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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-08-01 DIRECT TESTIMONY OF SCOTT J. KINNEY

FOR AVISTA CORPORATION

(ELECTRIC ONLY)

I. INTRODUCTION

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

A. My name is Scott J. Kinney. I am employed by Avista Corporation as the Chief Engineer, System Operations. My business address is 1411 East Mission, Spokane, Washington.

Q. Please briefly describe your education background and professional experience.

A. I graduated from Gonzaga University in 1991 with a B.S. in Electrical Engineering. I am a licensed Professional Engineer in the State of Washington. I joined the Company in 1999 after spending eight years with the Bonneville Power Administration. I have held several different positions in the Transmission Department. I started at Avista as a Senior Transmission Planning Engineer. In 2002, I moved to the System Operations Department as a supervisor and support engineer. In 2004, I was appointed to my current position of Chief Engineer, System Operations.

Q. What is the scope of your testimony?

A. My testimony describes Avista's pro forma period transmission revenues and expenses. I also discuss the nearly completed 5-year Transmission Upgrade Project, and the Transmission and Distribution expenditures that are part of the capital additions testimony provided by Company witness Mr. Dave DeFelice, as well as the Company's Asset Management Program expenses. Company witness Ms. Andrews incorporates the Idaho share of the net transmission expenses, the transmission and distribution capital additions, and the Asset Management Program O&M expenses proposed in this case.

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring Exhibit No. 10, Schedules 1-3, which were prepared under my direction. Schedule 1, provides the transmission pro forma adjustments. Schedule 2, includes a map of the "230 kV Upgrade Project" at page 1, and the "Avista 5-Year Transmission Upgrade Project" table at page 2. Schedule 3, includes the Asset Management Program Model.

II. PRO FORMA TRANSMISSION EXPENSES

Q. Please describe the pro forma transmission expense revisions included in this filing.

A. Adjustments were made in this filing to incorporate updated information for any changes in transmission expenses from the 2007 test year to the 2009 Pro forma period. Each expense item described below is at a <u>system</u> level, with the exception of the $71,000 Grid West adjustment which is Idaho only, and is included in Exhibit No. 10, Schedule 1.

Northwest Power Pool (NWPP) - Avista pays its share of the NWPP operating costs. The NWPP serves the utilities in the Northwest by providing regional transmission planning, coordinated transmission operations, and Columbia River water coordination. There is no anticipated change in NWPP costs in the pro forma period compared to 2007 actual expense of $31,000.

Colstrip Transmission - Avista is required to pay its portion of the O&M costs associated with the Colstrip transmission system pursuant to the joint Colstrip contract. In accordance with Northwestern Energy's (NWE) 15 year Colstrip transmission plan provided to the Company, NWE will bill Avista an annual total of $631,000 (based on 2007 dollars with no inflation adders) for Avista's share of the Colstrip O&M expense during 2009. This is an increase of $172,000 over 2007 actual expense of $459,000. NWE expects 2008 Colstrip O&M costs to be $519,000. The significant cost increase is a result of implementing cathodic protection measures and the on going anchor bolt replacement program.

ColumbiaGrid (RTO Development) - In 2006, Avista elected to fund the ColumbiaGrid RTO development effort. This is a regional organization whose purpose is to enhance transmission system reliability and efficiency, provide cost-effective regional transmission planning, develop and facilitate the implementation of solutions relating to improved use and expansion of the interconnected Northwest transmission system, reduce transmission system congestion, and support effective market monitoring within the Northwest and the entire Western interconnection. Under the amended ColumbiaGrid funding agreement signed September 1, 2006, Avista will pay a total of $518,000, which represents Avista's share of the ColumbiaGrid operating costs from 2006 through Augusts 31, 2008. Prior to the amended agreement, Avista paid $104,000 of these costs. The remaining balance ($414,000) is being collected over the remaining 20 months of the agreement. The monthly amount is $20,720. Avista anticipates that ColumbiaGrid operating costs will continue beyond August 2008 with monthly payments remaining at least $20,720. Therefore, the ColumbiaGrid cost for the pro forma period is anticipated to be approximately $249,000 annually based on a monthly fee of $20,720.

