 2024. In addition, the Company has also included the amount of $500,000 for 2025 and $250,000 for 2026.

Q. Please describe the Company's investments made under the Transmission Construction – Compliance Program.

A. This program covers the transmission rebuild and reconductor work identified by the Company as necessary to maintain compliance with the NERC reliability standards.[10] The applicable standard requires Avista to complete an annual planning assessment, to identify shortfalls and corrective actions, and for those actions to be timely implemented within specific timeframes to remedy identified system performance deficiencies. Avista's Transmission Construction - Compliance Program identifies funding needed to mitigate identified reliability issues, ensuring our compliance with NERC requirements. In addition to meeting NERC standards, this program also includes construction to remedy issues on any transmission line that is not compliant with the current capacity criteria under the National

[10]NERC Reliability Standard TPL-001-4 – Transmission System Planning Performance Requirements ("Standard"), has 8 requirements and 57 sub-requirements related to planning and analysis, including the requirement for robust system models to determine system stability, voltage levels and system performance under various scenarios.

Electric Safety Code (NESC). The NESC minimum criteria have also been adopted as requirements by the State of Washington. The supporting business case for this program can be found in Exh. JDD-2, starting at page 253.

Project #24 – WSDOT Control Zone Mitigation

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $580,562 for 2023 and $999,998 for 2024. In addition, the Company has also included the amount of $999,998 for 2025 and $2,000,002 for 2026.

Q. Please describe the Company's WSDOT Control Zone Mitigation Program.

A. This program was developed to mitigate poles identified to be in the control zones within Washington State highway rights of way. Twenty-nine of Avista's thirty-five WSDOT Franchise Agreements have expired, and as part of renewing the agreements, the poles located within the control zone must be moved to meet the WSDOT Control Zone requirements. There are 1,000 pole locations that must be mitigated as part of this plan. However, movement of the identified poles will impact neighboring poles which will then need to be moved. This program will also address scenic highway compliance, crossing wire heights, and previously red-tagged poles left in place due to expired Franchise Agreements. In 2020, the Control Zone Steering Committee worked to create a plan to mitigate this issue which led to this Business Case.

The program is designed to meet the WSDOT Clear Zone requirements and allow

Avista to obtain renewed franchise agreements that allow Avista to maintain its facilities in a proactive manner. Our customers will benefit by moving poles considered to be elevated risk for hitting if a vehicle leaves the traveled path and reduces unplanned outages from identified failed assets. The risks of not proceeding with this business case means:

• Avista facilities will be maintained in a run-to-failure mode as identified rejected poles are not replaced promptly

• Wildland-urban interface (WUI) required retrofitting may not take place.

• Potential car-hit-poles are left in place.

Finally, RCW Title 47.44.060 Penalties describes the WSDOT out of compliance Franchise risk: Without having obtained and kept the franchise in full force and effect at all times is guilty of a misdemeanor. Each day of violation is a separate and distinct offense. A civil penalty of $100 per calendar day of violation may be assessed until such time that the subject facility is removed. This program also helps ensure that Avista's poles are inspected and maintained within its current twenty-year cycle. The supporting business case for this program can be found in Exh. JDD-2, starting at page 276.

Project #25 – Capital Equipment Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $2,179,307 for 2023 and $2,074,003 for 2024. In addition, the Company has also included the amount of $2,079,010 for 2025 and $2,085,001 for 2026.

Q. Please describe the Company's investments in the Capital Equipment

Program (previously Capital Tools and Stores).

A. This program provides funding for the tools and equipment needed for Avista's employees to perform new construction, make repairs, complete essential maintenance, and ensure system integrity. This equipment, which needs to be adequate and fully available for both planned work and emergency response, has to meet the needs of our electric, natural gas, communications, fleet, facilities and generation crews, and infrastructure. The supporting business case for this program can be found in Exh. JDD-2, starting at page 288.

Project #26 – Distribution Grid Modernization

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $1,055,048 for 2023 and $987,476 for 2024. In addition, the Company has also included the amount of $979,842 for 2025 and $911,763 for 2026.

