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**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

IN THE MATTER OF THE APPLICATION )  
OF AVISTA CORPORATION FOR THE )  
AUTHORITY TO INCREASE ITS RATES )  
AND CHARGES FOR ELECTRIC AND )  
NATURAL GAS SERVICE TO ELECTRIC )  
AND NATURAL GAS CUSTOMERS IN THE )  
STATE OF IDAHO )  
\_\_\_\_\_ )

CASE NO. AVU-E-23-01  
CASE NO. AVU-G-23-01

DIRECT TESTIMONY  
OF  
JAMES M. KENSOK

FOR AVISTA CORPORATION

(ELECTRIC & NATURAL GAS)

1 **I. INTRODUCTION**

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

3 A. My name is James M. Kensok. I am employed by Avista Corporation as the  
4 Vice-President, Chief Information Officer (CIO) and Chief Information Security Officer  
5 (CISO). My business address is 1411 E. Mission Avenue, Spokane, Washington.

6 **Q. Mr. Kensok, please provide information pertaining to your educational  
7 background and professional experience.**

8 A. I am a graduate of Eastern Washington University with a Bachelor of Arts  
9 Degree in Business Administration, majoring in Management Information Systems and from  
10 Washington State University with an Executive MBA. I have experience through direct  
11 application and management of Information Services over the course of my 34-year  
12 information technology career. I joined Avista in June of 1996. I have been in the Information  
13 Services Department for approximately 25 years in a variety of management roles directing  
14 and leading information systems, infrastructure technology and security strategy, system  
15 delivery and operations, complex communication networks, cyber security, applications  
16 development, outsourcing agreements, contract negotiations, technical support, cost  
17 management, and data management. I was appointed Vice-President and Chief Information  
18 Officer in January of 2007, and Chief Security Officer in January of 2013.

19 **Q. What is the scope of your testimony in this proceeding?**

20 A. I will provide an overview of, and discuss capital additions and expenses  
21 associated with, the Company's Information Service/Information Technology (IS/IT)  
22 programs, projects and security included in the Company's filed case over its proposed Two-  
23 Year Rate Plan. These costs are comprised of the capital investments for a range of IS/IT

1 projects that support systems used by the Company, as well as cyber and physical security  
2 projects and costs. I will explain why our information technology and security investments  
3 are necessary in the time frames indicated. While I discuss this plan in detail within my  
4 testimony and exhibits, Company witnesses Ms. Schultz and Ms. Benjamin incorporate the  
5 capital additions, and incremental expenses associated with the Company’s IS/IT costs  
6 included in the Company’s request for rate relief over the Two-Year Rate Plan effective  
7 September 1, 2023, and ending August 31, 2025.

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

9 **Table of Contents**

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15

16 **Q. Are you sponsoring any exhibits in this proceeding?**

17 A. Yes. I am sponsoring Exhibit No. 11, Schedule 1, which includes Information  
18 Technology Capital Project Business Cases.

19

20 **II. IS/IT OVERVIEW**

21 **Q. How are Avista’s technology investments linked to supporting business**  
22 **processes?**

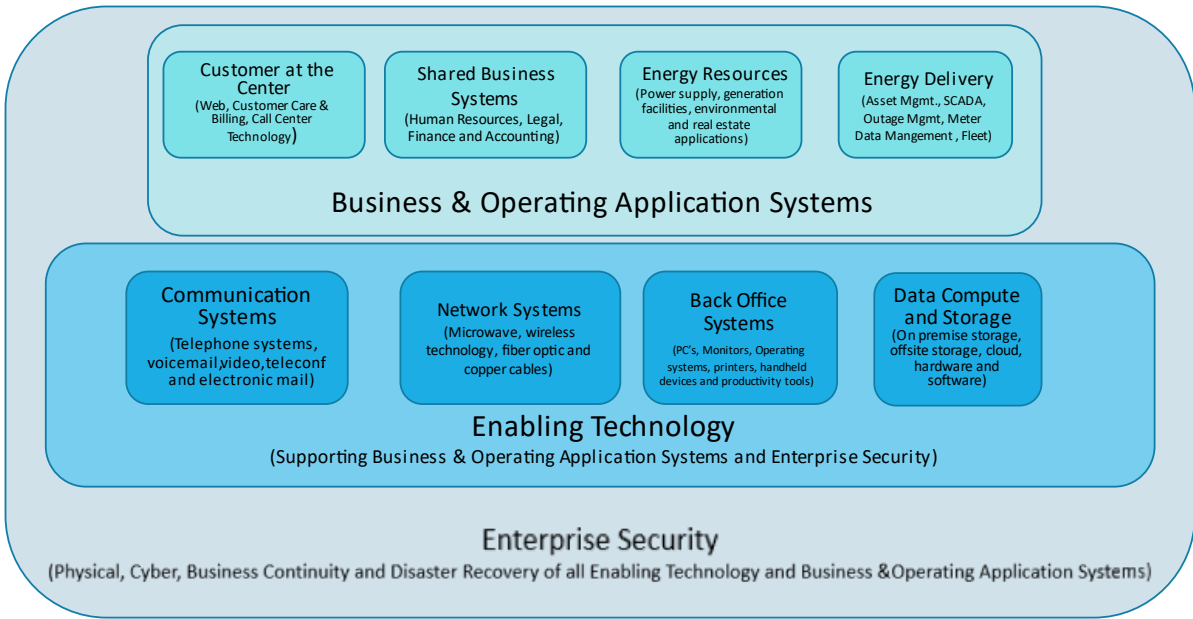
23 A. Avista’s technology investments fall into two major areas: (1) enabling  
24 technology and (2) business and operating application systems. Avista also takes an  
25 enterprise-wide approach to security and disaster recovery (resiliency) that links our  
26 technology investments with protecting our people, our assets, and our facilities.

1           Specifically, “enabling technology” consists of the technology infrastructure such as  
2 data storage, and endpoint compute hardware, (e.g., Server Storage, Personal Computers (PC),  
3 Laptops, and Mobile Devices). Enabling technology also includes operating systems and  
4 network transport connectivity (e.g., microwave radios, routers, and switches). Additionally,  
5 enabling technology includes databases and data schemas, integration software, business  
6 intelligence tools, and communication systems, etc. necessary to enable business capabilities  
7 through business application systems. It is the foundation on which we deliver energy safely  
8 and reliably, meet business objectives, and deliver value to our customers through business  
9 and operating application systems.

10           “Business and operating application systems” are dependent on a reliable  
11 infrastructure that delivers the technology foundation for meeting customer needs. Some of  
12 the business capabilities within these areas include electric and natural gas service design in  
13 the field in response to customer requests for prompt installation of new electric or natural gas  
14 service. Business application systems help business capabilities by automating business  
15 processes to optimize efficiencies and add functionality.

16           Illustration No. 1 below shows the relationship between the areas of Enabling  
17 Technologies, Business & Operating Application Systems, and Enterprise Security and how  
18 those fit into the different capital business cases discussed later in my testimony. Enabling  
19 technology is there to support the business and operating application systems, and just as  
20 importantly, neither of the two can co-exist without proper security to protect the information  
21 that is used to make business decisions and deliver energy to our customers.

1 **Illustration No. 1- Business Technology Structure:**



12 **III. IS/IT PRIORITIZATION, DELIVERY AND GOVERNANCE PROCESS**

13 **Q. How are the enabling technologies and business and operating application**  
14 **systems business cases prioritized within IS/IT?**

15 A. The IS/IT department uses a decision tree designed by Gartner<sup>1</sup> for both  
16 enabling technologies and business and operating application systems to help organize capital  
17 projects into three categories: run, grow, and transform<sup>2</sup>.

18 **Q. Did Avista consider alternatives to technology investments?**

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<sup>1</sup> Gartner is a research and advisory company, which delivers technology-related insights to its clients to make right decisions. It operates through the following segments: Research, Consulting and Conferences. <https://www.gartner.com/smarterwithgartner/align-it-functions-with-business-strategy-using-the-run-grow-transform-model/>

<sup>2</sup> The “run” category includes technology projects aimed at running the day-to-day business. The “grow” category projects are focused on developing and enhancing systems to enable business growth including new customers. Finally, the “transform” category are projects that aid the Company in addressing new customer and employee needs that recently have included remote work and mobile transactions. It also includes new operating models such as outage restoration and wildfire resiliency.



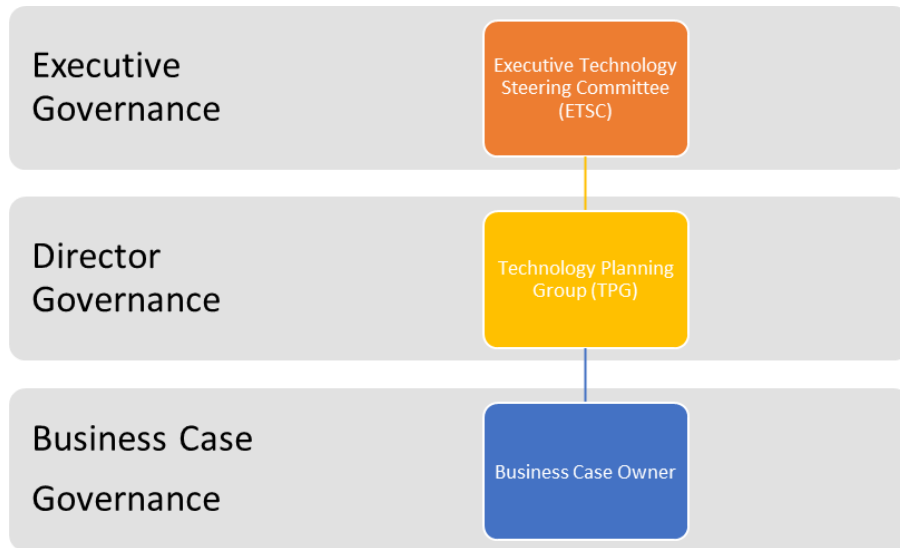


1 not, other options that may better suit the technology needs of Avista and its customers are  
2 considered. The technology programs also evaluate the risks of not making an immediate  
3 technology change or delaying a change to a later date. Through these programs and the  
4 technology leadership team, continuous re-evaluation of alternatives in technology  
5 investments are recommended to the Technology Planning Group (TPG – comprised of  
6 Directors from each business area) for the best path forward of technology investments.