<u>ColumbiaGrid Planning </u>- An additional service being provided by ColumbiaGrid is regional planning and expansion. A functional agreement was developed and filed with the Federal Energy Regulatory Commission (FERC) on February 2, 2007 and approved on April 3, 2007. The

agreement does not have a termination date and funding is on a two-year cycle with provisions to adjust for inflation. Funding is based on a fixed amount, plus a portion is based on Avista's load ratio compared to the other members. Avista believes the planning agreement will be extended beyond the initial 2 year period that ends after December 2008. The Company anticipates that costs to support the ColumbiaGrid planning effort will be equal to at least the current monthly rate of $10,251. This equates to $123,000 during the pro forma period, which is $72,000 over 2007 actual costs. The increase is attributed to the planning agreement being started in the middle of the 2007 operating year.

Grid West (ID Direct) - Included in transmission expense is an annual amount of $71,000 to recover costs associated with Grid West (and its forerunner, RTO West). Avista signed an initial funding agreement in 2000, as did all other Pacific Northwest investor-owned electric utilities, to provide funding for the start-up phase of Grid West (then named "RTO West"). Grid West had planned to repay the loans to Avista and other funding utilities through surcharges to customers once it became operational. With the dissolution of Grid West, this repayment did not occur. As a result, Avista filed an application with the Commission to defer these costs. The Commission approved, on October 24, 2006, in Order No. 30151, the Company's request for an order authorizing deferred accounting treatment for loan amounts made to Grid West. In its Order the IPUC found these costs to be "prudent and in the public interest" and required the Company to begin amortization of the Idaho share of the loan principal ($422,000) beginning January 2007, for five years. During the pro forma period Avista will amortize a total of $71,000 associated with Grid West development costs.

Electric Scheduling and Accounting Services - The $52,000 decrease in the pro forma period compared to actual 2007 expense for electric scheduling and accounting services is a result of continued reductions in services provided by third party vendors. These services are no longer required because of the development of an internal accounting program and the development of a regional transmission interchange tool by the Western Electricity Coordinating Council (WECC). These new applications replace the services provided by third parties.

Grant County Agreement - This will be discussed later in conjunction with the Seattle and Tacoma revenues and expenses associated with the Main Canal and Summer Falls Projects.

OASIS Expenses - The Open Access Same-Time Information System (OASIS) expenses are associated with travel and training costs for transmission pre-scheduling and OASIS personnel. This travel is required to monitor and adhere to the NERC reliability standards and FERC OASIS requirements. The costs associated with OASIS expenses in the pro forma period is $4,000 more than the 2007 test year.

WECC - System Security Monitor & WECC Administration and Net Operating Committee Systems - The WECC fees have and will continue to increase from year to year. WECC is just beginning to develop its 2009 budget so 2008 actual fees will be used for the pro forma period. WECC System Security Monitor fees in 2008 are $170,900 compared to 2007 test year fees of $98,500. Additionally, the WECC Administrative and Net Operating fees have been increased from $217,100 in 2007 to $282,000 for 2008. Both changes reflect significant increases in the WECC budget to fund regional reliability initiatives required to meet FERC and NERC mandatory reliability standards.

WECC - Loop Flow - Loop Flow charges are spread across all transmission owners in the West to compensate utilities that make system adjustments to eliminate transmission system congestion throughout the operating year. The 2009 pro forma charge is $26,800 which is a three year average of actual fees, since charges are dependent on transmission system usage and congestion, and can vary from year to year. This is $2,000 higher than actual 2007 charges.

III. PRO FORMA TRANSMISSION REVENUES

Q. Please describe the pro forma transmission revenue revisions included in this filing.

A. Adjustments were made in this filing to incorporate updated information for any changes in transmission revenue from the 2007 test year to the 2009 Pro forma period. Each revenue item described below is at a system level and is included in Exhibit No. 10, Schedule 1.

Borderline Wheeling - The Borderline Wheeling revenue in the pro forma period is set at $5,218,000, which is an average of the 2006 and 2007 actual revenue levels. Actual 2007 test year revenue was $5,203,000. Avista typically uses a five year average of actual annual revenue to estimate future Borderline Wheeling revenue. This helps levelize the revenue requirement since it is based on load demand that is sensitive to temperature variation from year to year. For this case Avista is only using a two year average since 2006 and 2007 are the only years operating under new contracts signed with BPA. The new Borderline Wheeling revenue methodology is based on a Load Ratio

Share[1], which is quite different than the previous revenue calculation under the old contracts. Under the new contracts, BPA, as the network customer, will pay a monthly demand charge, which will be determined by multiplying its Load Ratio Share times one twelfth (1/12) of the Transmission Provider's annual transmission revenue requirement.