Q. Please describe the Company's Distribution Grid Modernization Program.

A. The purpose of this program is to rebuild and upgrade every electric feeder in Avista's distribution system. Some objectives within this program are replacing end of life assets, while evaluating improvements in feeder design to bolster service reliability, capture energy efficiency savings, and improve operational ability, code compliance and safety.[11] These objectives are accomplished through the systematic replacement of end-of-life

[11] Instead of simply replacing equipment like poles in place and in kind, Grid Modernization looks at the overall feeder design to evaluate the opportunity for gains captured through new designs, feeder alignment, dividing feeders, and new technology.

equipment, such as old poles, conductor, and transformers, with new and more energy-efficient equipment that ensures the long-term, efficient operability of the system. Other issues addressed on each feeder include pole realignment to address accessibility issues and right-of-way concerns, potential feeder undergrounding, coordination of joint use facilities, and clear zone compliance. On qualifying feeders, additional system reliability value is captured by installing distribution line automation devices to help isolate outages and reduce the number of customers that experience a sustained outage (also known as feeder automation). The supporting business case for this program can be found in Exh. JDD-2, starting at page 296.

Project #27 – Distribution Minor Rebuild

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $6,779,574 for 2023 and $12,999,990 for 2024. In addition, the Company has also included the amount of $12,999,991 for 2025 and $12,204,154 for 2026.

Q. Please describe the Company's Distribution Minor Rebuild Program.

A. Distribution Minor Rebuild is an ongoing program that focuses on keeping the distribution system in a safe and reliable condition for customers, ensuring responsiveness to unplanned damages on distribution assets (car hit pole, broken crossarm, burned up transformer, etc.) that are not related to weather events, as well as small customer driven rebuilds. Throughout the entire distribution system, minor rebuilds, or replacement of asset units are required to be completed to maintain system reliability and safety.

The work includes failed asset replacements, small mandatory or compliance driven work, smaller performance and capacity improvements, or unplanned customer requests. Occasionally, larger projects with an identified need and short timeframe for implementation are constructed under the Distribution Minor Rebuild business case. Even though the work is unplanned, Minor Rebuild work occurs regularly due to the nature of the utility business and numerous assets in the field spread over a wide geographical area. An adverse accumulation of unrepaired assets would greatly put line workers and the public at risk as minor asset failures begin to deteriorate pockets of the distribution system as well as decreasing the reliability of the distribution system. The supporting business case for this program can be found in Exh. JDD-2, starting at page 308.

Project #28 – Distribution System Enhancements

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $6,106,491 for 2023 and $10,162,656 for 2024. In addition, the Company has also included the amount of $7,499,982 for 2025 and $9,999,987 for 2026.

Q. Please describe the Company's Distribution System Enhancements.

A. Avista's electric distribution system consists of 370 discrete primary electric circuits (feeders) encompassing over 19,300 circuit miles of overhead conductors and underground cables, along with all the other equipment needed to operate an electric distribution system. Load Demands on the grid are dynamic with load patterns changing because of many factors including weather, temperature, economic conditions, conservation

efforts, and seasonal variations. The distribution grid is managed by division or 'Operations Engineers' and centralized Distribution Planning. The performance and capacity needs of this system are constantly changing, and this business case is the main tool available to our Operations Engineers so that they can keep up with these system demands. Most of the work completed with this business case addresses capacity constraints driven by load growth, which we anticipate being higher in coming years than historical growth rates, throughout the system.

The main driver for this business case is load growth on our electric distribution system. This business case is primarily focused on ensuring that our electric distribution system can accommodate our load growth. In this business case our engineers are looking at the system as a whole within their areas and identifying needed projects that will keep the system operating within acceptable parameters. Other drivers of this business case include power quality investigations and subsequent mitigation projects which are initiated by customer inquiries or engineering analysis work. Work is also driven by reliability, system performance issues, and safety concerns that are identified by our engineers and/or operation personnel. Power quality, reliability and safety driven projects completed through this business case are meant to mitigate code violations and observed system issues that will help maintain adequate levels of service in these areas for our customers. Operational flexibility can also drive the need to upgrade electric circuits, install switching equipment, and other infrastructure as needed. The supporting business case for this project can be found in Exh. JDD-2, starting at page 318.

Project #29 – Downtown Network – Asset Condition

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $1,245,324 for 2023 and $2,000,000 for 2024. In addition, the Company has also included the amount of $2,000,000 for 2025 and $2,000,000 for 2026.