7 **Q. What is the governance or cost controls for all business cases with**  
8 **technology investments?**

9 A. There are three levels of governance that occur within technology business  
10 cases. Executive, Director, and Business Case Governance detailed below in Illustration No.  
11 2.

12 **Illustration No. 2 – Technology Governance Structure**



21 Under each business case there are two more levels of governance depending on if it  
22 is a program or project through Program Steering Committees and Project Steering  
23 Committees. Both have cost control responsibilities to manage and therefore meet regularly



1 to stay on track. Governance committee responsibilities are described further below.

2 **Program Steering Committee** - The Program Steering Committee consists of  
3 members in management positions that are identified and responsible for prioritizing  
4 the projects within each respective program. The Program Steering Committee is  
5 accountable for the financial performance of the program and hold regular meetings  
6 to review the progress of the program and make decisions on the following topics:

- 7 • Project prioritization and risk
- 8 • Approving program funding requests
- 9 • New project initiation and sequencing

10  
11 The program is facilitated and administrated by an assigned Program Manager within  
12 the IS/IT Project Management Office (PMO). The project queue is reviewed  
13 periodically and consists of projects needed to meet program goals for technology  
14 solutions under each respective program.

15  
16 **Project Steering Committee** - Project Steering Committees act as the governing body  
17 over each individual project within a program and consist of key members in  
18 management positions that are identified as responsible for the successful completion  
19 of the scope of work identified in the Charter document for each respective project.  
20 The Project Steering Committee is responsible to provide guidance and make  
21 decisions on key issues that affect the following topics:

- 22 • Scope
- 23 • Schedule
- 24 • Budget
- 25 • Project Issues
- 26 • Project Risks

27  
28 Project Steering Committees meet at defined intervals documented in the Charter of  
29 the project and are facilitated by an assigned Project Manager from within the IS/IT  
30 PMO. Project Steering Committees may or may not be necessary depending on the  
31 size of the project. In addition, Project Steering Committees may not meet on a  
32 monthly or regular basis if the project is on track with all the above deliverables and  
33 may only communicate with stakeholders via email or other communication methods.  
34

35 **IV. IS/IT TECHNOLOGY CAPITAL BUSINESS CASES**

36 **Q. Please describe the Enterprise Technology capital business cases with**  
37 **projects that are planned to be transferred to plant in service during 2022 - 2025.**

A. The Enterprise Technology capital business cases with projects that are planned to be transferred to plant in service during 2022 - 2025 are shown in Table No. 1 below. An explanation of each of the Business Cases follows the table.

**Table No. 1 – Enterprise Technology Capital Additions:**

Enterprise Technology Capital Projects (System) In \$(000's)						
Investment Driver			2022 <sup>1</sup>	2023	2024	2025 <sup>2</sup>
Business Case Name	Project Type					
<b>Mandatory and Compliance</b>						
High Voltage Protection (HVP) Refresh	Enabling Technology		\$ 693	\$ 366	\$ 334	\$ 198
<b>Failed Plant and Operations</b>						
Technology Failed Assets	Enabling Technology		\$ 171	\$ 544	\$ 544	\$ 363
<b>Asset Condition - Enabling Technology</b>						
Technology Refresh to Sustain Business Process	Enabling Technology		\$ 2	\$ -	\$ -	\$ -
<b>Performance &amp; Capacity - Enabling Technology</b>						
Basic Workplace Technology Delivery	Enabling Technology		\$ 252	\$ 800	\$ 800	\$ -
Control and Safety Network Infrastructure	Enabling Technology		709	2,203	1,243	907
Data Center Compute and Storage Systems	Enabling Technology		1,275	2,518	2,184	529
Digital Grid Network	Enabling Technology		4,026	2,169	1,763	1,293
Endpoint Compute and Productivity Systems	Enabling Technology		4,392	2,553	3,063	637
Enterprise & Control Network Infrastructure	Enabling Technology		1,492	-	-	-
Enterprise Communication Systems	Enabling Technology		2,156	1,684	1,974	709
Enterprise Network Infrastructure	Enabling Technology		722	2,977	1,663	944
Environmental Control & Monitoring Systems	Enabling Technology		869	1,050	1,016	597
ET Modernization & Operational Efficiency - Technology	Enabling Technology		1,402	3,360	2,796	294
Fiber Network Lease Service Replacement	Enabling Technology		1,861	820	963	1,095
Land Mobile Radio & Real Time Communication Systems	Enabling Technology		4,383	2,437	1,971	86
Network Backbone	Enabling Technology		315	2,932	5,714	3,264
<b>Asset Condition - Business &amp; Operational Application Technology</b>						
Project Atlas (Avista Facilities Management Replacement)	Business & Op Technology		\$ 1,746	\$ 2,500	\$ 2,075	\$ 580
Outage Management System & Advanced Distribution Management System (OMS & ADMS)	Business & Op Technology		631	-	-	33,190
<b>Performance &amp; Capacity - Business &amp; Operational Application Technology</b>						
Energy Delivery Modernization & Operational Efficiency	Business & Op Technology		\$ 5,851	\$ 5,830	\$ 3,349	\$ 3,114
Energy Resources Modernization & Operational Efficiency	Business & Op Technology		2,430	2,471	2,965	100
Financial & Accounting Technology	Business & Op Technology		1,753	2,053	1,900	2,129
Human Resources Technology	Business & Op Technology		485	435	450	-
Legal & Compliance Technology	Business & Op Technology		163	461	465	-
<b>Mandatory and Compliance - Security</b>						
CIP v5 Transition - Cyber Asset Electronic Access	Security		\$ -	\$ 416	\$ -	\$ -
Identity and Access Governance	Security		595	420	201	-
Security Compliance	Security		235	250	250	-
<b>Customer Service Quality and Reliability - Security</b>						
Enterprise Business Continuity	Security		\$ 41	\$ 349	\$ 100	\$ -
Enterprise Security	Security		2,216	2,811	1,405	956
Facilities and Storage Location Security	Security		441	370	345	-
Generation, Substation & Gas Location Security	Security		725	645	518	-
Telecommunication & Network Distribution location Security	Security		97	161	115	110
<b>Total Planned Enterprise Technology Capital Projects</b>			<b>\$ 42,129</b>	<b>\$ 45,585</b>	<b>\$ 40,166</b>	<b>\$ 51,095</b>

(1) Includes system pro forma capital additions for the period of July 01, 2022 through December 31, 2022.

(2) Includes system pro forma capital additions for the period of January 01, 2025 through August 31, 2025.

1           **Q.     Please provide an overview of the technology programs made by Avista**  
2 **from July 1, 2022 and estimated 2023 through August 31, 2025.**

3           A.     Table No. 1 above provides the listing of IS/IT business cases for the period  
4 July 1, 2022 through August 31, 2025. These business cases are summarized into the  
5 investment drivers of Mandatory and Compliance, Failed Plant and Operations, Asset  
6 Condition, Performance and Capacity, and Customer Service Quality and Reliability as  
7 further explained by Ms. Benjamin. These are also organized by project type as discussed  
8 earlier in my testimony of Enabling Technology, Business and Operating Application Systems  
9 and Enterprise Security. Business case narratives for each business case shown in Table No.  
10 1 are provided in Exhibit No. 11, Schedule 1.

11           **Q.     Again, generally, what alternatives were considered for the above**  
12 **Enabling Technologies, Business & Operating Application Systems, and Enterprise**  
13 **Security programs?**

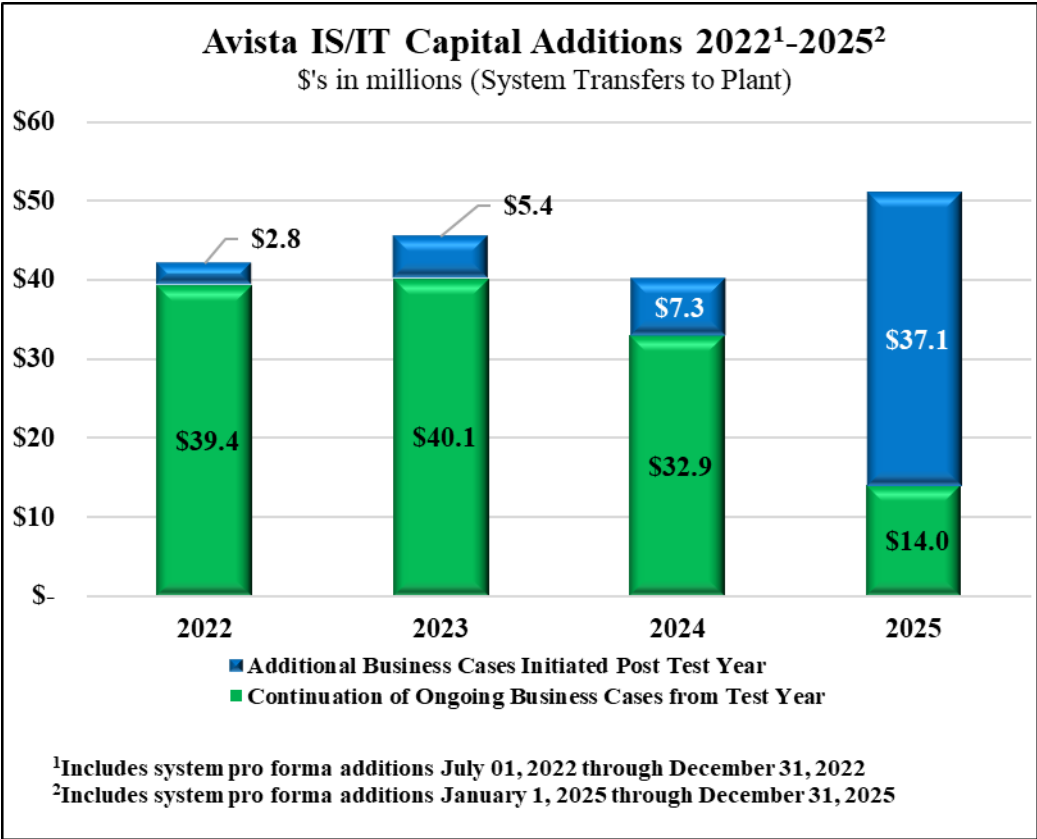
14           A.     Alternatives considered for each program can vary and may include the type  
15 of technology solutions available in the market, the total cost of ownership for the technology,  
16 the option to do the work differently, such as leasing or hiring a service. In addition, running  
17 the technology asset longer by purchasing extended warranties, or running the technology to  
18 failure for technology assets with an available sparing model are also alternatives. Additional  
19 alternatives considered under each program include balancing the performance and capacity  
20 requirements for each respective technology investment impacted by vendor driven  
21 technology obsolescence lifecycles. For example, how long can an upgrade be deferred before  
22 business risks become greater than the necessary upgrade? This can lead to security risks by