<u>Seattle and Tacoma Revenues and Expenses Associated with the Main Canal and Summer Falls Projects</u> - In March of 2006, Seattle and Tacoma purchased interim long-term firm point-to-point transmission service from Avista under the OATT to move their Main Canal and Summer Falls generation to load. These interim point-to-point transmission contracts replaced expired long-term contracts. The transmission was purchased from April 2006 through October 2007. Avista collected $1,281,000 in 2007 under these contracts and in turn paid $512,400 (plus $275,900 in losses) to Grant County PUD for use of its system to transfer the entire output of the Main Canal and Summer Falls projects. The interim contracts were meant to give Seattle and Tacoma time to build new transmission facilities to bypass Avista and connect directly to BPA. Pursuant to negotiations among Seattle, Tacoma, Grant County PUD, Grand Coulee Project Hydroelectric Authority

[1] Load Ratio Share is the ratio of a Transmission Customer's Network Load to the Transmission

and Avista, Seattle and Tacoma have decided not to bypass Avista's transmission system. The parties have agreed instead, to a series of long term agreements with service to commence March 1, 2008. Seattle and Tacoma have signed similar contracts with Grant County PUD so Avista will not incur any of the transmission expenses with Grant County PUD that it did in the 2007 test year. Under the new Main Canal agreement Avista charges Seattle and Tacoma during the eight months the Main Canal project runs (March-October) and only for that output not used for local load service. Under the new Summer Falls agreement, Seattle and Tacoma only use a portion of Avista's Stratford Switching Station and are charged a use-of-facilities fee based upon this limited use. The estimated revenue from Seattle and Tacoma for Main Canal and Summer Falls during the pro forma period is $120,000.

<u>Grand Coulee Project Revenue</u> - The Grand Coulee Project revenue is a result of a new contract signed in March 2006 with the project owner for a fixed dollar amount, replacing the previous contract which expired in October 2005. The new contract results in monthly revenue of $673 or annual revenue of $8,100 during the pro forma period, which is the same as the test year.

Provider's total load calculated on a rolling twelve-month basis.

OASIS Non-firm and Short-term firm Wheeling Revenue - OASIS is an acronym for Open Access Same-time Information System. This is the system used by utility transmission departments for purchasing and scheduling available transmission for other utilities and independent generators. OASIS revenues are revenues received from the sale of transmission capacity to third parties, for transmission above and beyond that needed by Avista to serve native load. These revenues are credited back to customers in a rate case, such as this one, to offset a portion of the overall cost of transmission.

Because these revenues vary year to year depending on electric energy market conditions and available transmission capacity (ATC) on adjacent utility systems, Avista has, in previous rate cases, used the most recent five-year average as being representative of future expectations unless there are known events or factors that occurred during the period that would cause the average to not be representative of future expectations. In 2004, there were some unusual events that caused Avista's OASIS revenues ($5,475,000) to be significantly higher than the other test years.

The Bonneville Power Administration (BPA) had several 500 kV lines out of service for rebuild projects, which resulted in a significant increase in Avista's transmission sales in 2004. During 2004 BPA was constructing a new 500 kV line from Bell substation in Spokane to Grand Coulee Dam in central Washington, installing fiber optic cable on existing transmission lines, and installing new and upgrading existing series capacitor banks on four of its area 500 kV lines as part of the West of Hatwai reinforcement project. This construction resulted in multiple prolonged transmission outages that significantly reduced the BPA ATC on critical transmission paths from eastern Montana. Avista owns rights and facilities in these same transmission paths so Avista experienced a significant increase in transmission sales and revenues during the BPA outages.

Therefore, Avista did not include the 2004 revenue in the calculation of the five-year average revenue. Avista calculated the 2009 pro forma OASIS revenue based on revenue from years 2003, 2005, 2006, and 2007. During these four years Avista's highest OASIS revenue was $3.573 million in 2003 and Avista's lowest revenue was $3.129 million in 2005. The resulting four-year revenue average is $3,354,000, which is $18,000 higher than the 2007 actual revenue of $3,336,000.

<u>Dry Gulch Revenue</u> - Dry Gulch revenue has been adjusted to $276,000 for the pro forma period, which is a $24,000 increase from the 2007 actual revenue of $252,000.

The current methodology used to forecast Dry Gulch revenue is a five-year average of actual revenue. A five-year average is used since the revenue can vary from year to year. The revenue is calculated using a 12-month rolling ratchet based on monthly peak demands. Load peaks are very sensitive to temperatures, which vary from year to year.