Q. Please describe the Company's investments in its Downtown Electric Network.

A. Avista's Downtown Electric Network provides highly reliable electric service to our large commercial customers in Spokane's downtown core. The network consists of a complex system of underground vaults, underground electrical cable, transformers, and network protectors. This is very long-lived infrastructure; as an example, of the approximately 580 underground vaults in service, nearly 80% of them were constructed before 1930, meaning they are now 90 years and older (some up to 120 years). Much of the cable in place was installed in the late 1920's. Because this infrastructure lasts so long, it is possible to have it provide very reliable service for many decades after the investment is fully depreciated. In recent years, the Company has been making increasing investments in the network, particularly in replacing aging transformers and network protectors. More recently Avista has engaged in a more comprehensive infrastructure refresh plan for the network based on replacement of the highest-risk end of life assets, which includes transformers, network protectors, grounds, cable, vaults, structures, and cable duct banks. The supporting business case for this program can be found in Exh. JDD-2, starting at page 333.

Q. Are there any direct offsetting benefits associated with this project?

A. Yes. As a result of this project there are direct O&M savings of $75,000 for

2024, $75,000 for 2025, and $75,000 for 2026.

Project #30 – Downtown Network – Performance & Capacity

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $2,736,210 for 2023 and $1,200,021 for 2024. In addition, the Company has also included the amount of $1,200,022 for 2025 and $1,200,753 for 2026.

Q. Please describe the Company's investments in the Downtown Network – Performance & Capacity project.

A. I have briefly described the Company's downtown electric network in Spokane in my testimony above, with a focus on the need to replace infrastructure that is at or beyond its useful service life based on asset condition. In this network program the Company is focused on investments required to operate the system within safe design standards while meeting increasing customer and electrical capacity demands being placed on the system. Examples of investments made under this program include constructing larger underground vaults to provide more space for transformers and protectors, larger duct banks for additional cable, and larger transformers to carry additional load. Without this additional capacity, network cables and equipment would have to be overloaded, subjecting assets to a greater risk of failure, exceeding equipment ratings and prudent operating limits, reducing the life expectancy of assets, and accepting the risk of shedding customer load during periods of peak demand on the network. The supporting business case for this project can be found in Exh. JDD-2, starting at page 349.

Q. Are there any direct offsetting benefits associated with this project?

A. Yes. As a result of this project there are direct O&M savings of $40,000 for 2024, $40,000 for 2025, and $40,000 for 2026, related to labor savings.

Project #31 – Electric Storm

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $6,935,274 for 2023 and $4,975,634 for 2024. In addition, the Company has also included the amount of $5,000,005 for 2025 and $5,000,008 for 2026.

Q. Please describe the Company's investments under the category of Electric Storm.

A. The Electric Storm Business Case is focused on restoring Avista's transmission, substation, and distribution systems (damaged plant) into serviceable condition during a weather storm event or other natural disaster where assets are damaged. The damage can be due to reasons such as, high winds, heavy ice and snow loads, lightning strikes, flooding, or wildfires. Significant storm events are best understood as random forces[12] that often occur with short notice and are beyond the control of the Company.[13] This business case is to fund a rapid response to unexpected damages and outages, so customer outage times are minimized. The business case provides funds for replacing poles, cross arms, conductor,

[12] Though the incidence of major storm events can follow cyclical patterns based on season of the year, we refer to them as random events because their occurrence, timing and magnitude cannot be predicted.

[13] Beyond the control of the Company refers to the fact that these "outside forces" exceed the ability of our system to withstand them without some resulting failures. While it is possible to have a system capable of better withstanding these events it would require a substantial redesign of our system and massive capital investments to rebuild it. One example of 'system redesign' would be to convert substantial portions of our electric distribution system from overhead to underground service where it would be relatively more immune to these outside forces, but which would be cost-prohibitive, and introduce other maintenance concerns.

transformers, and all other defined retirement units damaged during weather storm events. The importance of quickly replacing damaged facilities is vital to providing reliable service to our customers. This impacts customers in Washington and Idaho. The supporting business case for this program can be found in Exh. JDD-2, starting at page 361.

Project #32 – Fleet Service Capital Plan

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $3,891,975 for 2023 and $6,850,000 for 2024. In addition, the Company has also included the amount of $5,748,784 for 2025 and $7,092,857 for 2026.

Q. Please describe the Company's investments in the Fleet Services Capital Plan.

A. Fleet vehicles and equipment simply do not age well, as they are subject to a duty cycle that most vehicle owners would not experience in their personal car or truck. Avista's fleet of vehicles operate in environments that are often at the extreme: the hottest or the coldest, the dustiest, constant in and out, starting and stopping, high idle time and high loads. These factors lead to substantial wear and tear on our vehicles, even under prudent and proper use. Over time this leads to substantial maintenance and repair costs and reduced reliability/availability.