1 the vendors no longer offering system patches or system reliability risks as systems can  
2 become incompatible with one another.

3 **Q. Referring to the Table No. 1 above, the overall level of Enterprise  
4 Technology additions ranges from approximately \$40 million to approximately \$51  
5 million over the next four years. Would you explain why there is such a variance between  
6 years of additions?**

7 **A.** Yes. The following illustration portrays the IS/IT Capital Investment from  
8 2022 through 2025 included in this case, distinguishing between what are ongoing projects  
9 from 2022, and new projects introduced in 2022-2025.

10 **Illustration No. 3 – IS/IT Plant Investment (System Transfers to Plant)**



23 As you can see from this illustration, most of the capital investment relates to ongoing, multi-

1 year efforts that continue over time, at various funding levels. The rationale and justification  
2 for these ongoing projects, however, does not change over time, only the funding levels. The  
3 additional business cases listed in 2025 relates to the Outage Management System &  
4 Advanced Distribution Management System that is discussed later in my testimony. In  
5 addition, the 2022 and 2025, as noted earlier in Table No. 1, represent a partial year of  
6 additions and not full calendar years.

7 **Q. Do Enabling Technologies, Business and Operating Application**  
8 **Technology, and Enterprise Security programs have completion timelines?**

9 A. Technology investments can fall into programs with both ongoing and defined  
10 timelines, as well as projects with defined timelines. All projects transfer to plant the total cost  
11 of each project at the completion of every project, which at times can straddle calendar years.  
12 This includes projects that fall within a program, as well as those that are standalone projects.  
13 Quarterly forecasts capture changes in transfers to plant schedules and costs determined by  
14 project status.

15 **Information Related to “Enabling Technology” Projects Listed in Table No. 1**

16 **Q. Please describe the investments in Enabling Technology from July 1, 2022**  
17 **to August 31, 2025 included in Table No. 1.**

18 A. As previously mentioned, enabling technology consists of the infrastructure  
19 technology required to enable business and operating application systems that in turn enable  
20 business capabilities. For comparison purposes, it is the concrete footings, the framing, the  
21 roof, the conduit, and drywall that transform materials into a house that people make into a  
22 home. Below are the Enabling Technologies that are Mandatory and Compliance, Failed Plant  
23 and Operations, Asset Condition, and Performance and Capacity as defined by Ms. Benjamin.

1 **High Voltage Protection Upgrade for Substations – 2022: \$693,000; 2023: \$366,000;**  
2 **2024: \$334,000; 2025: \$198,000**

3 Technology investments under the High Voltage Protection business case are needed to  
4 provide high voltage protection for communication circuits in high voltage areas in support of  
5 employee and public safety, system reliability, and business productivity throughout our  
6 service territory. Avista is required to provide high voltage protection for leased  
7 communication circuits in high voltage areas newer than September 12, 1994, under an FCC  
8 Tariff and, thus this is a Mandatory and Compliance business case. If Avista does not meet  
9 the tariff requirements, telecommunication companies can turn off communication circuits to  
10 substations until Avista electrically isolates the copper wire coming into a substation, thereby  
11 affecting phone, modem, SCADA, and other metering and monitoring systems at substations.  
12

13 **Technology Failed Assets – 2022: \$171,000; 2023: \$544,000; 2024: \$544,000; 2025:**  
14 **\$363,000**

15 This program includes a range of solutions from computers to hand-held radios carried by  
16 field staff to printers in remote offices to networking equipment. Sometimes technology assets  
17 fail prior to being refreshed as part of a lifecycle management program. Any failed asset can  
18 cause downtime for an employee or system resulting in significant disruption to daily  
19 operations across the service territory depending on where and to what asset the failure  
20 occurred. To support these types of unplanned failures, the Technology Failed Assets program  
21 was established and consists of technology assets meant for rapid deployment as failures occur  
22 and when repairs are not feasible. A technology inventory is maintained to quickly restore  
23 business automation. This program provides benefits to customers by providing a technology  
24 inventory to quickly restore business automation and reduce the downtime caused by the  
25 failure. This business case is planning for laptop, mobile phone, printer, field area network,  
26 audio visual devices, and monitor replacements when the assets fail, just to name a few.  
27

28 **Technology Refresh to Sustain Business Process – 2022: \$2,000**

29 This business case was determined to sunset at the end of 2018, as projects were completed.  
30 Many of the ongoing projects were completed in 2019, except for one (Mission In-Building  
31 Cellular Booster Refresh). This project refreshes existing cellular signal amplifiers to support  
32 LTE 4G voice and data at Avista’s Mission campus and service building. Due to building  
33 infrastructure and cellular carrier technology obsolescence, many users experience a poor  
34 signal or no signal at all on their LTE capable smart phones. These devices are a significant  
35 tool for business communications that support all our customers, the signal strength needed to  
36 be upgraded to a cellular carrier-supported signal.  
37

38 **Basic Workplace Technology – 2022: \$252,000; 2023: \$800,000; 2024: \$800,000**

39 This business case represents hardware and software that end users need to perform day-to-  
40 day job functions. This may generally include personal computers, tablets, print/copy/scan  
41 systems, television displays, monitors, mobile phones etc., and the basic software productivity  
42 tools. Without Basic Workplace Technology Delivery hardware and software, productivity is  
43 significantly impacted and can become a blocking factor, as some job functions are extremely  
44 difficult to perform without digital productivity tools. For example, a new worker would not  
45 be able to adequately meet job function performance requirements in a customer call center  
46 without a personal computer and telephone.

1 Additionally, Basic Workplace Technology Delivery deployments that fall under this business  
2 case are often in short notice, and minimum inventory quantities are maintained to meet  
3 business value time frames. The business case is structured in such a way to handle both  
4 planned and unplanned short-cycle business demand to deliver basic technology items to all  
5 job functions and office areas.

6  
7 **Control and Safety Network Infrastructure – 2022: \$709,000; 2023: \$2,203,000; 2024:**  
8 **\$1,243,000; 2025: \$907,000**

9 The Control and Safety Network Infrastructure business case invests in network assets that  
10 deliver reliable network communication solutions that allow Avista to manage and operate  
11 our electric grid assets, gas network assets and safety communication systems. The Control  
12 and Safety Network Infrastructure enables the ability to remotely monitor, control, and operate  
13 critical business and safety systems. These systems include those that connect users in  
14 emergency or safety situations, control generation assets, maintain and expand network  
15 transport systems that enable push-to-talk radio connectivity for field crews and other  
16 personnel, deliver communication networks for protective relays, and supervisory control  
17 by providing data from transmission and distribution assets in the field. 2022 projects include  
18 investments in replacing end of life assets that mitigate cyber and network security risks on  
19 the very networks that allow Avista to operate and control our generation assets and refreshing  
20 legacy end-of-life network equipment that meets compliance requirements for field worker  
21 communications.

22  
23 **Data Center Compute and Storage Systems – 2022: \$1,275,000; 2023: \$2,518,000; 2024:**  
24 **\$2,184,000; 2025: \$529,000**

25 This business case represents projects that are driven by performance and capacity. This  
26 includes investment in server technology required to process and store massive amounts of  
27 data to automate and enable business processes that support natural gas and electric customers  
28 across service territories. The technology solutions to meet performance standards and  
29 reliability requirements can vary from hardware and software upgrades in an on-premise data  
30 center, offsite storage, or service provider (cloud) facility, or in operating technology to  
31 optimize compute and storage capacity. Avista’s office, call center, and field staff require on-  
32 demand information to meet customer needs, when providing natural gas and electric service  
33 to customers across our service territory. The information can be critical to prevent, reduce,  
34 or optimize an outcome that benefits our customers. Data center processing and storage  
35 investment benefits all Avista customers, as it optimizes cost and productivity by not reverting  
36 to manual business processing, which would result in increased labor costs, human error, and  
37 overall processing delays.

38  
39 **Digital Grid Network Expansion – 2022: \$4,026,000; 2023: \$2,169,000; 2024: \$1,763,000;**  
40 **2025: \$1,293,000**

41 This program provides network solutions that optimize technology communication and  
42 operations for field crews, inspectors, employees, contractors, and customers, and is critical  
43 to maintain the ability of providing safe and reliable electric and natural gas service.  
44 Technology investments under the Digital Grid Network program are necessary for expanding  
45 and maintaining network assets for system reliability and business productivity throughout  
46 our service territory. Not investing in this business case may result in reduced quality and

1 performance of our network system to transmit information, data and communication for  
2 back-office transactions, operation systems, and customer service centers, across our service  
3 territory. The Digital Grid business investments expand and maintain network assets in  
4 support of system reliability and business productivity, ensuring our ability to appropriately  
5 and timely respond to the needs of our customers.