PP&L Series Cap - 1978 - PP&L Series Cap revenue was reduced from $9,000 in the test year to $5,000 in the pro forma period since the 20 year amortization of the original contract expires in June 2009. In 1989 Pacificorp paid the company a lump sum of $178,222 in lieu of annual payments provided for under the original agreement. The lump sum payment was amortized at $781 per month from August 1990 through June 2009.

Spokane Waste to Energy Plant - No adjustments to Spokane Waste to Energy Plant revenue of $160,000 were made for the pro forma period compared to the 2007 test year. This revenue is the result of a long-term transmission interconnection agreement with the City of Spokane. The contract expires in February 2011.

Vaagen Wheeling - Vaagen Wheeling revenue was increased slightly to $112,000 for the pro forma period compared to 2007 actual revenue of $110,000. A five-year average is used to determine the pro forma period revenue since revenue can fluctuate year to year depending upon transmission usage.

Northwestern Energy (NWE) - The revenue of $231,000 from NWE in the 2007 test year was a result of a load following contract that Avista signed in 2005 with NWE. Under the contract Avista provides up to 15 MW of energy to NWE to help them match hourly fluctuations in loads and resources. Firm transmission for this contract was purchased by Avista's Power Resources department from Avista's Transmission department and was included in the contract price paid for by NWE. During the first three years of the contract the transmission revenue was credited to the Avista Transmission Department. Since the transmission revenue from this contract is actually an intra-company exchange of revenue it has been shifted to revenue account 447 for the pro forma period and has been included in Mr. Johnson's Power Supply information.

IV. TRANSMISSION AND DISTRIBUTION CAPITAL PROJECTS

Q. Please describe the Company's capital transmission projects in 2008?

A. The Company has nearly completed its 5-year (2003-2007) $136.4 million transmission upgrade project, discussed later in my testimony, that significantly improved the infrastructure of the 230 kV transmission system. With the completion of these projects the transmission project focus is shifting to improving the 115 kV transmission system to meet load growth and eliminate thermal loading issues. The major capital transmission costs (system) for projects to be completed in 2008 are approximately $12.1 million. The major projects scheduled for 2008 completion include:

- Airway Heights to Silver Lake 115 kV Transmission ($2.0 million)
- Benewah Substation Transformer ($1.5 million)
- Extension of 115 kV underground in Spokane ($1.8 million)
- Spokane/Coeur d'Alene area relay upgrade phase 1 ($1.2 million)

The remaining transmission projects being constructed in 2008 are smaller projects. These projects include normal system replacements due to aging facilities, minor rebuilds, reliability improvements, safety requirements, required line relocations, and smaller construction projects to address overloaded equipment. These smaller projects are required to operate the transmission system safely and reliably.

Q. Please describe the Company's distribution projects in the State of Idaho that will be completed in 2008?

A. Distribution Projects in Idaho (including transformation) for 2008 total $10.9 million, of which $3.5 million are for projects necessary to meet capacity needs of the system. Included in the $3.5 million is the transformation upgrade and substation rebuild at Plummer planned to be completed in 2008 at $2 million. New feeders, feeder reconductoring, substation transformers in plant and road construction requirements make up the remainder of the $3.5 million. The remaining anticipated distribution plant expenditures in the State of Idaho for 2008 over and above the $3.5 million are for minor blankets and various small-scale projects.

Q. Please describe the Company's 5-year transmission upgrade project?

A. The Company has nearly completed its 5-year transmission upgrade effort that began in 2003 at a total system cost of $136.4 million ($134.9 million has been completed and placed in service as of December 31, 2007). This multi-year transmission upgrade project added over 100 circuit miles of new 230 kV transmission line to Avista's system, and increased the capacity of an additional 50 miles of transmission line. The upgrade project included constructing two new 230 kV substations as well as reconstructing three existing transmission substations. Six additional 230 kV substations were upgraded to meet capacity requirements, replace protective relaying systems, and meet regional and national reliability standards. In total, Avista performed work on eleven of its thirteen 230 kV substations. Avista also upgraded its telecommunication system by installing fiber and digital microwave systems. This created redundant communication paths, required by national reliability standards and improved system monitoring, control, and protection. Exhibit No.10, Schedule 2 page 1, includes a map showing the location of the 230 kV upgrade projects. Page 2 shows the individual project costs by year totaling the $136.4 million total project cost. Included in Table No. 1 below is the listing of completed projects and their system costs through December 31, 2007.