The Company's fleet replacement program optimizes the life of each vehicle allowing us to extract the right amount of useful value from our vehicles before they experience an accelerated rate of repair expenses. The investments made under this plan represent the annual

investments needed to replace a portion of our service fleet each year based on asset condition (replacement at end-of-life). Avista's fleet group uses industry best practices, data, and a proprietary, third-party asset management system[14] to identify when to replace equipment in order to achieve the lowest total cost of ownership for our customers. The supporting business case for this program can be found in Exh. JDD-2, starting at page 369.

Project #33 – Gas ERT Replacement Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments for July 2023 through December 2023 was $302,676. Beyond 2023, all transfers to plant for this business case are expected to occur in Idaho and Oregon and is therefore not included in Washington provisional capital.

Q. Please describe the Company's investments made under the Gas ERT Replacement Program.

A. This program uses a proactive and strategic method for addressing asset condition by replacing ERT modules before their battery fails. Replacing these assets before they fail will avoid a manual process of estimating a customer's gas usage for billing, resulting in higher customer satisfaction. It is also more efficient and cost effective to proactively replace old ERTs rather than waiting until their battery fails and having to send out a serviceman to replace it.

There were approximately 6,200 meters located in "gas only" areas of the Washington

[14] Avista uses the services of Utilimarc, a utility-focused data analytics Company that benchmarks and performs similar analysis for over 50 investor-owned utility fleets nationwide. https://www.utilimarc.com/

service territory. These meters were not included in the Washington AMI Project due to them being in a gas only area. To ensure proper reporting of gas usage on these meters, ERTs were installed that allowed for meter reading to happen via a mobile collector. Approximately 5,000 of these ERTs were installed in 2022 and 1,200 in 2023. The supporting business case for this program can be found in Exh. JDD-2, starting at page 384.

Project #34 – Gas Non-Revenue Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $3,685,505 for 2023 and $9,682,000 for 2024. In addition, the Company has also included the amount of $9,972,000 for 2025 and $10,272,000 for 2026.

Q. Please describe the Company's investments made under the Natural Gas Non-Revenue Program.

A. The work in this annual program is mostly reactionary, unscheduled work and is therefore difficult to predict aside from using historical trends. The following situations are typical triggers for such work: shallow facilities found by excavation (the excavation may or may not be related to gas construction), relocation of facilities as requested by others (except for road and highway relocations), leak repairs on mains or services, remediation of cathodic protection (CP) issues, farm tap elimination, and overbuilds. Gas Engineering is responsible for projects under the Gas Non-Revenue program that require substantial design efforts such as farm tap retirements, highway or river crossings, and replacing steel pipelines with plastic pipe, but the local districts manage the work. The supporting business case for this program

can be found in Exh. JDD-2, starting at page 396.

Project #35 – Gas Regulator Station Replacement Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $685,386 for 2023 and $1,069,995 for 2024. In addition, the Company has also included the amount of $1,069,995 for 2025 and $1,069,995 for 2026.

Q. Please describe the Company's investments in the Natural Gas Regulator Station Replacement Program.

A. This program addresses needed replacements of existing 'at-risk' natural gas gate stations, regulator stations and industrial customer meter sets ("stations") located across Avista's natural gas service territory. The stations set to be replaced have reached the end of their useful service life, fail to meet the Company's current natural gas standards, and can no longer be properly maintained because of obsolete equipment. These replacements improve system operating performance, enhance operating safety, remove operating equipment that is no longer supported, and ensure the reliable operation of metering and regulating equipment. The supporting business case for this program can be found in Exh. JDD-2, starting at page 409.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. As a result of this program there are direct O&M savings of $3,400 in 2024 and $5,300 in 2025 and $7,200 in 2026, related to not needing to upgrade infrastructure.

Project #36 – Gas Reinforcement Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $468,738 for 2023 and $1,577,830 for 2024. In addition, the Company has also included the amount of $1,000,000 for 2025 and $1,000,000 for 2026.