6  
7 **Endpoint Compute and Productivity Systems – 2022: \$4,392,000; 2023: \$2,553,000;**  
8 **2024: \$3,063,000; 2025: \$637,000**

9 This program addresses technology obsolescence by delivering technology solutions required  
10 to support day-to-day operations. Technology solutions under this program include, but are  
11 not limited to, Personal Computer (PC) hardware and operating systems, various handheld  
12 devices, printers, configuration and management systems as well as productivity toolsets like  
13 Microsoft Office365. Each technology under this program undergoes regular review of  
14 utilization and performance levels to determine if expected performance standards are being  
15 met and to review the capacity requirements to maintain system reliability under the  
16 established budget constraints. These reviews can result in the periodic need for additional  
17 investments to address technology that is falling behind determined lifecycles performance  
18 standards. Additionally, and as part of keeping up with vendor-driven technology  
19 obsolescence, Avista’s technology team manages technology lifecycle plans to maintain  
20 system reliability. For example, Avista is replaced rugged laptop PC’s and related mounting  
21 equipment in vehicles during 2022 due to product end-of-life and limited vendor support.

22  
23 **Enterprise & Control Network Infrastructure – 2022: \$1,492,000**

24 This program provides technology network solutions that support a variety of site locations  
25 and systems within each facility environment. This technology includes, but is not limited to,  
26 emergency and safety systems, control systems, customer systems, and enterprise back-office  
27 productivity systems. Without continuous investment in the Enterprise and Control Network  
28 Infrastructure business case, Avista’s telecommunication backbone would become unreliable.  
29 This, in turn, would have significant consequences for every other business process that uses  
30 various network transportation paths to move data, information or communication. The  
31 infrastructure is a necessary core capability for utility operations that requires reliable  
32 networks in conjunction with commercial carrier and private network solutions to maintain  
33 system reliability for Avista customers. This business case will sunset in early 2023 after the  
34 completion of two projects. For additional visibility and tracking, this business case has been  
35 divided in to three new Business Cases, consisting of Enterprise Network Infrastructure,  
36 Control and Safety Network Infrastructure, and Network Backbone Infrastructure. This is  
37 discussed later in my testimony.

38  
39 **Enterprise Communication Systems – 2022: \$2,156,000; 2023: \$1,684,000; 2024:**  
40 **\$1,974,000; 2025: \$709,000**

41 All Avista business functions are affected by this program, as it enables all day-to-day work  
42 activities and automated business processes around communications. From service center to  
43 call center to field work, every worker requires communications systems technology to  
44 perform their business function and deliver natural gas and electric service to our customers.  
45 These investments include video- and tele-conferencing platforms, electronic mail, instant  
46 messaging, and calendar systems to support a hybrid digital workforce. The Enterprise



1 Communication Systems business case benefits Avista’s customers by enabling the  
2 communication between employees to be able to provide safe, reliable service and by enabling  
3 communication to our customers.  
4

5 **Enterprise Network Infrastructure (2022: \$722,000; 2023: \$2,977,000; 2024: \$1,663,000;**  
6 **2025: \$944,000)**

7 The Enterprise Network Infrastructure business case invests in network assets that deliver  
8 network capacity and reliability for day-to-day enterprise business productivity and back  
9 office system traffic. These investments deliver the enterprise network infrastructure that  
10 serve access to data from one endpoint, system and/or user to another. 2023 projects include  
11 investment in a new network impact analysis solution that allows us to optimize and baseline  
12 our network load and capacity; and investments that remove cyber risks from our network by  
13 replacing end of life assets that carry and serve enterprise network traffic at remote office  
14 sites, substations, district offices and generation plants; investments that replace end of life  
15 enterprise network traffic load balancing solutions.  
16

17 **Environmental Control & Monitoring Systems – 2022: \$869,000; 2023: \$1,050,000;**  
18 **2024: \$1,016,000; 2025: \$597,000**

19 The Environmental Control and Monitoring systems ensure reliable operation of Telecom  
20 facilities by managing the performance and capacity of assets that support safety, control,  
21 customer facing and back office automated business processes. Assets require specific  
22 operating environments to prevent physical damage, such as temperature, humidity, and  
23 power supply voltages. Environmental Control and Monitoring systems monitor and control  
24 these environmental parameters and alert operational personnel when they fall outside of  
25 optimal conditions. The alarms allow operational personnel to respond to issues that may  
26 cause damage to other assets well in advance of any failure resulting in loss of business  
27 automation processes.  
28

29 **ET Modernization & Operational Efficiency - Technology – 2022: \$1,402,000; 2023:**  
30 **\$3,360,000; 2024: \$2,796,000; 2025: \$294,000**

31 This program was designed to keep up with supporting the growth of business application  
32 technology and complexity. The program invests in the digital systems and tools to address  
33 the needs of the IS/IT department to support business applications. These technology systems  
34 and tools provide functional enhancements that address ongoing changes in the workplace,  
35 provide increased employee efficiency through the reduction of steps required to complete a  
36 task, and make better use of Avista resources. The technology tools and systems under this  
37 program benefit all Avista customers, as they support business application systems throughout  
38 the Company.  
39

40 **Fiber Network Lease Service Replacement – 2022: \$1,861,000; 2023: \$820,000; 2024:**  
41 **\$963,000; 2025: \$1,095,000**

42 This project is a multi-year effort to transition, by 2027, Avista’s use of leased fiber optic  
43 cable, which transports emergency and control network data, to a private network  
44 infrastructure. This transition aligns to the Company’s network strategy, reduces operating  
45 costs, and gains control over the 54 fiber segments for critical communication paths. The  
46 technology investments under this business case benefit customers by investing in the

1 privately-owned fiber optic cable segments thereby mitigating the potential of increased O&M  
2 costs for leased fiber in the future and having full control over the fiber that transports  
3 emergency & control data. The underlying agreement expires in 2027 with an option to renew  
4 for (5) five years. To reduce leasing costs and maintain control of critical infrastructure, Avista  
5 will not renew the leased fiber agreement. Therefore, if this program stays on schedule and  
6 maintains the appropriate priority, it will sunset in 2027 or 2028.

7  
8 **Land Mobile Radio & Real Time Comm Systems – 2022: \$4,383,000; 2023: \$2,437,000;**  
9 **2024: \$1,971,000; 2025: \$86,000**

10 The investments under this program provide the communication technology that enables real  
11 time communication with natural gas and electric field staff. Due to the remoteness and  
12 topology of the service territory, the technology investments span a wide range across field  
13 radio sites where traditional commercial cellular or telecommunication services are not  
14 available. The Land Mobile Radio & Real Time Communications Systems facilitates critical  
15 communication between field personnel, dispatch, system operations, and other end users.  
16 This radio system is used for normal day to day operation work, coordinating responses to  
17 outage events, switching and tagging procedures, communication with external agencies  
18 including Public Safety entities, and several other uses. It is a business-critical system used to  
19 maintain day to day operations and respond to emergency situations.

20  
21 **Network Backbone Infrastructure – 2022: \$315,000; 2023: \$2,932,000; 2024: \$5,714,000;**  
22 **2025: \$3,264,000**

23 The Network Backbone Infrastructure business case invests in network assets that deliver and  
24 expand data and communication transport networks in support of system reliability and  
25 business productivity for Avista. This network backbone infrastructure is the transmission  
26 system to our digital network. Across Avista, we move very large amounts of enterprise,  
27 control, and safety traffic types all via our network backbone infrastructures. 2022 projects  
28 include investment in legacy end of life microwave transport system assets, private fiber  
29 infrastructure investments and access points, and assets that manage the movement and  
30 prioritization of traffic over this infrastructure.

31  
32 **Q. How do the Enabling Technology projects benefit Avista Customers?**

33 A. Enabling technology benefits our customers by providing the foundational  
34 technology infrastructure required to connect with our customers over the phone, web, text,  
35 or the ability to process billing, meter reads, or communicate outages and restoration times  
36 during an unplanned outage. It also enables our field workers to safely connect over the radio  
37 across rugged remote locations or during storm restoration efforts that require significant field  
38 coordination to maintain employee safety. As the foundation to delivering natural gas and  
39 electric service safely to our customers.





1 customers will improve customer confidence in the information which will reduce the number  
2 of calls received by our customer service representatives, as well as call durations.

3  
4 The work is scheduled to start in late 2022 and early 2023, so that it can be completed while  
5 the current data model used by OMT is still supported by the vendor. If the work is not  
6 completed on schedule, there will be significant risks and costs to maintain the decades old  
7 OMT with the existing data model and application version.

8  
9 **Energy Delivery Modernization & Operational Efficiency – 2022: \$5,851,000; 2023:**  
10 **\$5,830,000; 2024: \$3,349,000; 2025: \$3,114,000**

11 This business case supports both existing and new technologies leveraged by the Energy  
12 Delivery business areas including Gas Engineering & Operations, Electric Engineering &  
13 Operations, Asset Management & Supply Chain, Facilities, Fleet Operations, and Metering.  
14 These technologies are used to automate and augment business solutions bringing efficiencies  
15 and capabilities to support the delivery of energy to customers. This support includes the  
16 following: 1) improving the performance and capacity of business resources by implementing  
17 new functionality in existing technologies, 2) improving the performance and capacity of  
18 business resources by implementing overall new technologies, and 3) modernizing existing  
19 technologies in accordance with product lifecycles and technical roadmaps, typically through  
20 product or system upgrades.

21  
22 Major applications supported in this business case include Enterprise Asset Management  
23 system (Maximo), mobile workforce management, crew planning and schedules, system  
24 operations support, and metering support, among other things.