Table No. 1- Transmission Project Costs

5-Year Transmission Upgrade Projects completed through December 31, 2007

Transmission Projects	Cost: System
Pine Creek Substation	$4,745
Beacon-Rathdrum 230 kV	$19,991
Dry Creek Substation	$14,454
Beacon-Bell #4 230 kV	$1,431
Beacon-Bell #5 230 kV	$3,657
Spokane Valley Reinforcement	$23,623
WoH Telecom	$8,184
WoH Telecom Line Upgrades	$966
Clark Fork RAS	$1,071
Palouse Reinforcement (1)	$54,658
Lolo Substation(1)	$2,139
Total	$134,919

(1) Additional costs of approximately $1.5 for Palouse Reinforcement ($800k) and Lolo Substation ($700k) are planned for 2008 and included in the Company's Pro Forma Capital Additions 2008 adjustment (PF7).

Q. Please describe the major components of the transmission upgrade project included in this filing?

A. As shown in the table above (see also Exhibit No.10, Schedule 2, page 2), the Company has completed several major transmission projects during the 5-year reinforcement effort, which include the Pine Creek 230 kV Substation, Beacon-Rathdrum 230 kV Project, the Beacon-Bell #4 and #5 230 kV line upgrades, the Dry Creek Substation Project, the Spokane Valley Reinforcement Project, the West of Hatwai (WoH) Telecom Projects including the Clark Fork Remedial Action Scheme, Palouse Reinforcement Project, the Lolo Substation Rebuild Project - at a total system investment of $136.4 million.

- **Pine Creek Substation:** Avista rebuilt this 230 kV substation located in Pinehurst, ID. The 500 MVA substation was re-energized in November 2003. Modernizing the 50-year old substation, by upgrading circuit breakers and other equipment relieved transmission congestion between Noxon Rapids Dam and delivery points in the Silver Valley, Spokane and southward into the Palouse area.

- **Beacon-Rathdrum 230 kV:** Avista reconstructed 25 miles of double circuit 230 kV transmission line between Rathdrum, ID and Spokane, WA. This project included reconstructing the Rathdrum 230 kV substation in Idaho. By adding a 230kV circuit and using larger conductor, the capacity of the old transmission line was raised from 300 to 2000 MW. This relieved a significant transmission bottleneck between North Idaho and Eastern Washington. Conversely, Rathdrum substation was reconstructed to enable the higher transfer limits. A second 230 kV bus was added to Rathdrum, making the station fully redundant. Without this addition, 230kV main bus outages at Rathdrum would result in 200-350 MW of load loss to customers throughout North Idaho and Eastern Washington. This project was completed in June of 2004.

- **Dry Creek Substation:** Avista constructed a new 230 kV substation near Clarkston, WA that enabled existing transmission lines to form a 35-mile transmission "ring" around the Lewiston, ID and Clarkston, WA. The transmission loop improved reliability by reducing congestion during heavy load periods and peak energy flows. The 230 kV Dry Creek switchyard was completed in December of 2004 and a 200 MVAR capacitor bank installed in June of 2005 to support area voltage. Avista also added a 250 MVA, 230 kV to 115 kV autotransformer in November of 2006, to improve load service and system reliability. The Hatwai-Lolo and Hatwai-North Lewiston 230 kV lines were also both upgraded as part of this project to eliminate thermal loading issues experienced during peak load conditions.

- **Beacon-Bell 230 kV:** Avista increased the capacity of two (2) parallel 230 kV transmission lines in north Spokane that originate from Avista's Beacon Substation and interconnect with Bonneville Power Administration (BPA) at its Bell Substation. Upgrading the capacity of each line from 400 to 800 MVA mitigated overloads between Avista and BPA and improved load service to the entire Avista system. One of the transmission lines was reconductored and placed into service in December 2005 and the other line upgraded in April 2007.

- **Spokane Valley Reinforcement:** Avista added two 250 MVA 230 kV to 115 kV transformers in two stages at the new Boulder Substation in the Spokane Valley. The first transformer was placed into commercial operation in December of 2005. The second transformer and corresponding substation work was energized in June of 2007. The Boulder station was constructed to serve customer load growth in the Spokane Valley, Post Falls, and Coeur d'Alene. The added capacity at Boulder also relieved congestion at Avista's largest transmission substation, Beacon. Shifting load from Beacon to Boulder improved service adequacy and overall reliability.