Q. Please describe the Company's investments in the Natural Gas Reinforcement Program.

A. This annual program will identify and provide for necessary capacity reinforcements to the existing natural gas distribution system in Washington Idaho, and Oregon. Avista has an obligation to serve existing firm gas customers by providing adequate capacity on design day weather conditions. The design day is defined as the 30-year coldest average daily temperature of a weather region with 99% probability of happening. Periodic reinforcement of the system is required to reliably serve firm customers due to increased demand at existing service locations and new customers being added to the system. Execution of this program on an annual basis will ensure the continuation of reliable gas service that is of adequate pressure and capacity. Following the settlement agreement approved in the Company's last general rate case, which required the Company to consider NPAs in its gas distribution planning processes[15], an alternative to this program was added to include an evaluation of non-pipe alternatives (NPAs) for capacity reinforcements. To date, no alternative has allowed us to continue providing adequate capacity for our natural gas customers, which is an essential requirement of our service. The supporting business case for

[15] Dockets UE-220053, UG-220054, UE-210854 *(Consolidated), Final Order 10/04, ¶86.*

this program can be found in Exh. JDD-2, starting at page 421.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. As a result of this program there are direct O&M savings of $22,800 in 2024, 2025 and 2026, related to elimination the Company's Cold Weather Action Plan, which requires actively monitoring the natural gas system and establishing a plan should an outage occur.

Project #37 – Gas Telemetry Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $184,132 for 2023 and $100,000 for 2024. In addition, the Company has also included the amount of $100,000 for 2025 and $100,000 for 2026.

Q. Please describe the Company's investments in the Gas Telemetry Program.

A. This investment provides funding for additions, improvements, and replacements to Avista's existing Gas Telemetry system. Telemetry facilities include flow computers, electronic volume correctors, and electronic pressure monitors. The Gas Telemetry System provides safety related pressure monitoring and alarms at gate stations, regulator stations, pipelines, odorizers, and transportation customers. This data is critical for gas procurement, billing, engineering analysis, system operations and compliance with Federal Codes. The supporting business case for this program can be found in Exh. JDD-2, starting at page 433.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. Currently, Avista Telemetry Technicians spend time every month responding to communication issues related to obsolete equipment using dial-up modem technology. This results in approximately 32 trouble-shooting activities per year with an annual labor cost of about $7,500. Replacing obsolete dial-up modem equipment with modern cellular IP equipment would result in a direct offset of $7,561 for 2024, 2025, and 2026.

Project #38 – LED Change-Out Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $162,877 for 2023 and $200,003 for 2024. In addition, the Company has also included the amount of $199,999 for 2025 and $199,999 for 2026.

Q. Please describe the Company's investments in the LED Change-Out Program.

A. Any local or state government which has jurisdiction over streets and highways has an obligation to the general public they serve to provide acceptable illumination levels on their streets, sidewalks, and/or highways intended for vehicle driver and pedestrian safety. Avista manages streetlights for many local and state government entities to provide such street, sidewalk, and/or highway illumination for their streets by installing overhead streetlights. Upon light burn-out, lights are converted to LED. The supporting business case for this program can be found in Exh. JDD-2, starting at page 445.

Project #39 – Meter Minor Blanket

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $152,207 for 2023 and $250,001 for 2024. In addition, the Company has also included the amount of $250,001 2025 and $250,001 for 2026.

Q. Please describe the Meter Minor Blanket.

A. The meter minor blanket is used to charge the labor associated with new electric meter installations in Washington and Idaho, due to the replacement of failed plant (meters) that can no longer gather or communicate accurate consumption data. Failed plant is a result of various reasons including but not limited to, age, weather/environmental damage, hardware failure, or radio communication failures. A meter must be installed as soon as possible to accurately capture customer energy consumption data. For this reason, Avista must sustain a continuous stock of each electric meter type, and budget the required labor to install these meters. The Meter Minor Blanket Business Case is driven by tariff requirements that mandate Avista's obligation to serve existing customer load within our franchised area. Please see the business case for more information on this project. The supporting business case for this program can be found in Exh. JDD-2, starting at page 456.

Project #40 – New Revenue – Growth

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investment proformed for July 2023 through 2024 are

$61,695,518 for 2023 and $78,505,094 for 2024. In addition, the Company has included the amount of $73,745,609 for 2025 and $75,985,327 for 2026.