25  
26 Direct offsetting benefits associated with this project of \$100,000 for 2023 on a system basis  
27 has been calculated and included in the Company's revenue requirement as a reduction. These  
28 savings are a result of avoiding extended support costs as a result of an upgrade to Maximo.  
29 Those offsets are included in pro forma Adjustment 3.12.

30  
31 **Energy Resources Modernization & Operational Efficiency – 2022: \$2,430,000; 2023:**  
32 **\$2,471,000; 2024: \$2,965,000; 2025: \$100,000**

33 This program supports the application-related technology initiatives for all areas within  
34 Energy Resources, which includes Power Supply, Gas Supply, Generation Production  
35 Substation Support (GPSS), and Environmental and Real Estate. Application refresh projects  
36 are necessary to maintain updates, upgrades and/or replacements to existing Energy Resource  
37 applications, to respond to changing business needs and/or technical obsolescence. These  
38 refreshes or upgrades are essential to remain current, maintain compatibility, reliability and  
39 address security vulnerabilities. The Energy Resources programs supported in this business  
40 case include support for Avista's energy risk management and energy trading operations,  
41 including Avista's Decision Support System (ADSS), Nucleus (Avista's energy transaction  
42 book of record), and Energy Risk Management system, among other items.

43  
44 **Financial & Accounting Technology – 2022: \$1,753,000; 2023: \$2,053,000; 2024:**  
45 **\$1,900,000; 2025: \$2,129,000**

46 This program supports financial applications critical to maintaining the financial health and

1 compliance of regulatory requirements through the completion of reoccurring business  
2 processes. The business processes change on a frequent basis, driven by several factors and is  
3 dictated by the lifecycles of the applications governed in the business case, further requiring  
4 resources and adaptive technology solutions. Investment in this program supports Company  
5 applications including Oracle e-Business Suite, PowerPlan (for fixed assets and tax),  
6 depreciation forecasting, supply chain support, and FERC reporting, among other things.

7  
8 **Human Resources Technology – 2022: \$485,000; 2023: \$435,000; 2024: \$450,000**

9 The Human Resources Technology business case supports the technology-related application  
10 projects required for both expansion and refresh activities required within the Human  
11 Resources business area. This program is required to support the application related  
12 technology initiatives for all areas of Human Resources including Human Resources Labor  
13 and Employee Relations, Leadership and Organizational Development, Human Resources  
14 Shared Services, Craft Training, Safety, and Internal Communications. Direct offsetting  
15 benefits for this business case of \$16,300 for 2023 on a system basis, has been calculated and  
16 included in the Company’s revenue requirement as a reduction. Those offsets, which are  
17 related to reducing costs of printing, copier maintenance and filing of paper documents, are  
18 included in pro forma Adjustment 3.12.

19  
20 **Legal & Compliance Technology – 2022: \$163,000; 2023: \$461,000; 2024: \$465,000**

21 The various business entities within Avista rely on the legal and compliance systems to ensure  
22 business operations are done in the most efficient and cost-effective manner. The legal and  
23 compliance technology systems vary from the simple to complex and require continuous  
24 management of the enhancements needed to meet the internal and external business  
25 requirements.

26  
27 **Information Related to “Security” Projects Listed in Table No. 1**

28 **Q. Please describe any major changes in “Security”.**

29 A. In the Spring of 2021, President Biden’s Administration launched a 100-day  
30 initiative to secure our nation’s critical infrastructure. The initiative focused primarily on  
31 improving cybersecurity of industrial control systems of electric utilities. The initiative  
32 represents swift, aggressive actions to confront cyber threats from adversaries who seek to  
33 compromise critical systems that are essential to U.S. national and economic security.

34 Secondly, in July of 2021, the Biden Administration expanded the initiative to  
35 include natural gas pipelines. The initiative established voluntary cybersecurity goals, as well  
36 as mandatory requirements that clearly outline expectations for owners and operators of

1 critical infrastructure. The voluntary goals and mandatory requirements are based on  
2 cybersecurity ‘best practices’. Investments to meet the new mandatory obligations required a  
3 reprioritization of 2021 planned investments in various areas of Enterprise Security, Business  
4 Continuity, and Disaster Recovery. Furthermore, should requirements continue to change,  
5 based on ever-changing cyberthreats, further reprioritization will continue in future years.

6 **Q. Please describe major investments in Enterprise Security – Physical and**  
7 **Cyber Security, Business Continuity, and Disaster Recovery from July 1, 2022 through**  
8 **August 31, 2025.**

9 A. Avista understands that a safe, reliable, and secure energy infrastructure is  
10 essential to the economies in the areas that we serve and our customer's way of life and that  
11 intruders can use a variety of cyber and physical attacks to try and disrupt the delivery of safe,  
12 reliable, and secure energy. Cyber and physical attacks can not only have a reliability impact  
13 but also can lead to data breaches, ransomware, or other costly system repairs and threaten  
14 employee safety. Based on information from our government partners in the Information  
15 Sharing and Analysis Centers (ISACs), FBI, DHS, TSA, and State Fusion Centers, we know  
16 the attacks continue to grow in size and complexity and therefore it is prudent that Avista  
17 continues to invest in its cyber, physical, business continuity, and compliance programs.  
18 Investments in “Security” primarily fall into cyber and physical security, followed by  
19 investments in business continuity and meeting new compliance requirements.

20 **Critical Infrastructure Protection v5 Transition – Cyber Asset Electronic Access – 2023:**  
21 **\$416,000**

22 Avista is required to meet North American Electric Reliability Corporation (“NERC”) Critical  
23 Infrastructure Protection (“CIP”) Reliability Standards (“Standards”). Specifically, Avista has  
24 been complying with CIP Version.3 Standards (“CIPv3”) and needs to transition to CIP  
25 Version.5 Standards (CIPv5). This Business Case will support achieving compliance for Low  
26 Impact Bulk Electric System Cyber Systems by implementing electronic access controls.  
27

1 **Identity and Access Governance – 2022: \$595,000; 2023: \$420,000; 2024: \$201,000**

2 Avista’s current Identity and Access Governance (IAG) program is a framework of business  
3 processes, policies and technologies that facilitates the management of electronic or digital  
4 identities. With an IAG framework in place, management can control user access to critical  
5 information. The IAG program will create role-based system access profiles, define system  
6 privileges, automate access management, and facilitate regular user access review and  
7 validation. This solution will benefit Avista and its customers by adhering to the security  
8 principle of ‘least privilege’, whereby individuals are limited access only to information and  
9 resources necessary to perform their current and intended job functions. It also reduces the  
10 risk associated with individuals having broad access to systems or to facilities their roles no  
11 longer require.

12  
13 **Security Compliance – 2022: \$235,000; 2023: \$250,000; 2024: \$250,000**

14 This business case was originally titled NERC CIP Compliance in previous years. It was  
15 focused on the cyber and physical security investments needed to meet new NERC CIP  
16 standards. In response to various compliance agencies requiring updates or improvements to  
17 Avista’s cyber and physical security, the Company determined that a broader scope was  
18 necessary to achieve and maintain NERC CIP, Western Electricity Coordinating Council  
19 (WECC), Transportation Security Administration (TSA), Payment Card Industry (PCI),  
20 Federal Energy Regulatory Commission (FERC), and other emerging security compliance-  
21 driven requirements. Not being compliant is not a viable alternative, as it puts Avista’s cyber  
22 and physical security posture at risk.

23  
24 **Enterprise Business Continuity – 2022: \$41,000; 2023: \$349,000; 2024: \$100,000**

25 Avista has developed and maintains an Enterprise Business Continuity Program to continually  
26 enhance and improve the Company’s emergency response, business continuity, and disaster  
27 recovery capabilities to ensure the continuity of its critical business process and systems under  
28 crisis conditions. Severe storms, natural disasters, and significant security events are  
29 unpredictable and, while they may have a low probability, they can have a high consequence.  
30 These types of low frequency, high consequence events can have an impact on the resources  
31 Avista depends on for its operations.

32  
33 **Enterprise Security – 2022: \$2,216,000; 2023: \$2,811,000; 2024: \$1,405,000; 2025:  
34 \$956,000**

35 Threat actors continue to evolve their tactics in response to our defenses and therefore  
36 investments that were effective in the past, need to be enhanced with an upgrade or paired  
37 with another solution to help mitigate new risk. Firewalls, anti-virus, and intrusion detection  
38 systems all continue to evolve to ensure they are effective in preventing and detecting modern  
39 attacks. Investing in physical and cyber security is a direct benefit to our customers, as it is  
40 critical to the protection of the natural gas and electric infrastructure. It is also protecting the  
41 Company’s sensitive customer, employee, operating, and financial information. Unable to  
42 predict when or where the next attack will occur requires a proactive security posture to  
43 identify, protect, detect, respond, and recover from any incident type. This may include a  
44 physical breach to a Company facility, such as a construction yard or substation targeted for  
45 copper wire or precious metals that can be cashed in for recycling, or a data breach to capture  
46 sensitive customer information or operational data critical to delivering electric and natural



1 gas service that can be used to perpetuate future attacks on the Company or its customers. In  
2 either case, theft of a physical or cyber asset can result in unanticipated costs to remediate  
3 damages, risk the safety and reliability of the energy system, or release sensitive data that the  
4 Company stewards.

5  
6 **Facilities and Storage Locations Security – 2022: \$441,000; 2023: \$370,000; 2024:  
7 \$345,000**

8 This business case maintains security at our facilities and storage locations. Security remains  
9 a concern at these locations. The locations contain people, equipment, and material that are  
10 critical to support our day-to-day operations and, in turn, the delivery of safe and reliable gas  
11 and electricity. A physical security incident at any of these locations may harm people,  
12 damage equipment, or even restrict our ability to respond to customers. Investments under  
13 this business case are prioritized based on risk to the people, equipment, and assets in each of  
14 the Company’s facilities and storage locations. Company vehicles, tools, equipment, and spare  
15 parts often used to maintain our energy infrastructure and respond to emergencies may be  
16 affected without continuous investment in physical security protections at our facilities and  
17 storage locations.