- **West of Hatwai (WoH) Telecom and Clark Fork Remedial Action Scheme (RAS):** The ability to communicate with, monitor, and control transmission equipment is an important factor in providing reliable service to customers. The WoH Telecom initiative was comprised of several individual projects. Several of these fiber projects required the upgrade of existing transmission lines in order to support the fiber. The Noxon-Pine Creek fiber project, the Benewah-Boulder fiber project and the Benewah-Pine Creek Digital Microwave project completed a telecommunication ring from Spokane to Noxon Rapids Dam. The ring provides for redundant communication paths, where the loss of one side of the ring will not eliminate the ability to control equipment. The ring is also required to implement the Clark Fork Remedial Action Scheme (RAS) that drops generation at Noxon Rapids and Cabinet Gorge Dams following the loss of critical transmission circuits to ensure system reliability. Another component of the Clark Fork RAS included the addition of fiber from the Cabinet generation units to the 230 kV Cabinet Substation. The Hatwai-North Lewiston fiber project completed a fiber ring around the Lewiston/Clarkston load service area. The Benewah-Boulder fiber project was placed into service in 2005. The Hatwai-North Lewiston and Clark Fork fiber projects were completed and commissioned in 2006. The Noxon-Pine Creek fiber project was commissioned in September of 2007.

- **Palouse Reinforcement:** This project involved the construction of 60 miles of new 230 kV transmission line between the Benewah and Shawnee substations and the rebuild of Benewah substation to a more reliable configuration. The project was required to relieve congestion on the existing Benewah-Moscow 230 kV line by providing a second 230 kV transmission line between Avista's Northern and Southern load service areas and to provide an alternate 230 kV source of power to the Shawnee Substation. This project significantly improves system reliability. The transmission line portion of the project was completed in three phases over a two year construction period. All but one small portion of the project was energized and placed into service before December 2007. The 200 MVAR capacitor bank is currently being constructed and will placed into service by June, 2008.

- **Lolo Substation:** This project involves the rebuild of the existing Lolo substation to increase the capacity of the substation bus, breakers, and supporting equipment to match the upgraded area transmission lines. The new Lolo substation design significantly improves reliability and operating flexibility. The substation rebuild was constructed in two phases. Phase 1 was completed in 2007 and Phase 2 is anticipated to be completed by September of 2008.

Q. Did the construction of these new facilities increase third party transmission revenue received by the Company from third party transmission users who move power across Avista's system?

A. No. These projects were built to improve system reliability, improve area load service, and meet national reliability standards that are now mandatory. In the WoH agreement signed with BPA, Avista preserved its existing transfer capability (600 MW) across the WoH cut-plane and BPA gained the additional transfer capacity that was created.

As previously discussed in Section III of my testimony Avista receives third party transmission wheeling revenue from transmission sales made through its OASIS. A comparison of revenue for years 2003 through 2007 show Avista averages $3.354 million per year with a high of $3.573 million in 2003 and a low of 3.129 million in 2005 excluding year 2004 ($5.475 million), which was an anomaly due to scheduled BPA transmission outages as previously discussed. This data shows that Avista has not seen a significant increase in transmission revenue after the completion of the upgrade projects. The upgrade projects reinforced the transmission system internal to Avista; however, the projects did not create additional transmission capacity to our adjacent utilities.

Q. Please discuss the national reliability standards?

A. The North American Electric Reliability Corporation (NERC) has developed national reliability standards for utilities to follow to ensure interconnected system reliability. When Avista started its transmission upgrade projects in 2002, compliance with these standards was voluntary. The Energy Policy Act of 2005 required the transition of the standards from voluntary to mandatory. Beginning June 2007 the standards became mandatory and non-compliance may result in monetary penalties.

The reliability standards include several transmission planning and operating requirements. The planning standards require utilities to plan and operate their transmission systems in such a way as to avoid the loss of customers or impacting neighboring utilities for the loss of transmission facilities. The transmission system must be designed and operated so that the loss of up to two facilities simultaneously will have no impact to the interconnected transmission system. These requirements drove the need for Avista to invest in its transmission system.

V. AVISTA'S ASSET MANAGEMENT PROGRAM

Q. Please provide additional background to Avista's continuing investment in its transmission and distribution systems?

A. Like most U.S. utilities, after World War II, Avista's growth required installing or updating equipment to meet rising electrical demand. Substations were built or modified to meet increasing loads. The transmission system expanded to bring new generating plant output to population centers. Distribution systems grew and voltage levels were increased to meet new housing and industrial needs.