Q. Please describe the Company's New Revenue – Growth investments.

A. Avista defines these investments as "customer requests for new service connections, line extensions, transmission interconnections, or system reinforcements to serve a single large customer." In the past we have referred to new service connects as "growth," which refers growth in the number of customers Avista services. It's important to note that these investments are beyond the control of the Company, and as such they do not reflect a plan or strategy on the part of Avista. Typical projects include installing electric or gas facilities to news housing or commercial developments, installing or replacing electric or gas meters, or adding street or area lights at the request of a customer, city, or county agency. As would be expected, fluctuation in the number of new customer connections is largely dependent on local economic conditions both in the housing and business sectors.

The New Revenue – Growth Business Case is driven by requirements that mandate Avista's obligation to serve new customer load when requested within our franchised area. Growth is also seen as a method to spread costs over a wider customer base, keeping rate pressure lower than would otherwise be experienced. The supporting business case for this program can be found in Exh. JDD-2, starting at page 462.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. The revenue associated with New Revenue – Growth has been included in the case as a direct offset. That adjustment is sponsored by Ms. Andrews (see Adjustments 4.02 and 5.08).

Project #41 – SCADA – SOO and BuCC

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments performed for July 2023 through 2024 are $1,086,767 for 2023 and $700,000 for 2024. In addition, the Company has also included the amount of $700,000 for 2025 and $701,014 for 2026.

Q. Please explain the SCADA – SOO and BuCC Program and the need for planned investments.

A. The Company increasingly relies on comprehensive digital monitoring of critical power system infrastructure and communication interconnectivity that provides real-time visibility, status, and the ability for remote and automated operations. Avista relies on the industry-standard system known as Supervisory Control and Data Acquisition (or SCADA) to provide this functionality.[16] The Company is required to continuously upgrade and enhance its SCADA systems to replace end-of-life technology and to meet expanding regulatory requirements and business needs. This particular project, the System Operations Office (SOO) and Backup Control Center (BuCC) is replacing and upgrading existing SCADA communications for our electric and natural gas control centers. The control systems addressed under this program provide real-time visibility, situational awareness, remote operation, and control of these systems. The investments made in our SCADA systems ensure we can continue to operate our energy delivery systems safely and remain in compliance with a broad range of FERC Orders, NERC standards, and federal pipeline safety requirements

[16] SCADA, and extension of industrial process control, has been around since the early 1960s, and the term "SCADA" became commonly used by the mid-1970s. SCADA systems, naturally, have evolved through several major generations as computing and communications technologies have evolved and advanced.

under PHMSA. The supporting business case for this program can be found in Exh. JDD-2, starting at page 472.

Project #42 – Structures and Improvements/Furniture

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $4,056,748 for 2023 and $5,348,646 for 2024. In addition, the Company has also included the amount of $4,238,511 for 2025 and $4,399,224 for 2026.

Q. Please describe the Company's investments in the Structures and Improvements/Furniture Program.

A. These investments fund capital maintenance, site improvements, security, and other needs related to the Company's 72 building facilities that provide office, operations, storage space and other business functions. These capital maintenance projects can include roofing, siding, asphalt, electrical and plumbing work, remodeling, furniture replacements and new furniture for growth in operations. Approximately half the investments fund asset replacements based on end-of-life condition and the Company's facilities management group uses a specialized application to help determine the optimum timing for these replacements. Approximately 30% of the annual funding supports immediate needs identified by the Avista work groups with responsibility for each facility, and the remaining funds go to emergent needs that could not be anticipated in the planning process. The supporting business case for this program can be found in Exh. JDD-2, starting at page 483.

Q. Are there any direct offsetting benefits associated with this program?

A. Yes. As a result of this program there are direct capital savings of $20,000 in

2024, $20,600 in 2025 and $21,220 in 2026 due to Scope Reduction in Planned work. There is also direct O&M savings of $11,000 in 2024, $11,330 in 2025 and $11,670 in 2026, related to savings from newer energy efficient equipment.

Project #43 – Substation – Asset Condition Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $17,853,298 for 2023 and $25,772,370 for 2024. In addition, the Company has also included the amount of $44,265,853 for 2025 and $34,666,286 for 2026.

Q. Please describe the Company's investments in the Substation - Asset Condition Program.

A. The Substation Asset Condition Business Case is comprised of three Projects. ER 2000 includes major equipment spares (power transformers, high voltage breakers, etc.) that are held in stock until they are transferred to a location. ER 2204 includes major substation projects that contain multiple equipment asset condition issues, compliance updates and capacity upgrades. A substation rebuild is planned when several equipment types are at end of life. These projects also include significant Distribution system, Transmission system and Communication system work. ER 2215 includes small substation projects (single transformer replacements, regulator upgrades, etc.) that have been deemed necessary due to asset condition leading to imminent equipment failure. Equipment failures for capital items that have been run to failure are funded through ER 2215.