18  
19 **Generation, Substation & Gas Location Security – 2022: \$725,000; 2023: \$645,000;  
20 2024: \$518,000**

21 This business case covers physical security at the Company’s generation, substation, and gas  
22 locations. Many of these locations are remote, unmanned, and vulnerable, which makes them  
23 difficult to protect. A physical security incident at any of these locations could deny, degrade,  
24 or disrupt the delivery of energy. In addition, physical attacks can also give intruders access  
25 to critical cyber equipment, which can lead to a cyber security event..

26  
27 **Telecommunication & Network Distribution location Security – 2022: \$97,000; 2023:  
28 \$161,000; 2024: \$115,000; 2025: \$110,000**

29 Security is an expectation of companies today by customers. Especially companies considered  
30 critical infrastructure. Protecting communication infrastructure is vital as many of Avista’s  
31 business processes depend on network communications and without them, they could not  
32 function which could have an impact on our day-to-day operations that are needed to support  
33 our customers. Not funding these investments can pose risks to the assets Avista depends on  
34 to conduct business and delivery safe and reliable energy.

35  
36 **V. IS/IT OPERATING AND MAINTENANCE EXPENSES**

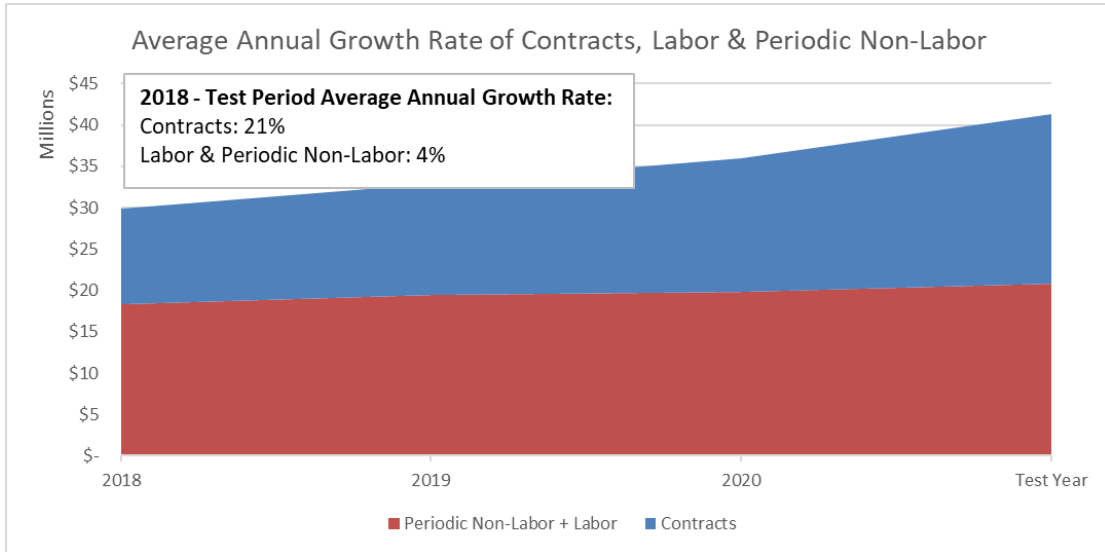
37 **Q. Please describe the general make-up of IS/IT Operating & Maintenance**  
38 **(O&M) costs.**

39 **A.** IS/IT O&M consists of centralized expense for labor and non-labor security,  
40 information services and technology expenses primarily driven by increasing trends of

1 software vendors changing how they license and deliver software solutions, and by capital  
2 investment across all areas of the Company, including Energy Delivery, Energy Resources,  
3 Customer, HR, Finance, IS/IT, etc. In general, for any investment the Company makes that  
4 is enabled, supported, or secured by technology and requires ongoing licensing, maintenance  
5 and support, those expenses will be centralized in IS/IT O&M. The expense impact of annual  
6 and multi-year operating agreements surrounding capital investment reflects most of the  
7 overall incremental increase and are primarily driven by the digital transformation of the  
8 utility. Keeping pace with emerging technologies and taking advantage of the opportunities  
9 digital technologies provide, drive the need for the Company to convert analog information  
10 into digital form and to incorporate digital technologies into business processes and  
11 interactions with our customers and within the utility itself. Some examples of investment  
12 that support the Company's digital transformation include, Energy Imbalance Market (EIM),  
13 Customer at the Center Platform, Human Machine Interface, Project Atlas, and Enterprise  
14 Security, to name a few.

15 Illustration No. 4 below, displays all IS/IT O&M expense from 2018 through 2022.  
16 As discussed by Ms. Schultz, the Company has pro formed IS/IT expense using known and  
17 measurable expenses available through 2022 only, as reflective of the level of expenses in  
18 Rate Year 1 beginning September 2023. No incremental adjustment was included within the  
19 pro formed Rate Year 2.

1 **Illustration No. 4: Average Annual Growth Rate of Contracts, Labor & Periodic Non-**  
2 **Labor (System):**  
3



12 As shown above in Illustration No. 4, IS/IT system labor and periodic (typically usage-

13 based monthly, not quarterly/annual) non-labor expenses remain relatively flat from 2018

14 through the test year, increasing at an annual average growth rate (AAGR) of 4%. During this

15 same period, known and measurable contracts increase at an AAGR of 21%.<sup>3</sup> The resulting

16 change is driven largely by the need to support IS/IT and non-IS/IT investments, changes to

17 the licensing and delivery models of software vendors, and changing market conditions. An

18 example of a contract with built in escalation is with Oracle, which is the publisher of several

19 of the Company’s enterprise software systems including Customer Care and Billing (CC&B),

20 Meter Data Management (MDM) and Oracle Financials. Historically these contracts increased

21 roughly 4% annually, but Oracle has announced they will increase prices by up to 8% annually

22 beginning in 2023. Another example is with IBM, which publishes The Company’s asset

23 management tool (IBM Maximo) as well as its business intelligence performance

24 management tool (Cognos). Annual increases for IBM software maintenance and support

<sup>3</sup> Known and measurable contracts refer to contracts currently entered into by the Company and other parties.

1 were consistent at 3%, though IBM upped their annual increase to 10% beginning in 2022.

2 **Q. Please summarize the incremental IS/IT O&M expenses beyond the**  
3 **Company’s 12 months-ended June 30, 2022 historical test period, included in this case.**

4 A. In Ms. Schultz Electric and Natural Gas Pro Forma Studies, she has pro formed  
5 security, information services, and technology expenses. IS/IT has narrowed the scope of  
6 incremental expenses to known and measurable items that will be in place during the rate  
7 period beginning in September 2023. It includes incremental employee labor driven by  
8 compliance of cyber security and application patching requirements dictated by the  
9 Department of Homeland Security’s (DHS) Transportation Security Administration (TSA).  
10 Also included is the non-labor impact of annual and multiyear agreements for products and  
11 services, licensing, and maintenance fees for a range of centralized information services.  
12 These incremental expenditures are necessary to support the Company’s cyber and general  
13 security, emergency operations readiness, electric and natural gas facilities and operations  
14 support, and customer services.

15 **Q. Will you please provide a summary table showing the O&M expenses pro**  
16 **formed by the Company in this case?**

17 A. Yes. Please see Table No. 2 below. This table includes the incremental labor  
18 and non-labor expenses pro formed in the case, above test period levels, reflecting known and  
19 measurable expenses representative of Rate Year 1 (and Rate Year 2). No incremental  
20 adjustment for Rate Year 2, above Rate Year 1 levels, is known at this time.

21 **Table No. 2 – Total Pro Formed Expenses - Rate Year 1 (System)**

<b>Total Pro Formed Expenses</b>	<b>RY 1 Incremental</b>
Labor	\$876,847
Non Labor	\$836,787
<b>Grand Total</b>	<b>\$1,713,634</b>

22  
23



1 every 3-5 years and follow the investment refresh cycle, and the O&M costs will be sustained  
2 year over year. To support this work, Avista has pro formed expense into this case related to  
3 four new (incremental) “TSA Compliance” employees. Additionally, Physical Security  
4 responsibilities are currently embedded and shared among many cybersecurity professionals  
5 whose primary job responsibilities are protecting Avista from cybersecurity-related issues.  
6 As cybersecurity issues continue to grow in scope and complexity this model is difficult to  
7 maintain due to the increasing workload, the focus needed for cybersecurity and the shortage  
8 of cybersecurity professionals. To remove the responsibility for Physical Security from  
9 cybersecurity professionals, incremental labor expense has been pro formed to include a  
10 Physical Security professional to handle the physical security workload.

11 The second compliance driver is in relation to the 2021 IBEW Local 77 contract, and  
12 more specifically Article 16 negotiations (“Negotiations”) within the contract that speak to  
13 our telecommunications organization. Prior to, and during negotiations, numerous grievances  
14 were filed alleging infringement upon work by non-bargaining employees due to the  
15 introduction and implementation of new technology systems that replaced legacy systems  
16 traditionally supported by bargaining unit employees. The 2021 negotiations offered an  
17 opportunity to provide a reset in roles/responsibilities and establish a path for future  
18 adjustments in the skills and expertise of all applicable areas. These three new bargaining unit  
19 technician positions (incremental additions that are not replacing existing positions) will be  
20 trained to support the applicable new technologies. These new technician roles will also be  
21 responsible for updating and maintaining our training program for the bargaining unit  
22 employees as new technologies are introduced. The addition of new roles coupled with  
23 changes to process and procedures will ensure the new technologies have adequately trained

1 support staff and well-maintained documentation. This will result in an overall increase in  
 2 efficiency and effectiveness of the technologies for our customers.<sup>5</sup>

3 In total, the O&M incremental labor costs of these eight new employee positions  
 4 amount to \$876,847 (system) annually. See Table No. 3 below for a list of the positions  
 5 expected to be filled by end of Q4 2022.