Avista's installed equipment is aging, and more components are reaching the end of their life. Equipment has become obsolete, and manufacturers no longer support the aged equipment or produce replacement parts, which makes it impractical to rebuild the equipment. Recognizing the increasing cost of aging equipment failure, Avista launched its Asset Management effort in March 2004.

Q. Please describe the Asset Management mission and process.

A. Avista's Asset Management (AM) program manages key electric transmission and distribution assets throughout their life to provide the best value for our customers. By minimizing life cycle costs and the cost per kilowatt-hour to generate and deliver energy, we're able to maximize system reliability and value for our customers.

The Asset Management process combines technology and information in a manner that integrates data from a myriad of sources into a comprehensive plan that maximizes the value of capital assets. The process provides a replacement or maintenance program that minimizes life cycle costs and maximizes system reliability.

Technical experts evaluate each asset and develop a comprehensive Asset Management Model. Available data is examined and where it is not available, expert opinion from the team fills in the gaps. Exhibit No. 10, Schedule 3 shows the steps in the process for developing an Asset Management Plan. The foundation for the plan involves determining the future failure rates and impacts to the environment, reliability, safety, customers, costs, labor, spare parts, time, and other consequences. The failure model then becomes the baseline to compare all other options. Given this foundation, alternatives can be examined and evaluated to define the optimal asset management plan.

Q. How has Avista implemented and facilitated the Asset Management process?

A. Avista has assigned two full-time engineers to the formal Asset Management program. These individuals are responsible for gathering information, prioritizing work and executing efforts to best meet the Asset Management mission. The engineers utilize a statistical Reliability Centered Maintenance (RCM) software package to analyze data. This software allows detailed analysis of the impacts of increased or decreased reliability based on system configuration and component reliability.

Q. Have any Avista Asset Management plans been implemented?

A. Yes, several programs have been successfully implemented. Two of the successful programs underway are Underground Cable Replacement and Wood Pole Management.

The Underground Cable Replacement program has successfully reduced the number of primary underground distribution cable faults from 250 in 2004 to approximately 180 events in 2007. The replacement program eliminated approximately 5,600 hours of outage time for our customers and resulted in avoided costs/savings of $175,000. The increased emphasis on cable replacement has stabilized the fault rate per mile of cable during the past 3 years. This marks significant progress after a four-fold increase in the fault rate since 1992.

The Asset Management team also studied the Wood Pole Maintenance program. After completing an optimization analysis and revenue resource requirement model, the data indicated that distribution poles should be inspected on a 20-year cycle and transmission poles inspected on a 15-year cycle.

Under the new Wood Pole maintenance program Avista tested twice as many Distribution poles in 2007 as in 2006. Increased wood pole inspections identified nearly 200 rotten cross-arms that were replaced and also identified additional poles that require replacement. The Operations and Maintenance portion of the Avista rate request to support Wood Pole maintenance work in 2009 totals $776,000 (system). This represents an increase of $493,000 (system) above the 2007 test year.

Q. What is the Company's request with regards to Asset Management capital expenditures and O&M expenses?

A. Asset Management capital projects for 2008 are included in our existing capital project funding requirement discussed by Company witness Mr. DeFelice. Avista is not asking for any planned 2009 capital Asset Management additions to be included in this case.

For Asset Management projects that require additional O&M, proposed 2009 O&M expenses are $3,941,000 (system) compared to 2007 test year expenses of $1,690,000 (system). This represents an increase of $2,251,000 (system) above the 2007 test year included in this rate case. As shown in Table No. 2 below, Asset Management O&M additions have been divided into four major categories: Substation, Distribution, Transmission and Spokane Downtown Network.

Table No. 2:

Asset Management Operations & Maintenance Amount Above 2007 Test Period		(System) Pro forma
Substation	$	453,000
Distribution	$	491,000
Transmission	$	1,221,000
Network	$	86,000
Total Additional Requested	$	2,251,000

Q. Please describe Avista's Substation Asset Management Plan.

A. Avista operates 157 transmission and distribution substations. A significant portion of the equipment and substation structures are more than 40 years old and have operated beyond normal industry expectations. This older equipment has reached a point in its lifecycle where planned replacement or maintenance will add value to our customers by improving reliability and safety, and avoiding outage costs. Costs to support the Substation maintenance work totals approximately $1,896,000 (system) in the 2009 pro forma period. This is an additional $453,000 compared to the 2007 test period.