Substation equipment needs to be replaced when it fails to fulfill its intended function.

Substation equipment may also need to be replaced when it has become obsolete. Obsolescence is due to parts or software not being available to maintain a piece of equipment. There were 95 projects opened and completed in 2020 that aimed at addressing individual pieces of equipment that failed to fulfill their intended purpose or became obsolete. The supporting business case for this program can be found in Exh. JDD-2, starting at page 503.

Project #44 – Substation – Performance & Capacity Program

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments performed for July 2023 through 2024 are $3,760,226 for 2023 and $8,621,160 for 2024. In addition, the Company has also included the amount of $7,399,007 for 2025 and $1,350,006 for 2026.

Q. Please describe the Company's investments in the Substation – Performance & Capacity Program.

A. Avista actively monitors the customer loads placed on its energy delivery systems, identifies portions of its infrastructure where capacity has been reached or exceeded, evaluates options for best addressing these priority capacity constraints and invests in solutions to ensure we meet current and long-term customer needs. This program is focused on investments needed to add new electrical capacity to our distribution substations in response to growth in demand on the feeders supported by these stations. Beyond just meeting capacity requirements these investments provide Avista with greater operational flexibility, ease of maintenance, and electric service reliability for our customers. The supporting business case for this program can be found in Exh. JDD-2, starting at page 518.

Project #45 – Transmission – Minor Rebuild

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $3,674,974 for 2023 and $3,343,420 for 2024. In addition, the Company has also included the amount of $3,343,420 for 2025 and $3,343,419 for 2026.

Q. Please describe the Company's investments in the Transmission Minor Rebuild Program.

A. Through this program, Avista's Transmission Engineering group performs the transmission line rebuild and reconductoring work necessary to maintain compliance with NERC reliability standards. Specifically, the requirements for annual inspections and implementation of any corrective actions identified. Corrective or mitigation actions focus on equipment that has failed in service or is nearing the end of its useful service life based on asset condition, the rating probability of a failure, and magnitude of the consequence. Only a portion of the mitigation work is recognized as mandatory under the standard and the balance of the needed investments is funded under the program Transmission Major Rebuild – Asset Condition (#48), described below. The supporting business case for this program can be found in Exh. JDD-2, starting at page 529.

Project #46 – Transmission – Performance & Capacity

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments performed for July 2023 through 2024 are $0 for

2023 and $100,000 for 2024. In addition, the Company has also included the amount of $1,400,000 for 2025 and $500,000 for 2026.

Q. Please describe the Company's investments made under the Transmission – Performance & Capacity program.

A. The Transmission Performance & Capacity Business Case covers the new Transmission construction work necessary to either support the addition of new substations due to load growth in a particular area or to reinforce existing substations with new transmission for increased performance. The projects within this program are typically requested by System Planning or System Operations. Adding substations and associated transmission is based on forecasted load increases. These forecasts can either overshoot or undershoot actual conditions. It is therefore necessary that a structured and measured approach be made to adding this infrastructure so as not to overtax budget, design and construction, and outage resources. The supporting business case for this program can be found in Exh. JDD-2, starting at page 536.

Project #47 – Transmission – Critical Crossing Reinforcement

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments performed for July 2023 through 2024 are $0 for 2023 and $1,000,000 for 2024. In addition, the Company has also included the amount of $1,000,000 for 2025 and $2,000,000 for 2026.

Q. Please describe the Company's investments made under the Transmission – Critical Crossing Reinforcement Program.

A. The Transmission Critical Crossing Reinforcements Business Case identifies high failure consequence asset/structure locations; that, if subject to failure, would create life loss or injury conditions. Avista is dedicated to providing safe and reliable service to our customers, ensuring failures that could lead to these conditions are avoided; and that trust with Avista's service territory community remains. These locations are specifically highway, railway, and waterway crossings. The supporting business case for this program can be found in Exh. JDD-2, starting at page 545.