6 **Table No. 3: Pro Formed IS/IT Employees Above Test Period Levels (System)**

7	Role	Driver	Annual O&M Impact
8	Delivery Network System Technician	IBEW Labor Article 16	\$ 131,560
	Operations Network System Technician	IBEW Labor Article 16	\$ 131,560
9	Operations Communication System Technician	IBEW Labor Article 16	\$ 131,560
	System Technician	TSA	\$ 46,667
10	Vulnerability Management Analyst	TSA	\$ 129,000
	OT Security Engineer	TSA	\$ 22,500
11	TSA Compliance Engineer	TSA	\$ 130,000
	Mgr, Physical Security	TSA	\$ 154,000
12			<u>\$ 876,847</u>

13 **Q. What is driving the increase in non-labor O&M expense of \$836,787**  
 14 **(System) as shown in Table No. 2 earlier?**

15 A. The main driver is capital investment in Enabling Technology, Business &  
 16 Operating Application Systems, and Enterprise Security from areas across the Company as  
 17 described earlier in my testimony. As digitalization drives technology further and further into  
 18 areas of the utility that traditionally were not as technology dependent, nearly all capital  
 19 investment - regardless of what functional area it supports - include technology components  
 20 that result in incremental increase to licensing, support and maintenance expense for those  
 21 systems.

22 Another significant driver is the increasing trend of software vendors changing how

---

<sup>5</sup> Additional descriptions of each of the eight total incremental labor positions pro formed by the Company is provided within the confidential workpapers of Ms. Schultz for Adjustment 3.04 – Pro Forma IS/IT Expenses.

1 they license and deliver software solutions; examples include a shift from a perpetual license  
 2 to a subscription license, or from an on-premise solution to a cloud-based solution. In addition,  
 3 software vendors regularly increase the cost of ongoing maintenance and support to keep up  
 4 with the cost of enhancing, fixing and supporting their products, and to align with market  
 5 driven forces such as annual consumer price index increases and inflation.

6 As digital transformation increases the number and complexity of systems dependent  
 7 on information technology, the Company prudently negotiates annual and multi-year  
 8 agreements to normalize, control and manage IS/IT expense to the benefit of our customers.  
 9 The non-labor incremental increase in this adjustment is the result of known and measurable  
 10 expense from those annual and multi-year agreements currently in place or continuation of  
 11 agreements expected, that have increased beyond the 12-months ended June 30, 2022  
 12 historical test period. A breakdown of the incremental increase to expense of \$836,787  
 13 (system) by technology type is include in Table No. 4 below:

14 **Table No. 4: Non-Labor Incremental System Expense (System) for Rate Year 1:\***

15 \*No incremental adjustment for Rate Year 2, above Rate Year 1 levels, is known at this time.

General Tech Type	Test Year	RY1	RY 1 Incremental
Enabling Technology Business & Operating	\$5,264,677	\$4,930,725	(\$333,952)
Application Systems	\$13,306,959	\$14,263,280	\$956,322
Enterprise Security	\$1,998,676	\$2,213,093	\$214,417
<b>Grand Total</b>	<b>\$20,570,311</b>	<b>\$21,407,098</b>	<b>\$836,787</b>

20 **Q. Table No. 4 includes an increase of \$836,787 (System) in RY 1, and it**  
 21 **appears that most of this increase is related to the Business & Operating Application**  
 22 **Systems. Please describe the reasons for the increase in the Business & Operating**  
 23 **Application Systems area.**

24 **A. The primary increases to the Business & Operating Application Systems**



1 originate from non-IS/IT capital investments within the Customer Technology area. More  
2 specifically, the Customer Load Disaggregation Platform service, an energy monitoring and  
3 management platform for eco energy savings, and Salesforce for CRM/CXP, account for  
4 nearly \$750,000 of the Rate Year 1 incremental change within Business & Operating  
5 Application Systems. Additional discussion below describes non-IS/IT capital drivers of IS/IT  
6 O&M.

7 Incremental reductions within Enabling Technology from test year to Rate Year 1  
8 result primarily from the restructuring of key licensing agreements within the Hardware  
9 License Support and Software License Support categories. A prime example is Schneider  
10 Electric Smart Grid Services, a tool used by electric, gas and network personnel to design and  
11 manage assets, which moved from a one-year agreement to a three-year agreement. Prepaying  
12 for three years allowed Avista to achieve both an \$80,000 discount with the vendor and meet  
13 our cost of capital. In total, Avista paid \$1 million for the multi-year agreement versus \$1.08  
14 million, had we maintained annual payments for three years. Additionally, moving to a multi-  
15 year agreement drove an accounting change from being 100% O&M to 80% capital and 20%  
16 O&M. Net present value calculations were run for both options and, ultimately, the prudent  
17 business decision was made for our rate payers which resulted in a shift from O&M to capital  
18 of approximately \$166,000 (system) from test year to Rate Year 1.

19 **Q. What are the primary types of incremental IS/IT non-labor O&M**  
20 **expense?**

21 A. The primary types of incremental non-labor O&M expenses include Hardware  
22 and Software License support and maintenance, and Software Services and Subscriptions.  
23 Hardware and Software License support and maintenance are costs associated with a

1 traditional licensing model where a capital asset license is purchased along with the required  
 2 license support and maintenance costs. Support and maintenance costs are the ongoing  
 3 expense portion associated with vendor provided security patches, bug fixes, incremental  
 4 upgrades, and expert technical support with pre-determined service level agreements.  
 5 Software Services and Subscriptions are costs associated with a less traditional but  
 6 increasingly more common licensing model where all or most of the license cost is considered  
 7 ongoing expense, rather than a capital asset. Examples include items like Software as a Service  
 8 (SaaS), data feeds, or site license subscriptions. Costs in this category range from solutions  
 9 that enable or supplement on premise systems, to complete end-to-end solutions  
 10 (infrastructure, networks, computing, storage, hosting, etc.) with little to no on-premise  
 11 footprint. The incremental expenses included in this case and displayed above in Table No.  
 12 4, on a system basis, are re-categorized and shown by general cost types in Table No. 5:

13 **Table No. 5: Non-Labor O&M (System)**

<b>General Cost Types</b>	<b>Test Year</b>	<b>RY1</b>	<b>RY 1 Incremental</b>
Dedicated Voice and Data Circuits	\$78,970	\$228,269	\$149,299
Hardware License Support	\$1,544,417	\$1,364,488	(\$179,929)
Professional Services	\$648,216	\$610,497	(\$37,719)
Radio Tower Site Leases	\$274,954	\$261,816	(\$13,138)
Rental Expense - Equipment	\$120,768	\$125,982	\$5,214
Software License Support	\$10,002,908	\$9,741,450	(\$261,458)
Software Services and Subscriptions	\$7,893,949	\$9,054,510	\$1,160,561
Training	\$6,129	\$6,129	\$0
Wireless WAN		\$13,956	\$13,956
<b>Grand Total</b>	<b>\$20,570,311</b>	<b>\$21,407,098</b>	<b>\$836,787</b>

20 **Q. Please describe what is being represented in Table No. 5.**

21 A. As demonstrated, Table No. 5 represents an alternative view of the incremental  
 22 adjustment from Test Year to Rate Year 1, focusing on the general cost types of items that  
 23 make up the categories displayed in Table No. 4. As shown in Table No. 4, the largest single

1 driver of increased non-labor O&M costs is increases in software services and subscriptions,  
2 of which the largest portion is a result of the non-IS/IT driven Customer Facing technology  
3 capital project, as described below and shown in Illustration No. 5.

4 In addition, the Security Directives issued by the Department of Homeland Security's  
5 TSA directly impact Avista and require us to implement a number of security protections. The  
6 need to meet these requirements has driven not only increases to labor O&M, but also non-  
7 labor O&M. New, Security driven software services and subscriptions have been brought into  
8 portfolio to support these directives. Inflated market conditions have also caused greater than  
9 average vendor price increases within the Software Services and Subscriptions category.

10 As shown in Table No. 5, above, the total incremental IS/IT non-labor O&M expenses  
11 included in this general rate case above test period levels is approximately \$837,000 (system).

12 The net effect of the incremental labor and non-labor IS/IT expenses, as discussed  
13 above in Table No. 2, total approximately \$1.7 million on a system basis, or \$408,000  
14 allocated to Idaho electric operations and \$93,000 allocated to Idaho natural gas operations,  
15 as discussed by Ms. Schultz within her direct testimony, and shown in Exhibit No. 4,  
16 Schedules 1 (electric) and 2 (natural gas).

17 **Q. Are IS/IT capital projects the only driver of incremental IS/IT O&M**  
18 **expense?**

19 A. No. As described earlier in my testimony, information technology is prevalent  
20 throughout the utility and underpins most of the modern business and operating systems as a  
21 result of the digital transformation of the utility.