Q. Are there any direct offsetting benefits associated with this program?

A. Direct offsets associated with this project are the incremental costs associated with performing work under emergency conditions versus planned conditions. Emergency conditions would result in overtime wages and increased contractual expenditures. The annual estimated value of these Direct Offsets for 2024, 2025, and 2026 is $5,000 per year.

Project #48 – Transmission Major Rebuild – Asset Condition

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $6,558,470 for 2023 and $8,250,000 for 2024. In addition, the Company has also included the amount of $9,040,634 for 2025 and $10,000,000 for 2026.

Q. Would you please describe the Company's Transmission Major Rebuild – Asset Condition Program?

A. This program provides for the major rebuild of electric transmission lines that are nearing the end of their useful service life based on overall condition of the assets, the

rating probability of a failure, and magnitude of the consequence. Factors such as operational issues, ease of access during outages; and potential benefits of communications build-out are considered when planning and prioritizing the work to be completed. The supporting business case for this program can be found in Exh. JDD-2, starting at page 553.

Project #49 – Wood Pole Management

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments proformed for July 2023 through 2024 are $7,659,818 for 2023 and $13,000,004 for 2024. In addition, the Company has also included the amount of $9,999,994 for 2025 and $9,999,994 for 2026.

Q. Would you please describe the Company's Distribution Wood Pole Management Program?

A. Yes. Avista has approximately 230,000 to 240,000 wood poles[17] in its electric distribution system and a portion of these must be replaced each year based on asset condition. These are replacement of poles and attachments that have reached the end of their useful service life. Our wood poles are inspected on a 20-year cycle, resulting in the inspection of approximately 12,000 poles each year.[18] Individual poles or attached equipment that don't meet our inspection requirements are replaced as part of capital follow-up work. Attached equipment includes overhead distribution transformers, cutouts, insulators and pins, wildlife guards, lighting arresters, cross arms, pole guying, and grounds. The supporting business case

[17] Under the current inspection program, individual poles are validated by location, age, and material in our geographic information system, leading to an overall refinement in the population size.
[18] Avista's Wood Pole Inspection Program is funded as an expense.

for this program can be found in Exh. JDD-2, starting at page 564.

Project #50 – Central 24 HR Operations Facility

Q. What capital additions for this Project did Avista make from July 2023 through December of 2026?

A. The total capital investments performed for July 2023 through 2024 are $0 for 2023 and $0 for 2024. In addition, the Company has also included the amount of $0 for 2025 and $3,499,757 for 2026.

Q. Please describe the Company's current investments in the Central 24 HR Operations Facility Project.

A. For decades, several of Avista's most critical operations have been located on the 4th floor of Avista's General Office Building on the Mission Campus. This includes departments such as Transmission System Operations, Supervisory Control and Data Acquisition, Distribution Operations, Gas Control, Network Operations, Security Operations, and 24-Hour Call Center Reps. Over time, as each of these departments experiences new growth due to ever-changing utility requirements and/or initiatives, capacity has been reached in their available square footage. The supporting business case for this project can be found in Exh. JDD-2, starting at page 577.

Project #51 – West Plains New 230kV Substation

Q. What is the level of capital investment being made by Avista for this project through 2026?

A. The total capital investments performed for July 2023 through 2024 are $0 for 2023 and 2024. The Company has also included the amount of $0 for 2025 and $3,950,000

for 2026.

Q. Please describe the Company's investments made under the West Plains System Reinforcement Project.

A. The scope of the project includes a new 230/115kV transmission substation near the West Plains called Garden Springs. This is a new 230kV station to interconnect with the Bonneville Power Administration called Bluebird and a new 12-mile 230kV transmission line. The new infrastructure is a major investment in the transmission system needed to serve our growing region. The new 230kV source is critical to meet predicted load growth in the area. The timing for completion is sensitive as operational performance issues have been observed in the operations time-horizon and performance is expected to worsen as new load connects to the system. The supporting business case for this project can be found in Exh. JDD-2, starting at page 594.

Q. Before concluding, would you please remark on the amount of funding for projects that did not receive funding approval within the business cases discussed herein for 2024 through 2026?

A. Yes. For the areas that I oversee, requested funding for projects between 2024-2026 totaled $1.294 billion, however, only $1.035 billion or 80% was approved for funding. I offer this observation to demonstrate that the Company must control its costs and prioritize what gets funded, rather than simply funding all necessary projects. Please see Company witness Mr. Christie's testimony for further discussion on this.

Q. Does this conclude your direct testimony?

A. Yes.