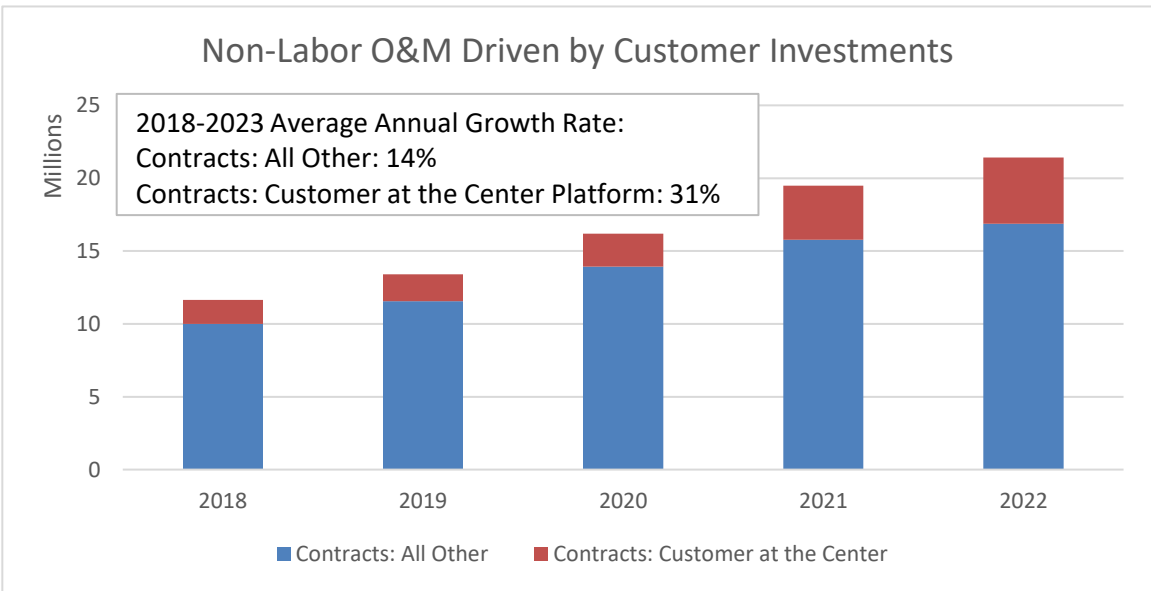
22 **Q. Provide an example of a non-IS/IT driven capital investment that is**  
23 **driving incremental IS/IT O&M expense.**



1 meet the unpredictable demand. The total costs associated with all cloud computing services  
 2 are split between monthly and annual billings and have resulted in a net increase of \$224,000  
 3 in 2022 centralized O&M expense. The above are a few examples of technology solutions for  
 4 the Customer at the Center Platform that resulted in increases to our centralized O&M  
 5 expenses. The provided CXP and CRM examples, in addition to Oracle Support for our  
 6 Customer Care and Billing, and Meter Data Management solutions, total approximately \$3.35  
 7 million (system) annually, as of 2022, and have long been centralized in the IS/IT O&M  
 8 expense budgets.

9 Illustration No. 5, below, is an example of one non-IS/IT investment area that drives  
 10 IS/IT O&M. The visual displays the year over year change of known and measurable expense  
 11 from annual and multi-year agreements demonstrating the impact of Customer at the Center  
 12 Platform on all IS/IT contracts. As you can see, Customer at the Center Platform has grown  
 13 at a rate more than twice that of all other IS/IT contracts.

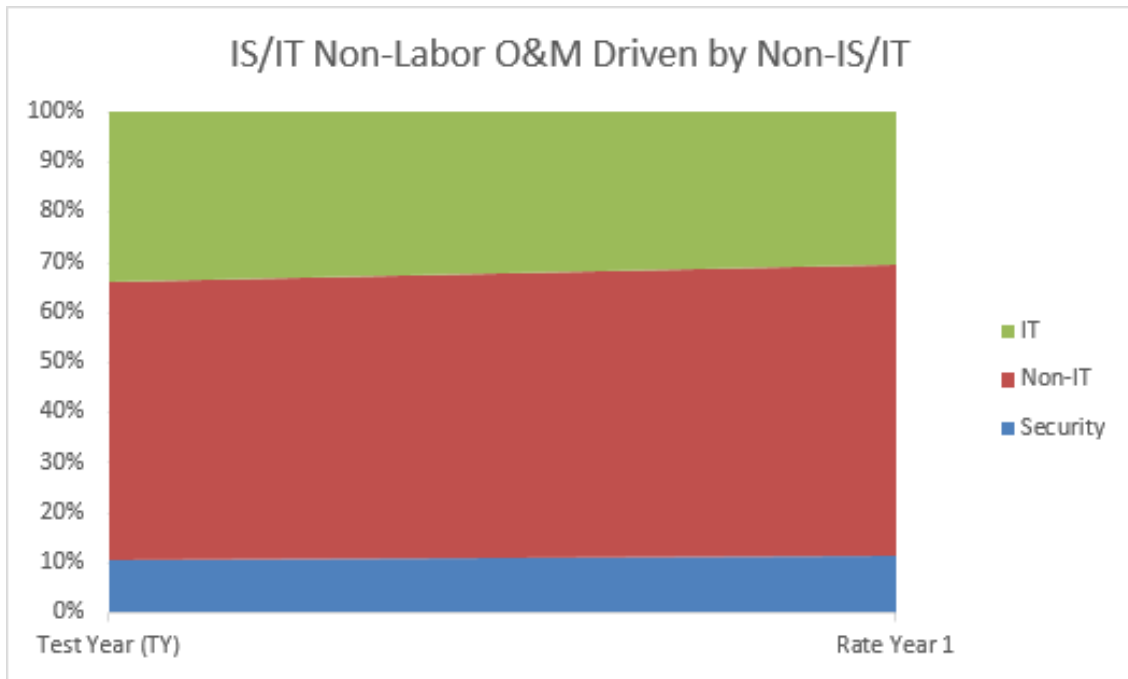
14 **Illustration No. 5: Non-Labor O&M Driven by Customer Investments**



23 Illustration No. 6, below, displays the percentage of IT, Security and Non-IT sourced

1 IS/IT non-labor O&M from the test year through Rate Year 1. As is clearly demonstrated, a  
2 significant portion of IS/IT non-labor O&M is driven by Security and Non-IS/IT areas of the  
3 business.

4 **Illustration No. 6: IS/IT Non-Labor O&M Driven by Non-IS/IT**



15 **Q. Describe how technology system support and maintenance service**  
16 **contracts provide value and benefit customers.**

17 A. Technology systems are becoming more integrated and complex as business  
18 transactions become more integrated and automated. These technology systems require  
19 regular maintenance activities to stay current on security vulnerability patching, software  
20 defect patching, and various software functionality changes. Due to the increase in complexity  
21 of these systems, vendor support is needed to assist with root cause analysis when  
22 troubleshooting failures in the system. Without support and maintenance services for these  
23 technology systems the Company and our customers would experience longer system

1 downtimes due to complexities of root cause analysis. In addition, the Company would be at  
2 increased risk of malicious activities in our technology systems if we did not have access to  
3 software vulnerability patches, and our ability to optimize and maintain the business value of  
4 the technology system would be degraded.

5 **Q. How has Avista focused on managing its overall IS/IT expenses for the**  
6 **benefit of its customers?**

7 A. Avista employs several approaches to regularly assess, review, and take action  
8 to manage and control IS/IT costs. One approach is through software application license  
9 acquisition, renewal, and recovery. A software analyst works in conjunction with our technical  
10 and business subject matter experts to negotiate right-sized licensing, and to review and  
11 validate the value and use of software applications to identify opportunities to reduce and  
12 remove unused license and maintenance costs prior to any renewal of software agreements.

13 An example of this practice from the current year occurred when ahead of the license  
14 renewal for our data analytics platform we analyzed license assignments and usage. Our team  
15 examined reporting from the platform to identify users that may not be fully leveraging the  
16 service or do not justify the assigned license cost. Additionally, we surveyed users to  
17 determine how the service was being used, and whether there was a lower cost/no cost  
18 alternative that would meet their needs.

19 Avista regularly evaluates all available purchasing options from our software  
20 vendors. As we approach the upcoming renewal of our Microsoft desktop business  
21 applications, we have identified an option to combine three currently licensed application  
22 suites under a single purchasing SKU. This move is anticipated to create a cost savings of  
23 \$173,052 over 3 years without any reduction in service or license entitlement. Additionally,

1 by analyzing the available volume pricing tiers we have identified a potential opportunity to  
2 increase our licensed user count at onset of the agreement which may reduce the overall cost  
3 by an additional \$78,437, while providing room for user growth over the next 3 years (and  
4 potentially reduce administrative overhead associated with processing license expansion  
5 orders).<sup>6</sup>

6 Another approach Avista takes to manage and control IS/IT costs is to identify  
7 opportunities to consider annual and multi-year agreements with software and service vendors  
8 when business needs align with the duration of the agreement. These agreements allow Avista  
9 to lock in pricing at or below current or expected market pricing, providing protection from  
10 adverse market conditions, which benefits both Avista and our customers. An additional way  
11 IS/IT looks to reduce expense over time is to seek further discounts from vendors in exchange  
12 for pre-payment of annual and multi-year agreements. Avista prudently approaches pre-  
13 payment of software agreements which are considered and agreed to when the benefits of  
14 prepayment outweigh the cost, or where the vendor requires it as part of the agreement.

15 **Q. What are other methods Avista uses to manage its overall IS/IT expenses**  
16 **for the benefit of its customers?**

17 A. Another method which has been discussed above is the use of digitalization,  
18 an industry-wide strategy that requires additional investment in IT's support capabilities. As  
19 existing and new services are digitalized, IT departments are experiencing a significant  
20 increase in workloads. Although these increasing workloads are expected, we actively work  
21 to decelerate the associated cost increases using automation technology and changes to our IT  
22 operating models.

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<sup>6</sup> If during the process of the case, these contracts are renewed at a reduced cost then that included in the case, the Company will reflect Idaho's share of the possible savings.



1           Other examples of practices to manage and control IS/IT expense include training  
2 employees to use mobile devices to scan documents and temper investment in  
3 printing/scanning technology, and working with our Supply Chain department to negotiate  
4 volume rebates (\$257,250 in discounts from 2020 across capital and expense projects), and  
5 early pay discounts (\$160,181 in discounts from 2020, and \$130,741 in 2021 through October,  
6 across capital and expense projects) for technology products and services procured each year.

7           **Q.     Does this conclude your pre-filed direct testimony?**

8           A.     Yes.