The Substation plan includes:

- Power Transformers: More than 26% of Avista's Substation Transformers are over 40 years old. These aging transformers need to be either maintained or replaced depending on condition.

- Circuit Breakers: The Power Circuit Breaker Plan has been an ongoing and successful program maintaining approximately 300 High Voltage Oil Circuit Breakers prior to establishing an Asset Management Program. However, Avista has not yet reached the target of a 10 year Circuit Breaker maintenance cycle and is currently at a 15 year cycle. The requested increased funding will allow more Circuit Breaker maintenance each year.

- Circuit Switchers: Avista uses 120 Circuit Switchers to protect substation transformers at smaller Substations. Avista's analysis indicates periodic maintenance based on the age of the Circuit Switcher should extend the life of these devices by 25% based on a graduated cycle plan determined by age. It is anticipated that the program will result in approximately $180,000 of avoided outage related costs to our customers.

- Reclosers: The Recloser/Medium Voltage Circuit Breaker plan covers about 415 substation and 145 Line Reclosers/Medium Voltage Circuit Breakers. Our current maintenance practice strives to sustain the Substation Reclosers/Medium Voltage Circuit Breakers on a 10-year cycle and to refurbish any failed or replaced ones to use as spares for future needs.

- Rock and Fence: The Substation Rock and Fence plan covers the maintenance and replacement of Rock and Fence for Avista's 157 substations. Avista anticipates an average of 4 Substations will require repairs to the fence or rock ground cover in order to ensure safety by preventing public access and maintain the required insulating properties of the Substation Rock. O&M funding is increased by a relatively small amount for minor repairs to Rock and Fence above current levels.

- Relays: The Relay plan covers the maintenance and replacement of over 6000 separate relay hardware devices that provide protection for Avista's generation, transmission and distribution systems. Regulatory requirements for relay testing and record keeping have increased in recent years as part of new mandatory reliability standards.

Q. Please describe Avista's distribution Asset Management Plan.

A. Avista's distribution system includes 324 feeders and over 12,000 miles of conductors, poles, underground cable, distribution transformers, and various other distribution system components. Avista has developed operations and maintenance plans for the distribution system totaling approximately $648,000 for the 2009 Pro forma period. This amount is $491,000 above that included in the 2007 test period.

The distribution plan includes:

- Animal Guards: Data shows that animals are the second-leading cause of outages at Avista, ranking second only behind weather, and accounting for 19 percent of all outages. Outages caused by squirrels and birds are an increasing, on-going and persistent problem on the distribution system. Statistics indicate that 60 feeders were the subject of almost half of all animal-caused outages. Four of those 60 most vulnerable feeders were recently retrofitted with animal guards. Animal-caused outages have decreased to almost zero on all four feeders, compared to 10 or more per month during warm weather in previous years. Avista has included additional O&M funding to begin implementing a four-year program to install animal guards on the remainder of the 60 most vulnerable feeders.

- Underground Cable: Over 6 million feet of unjacketed underground cable was installed prior to 1982; it has been subject to a replacement program since 1984. After 2008, there will be approximately 750,000 feet of pre-1982 cable still left to be replaced. Though primarily a capital intensive program, there is some related maintenance costs associated with underground cable.

Q. Please describe Avista's Transmission Asset Management Plan.

A. The Avista transmission system is comprised of over 2500 miles of lines crossing an extreme variety of terrain. The 976 miles of 230kV transmission system is critical to serving Avista's customers and to the stability of transmission resources throughout the region. The 115kV system, comprised of 1675 miles, serves Avista customers and neighboring utilities throughout large portions of Eastern Washington and Northern Idaho. Approximately 75% of the transmission system components are over 35 years old. A more rigorous inventory of the 115kV system is underway. Preliminary results of this survey show over 20% of the 115kV system is pre-1930. Avista is requesting $1,289,000 in Operations and Maintenance funding for support of the transmission system under this proposal. This is an increase of $1,221,000 above the 2007 Operations and Maintenance spending for this area.

The transmission plan includes:

- <u>Compression Sleeve Couplings:</u> The majority of the 230kV system was installed in the late 1950s and early 1960s. A critical component of the conductor system is "compression sleeve couplings" that join together sections of conductor. These couplings are beginning to fail. Technology now exists to test the integrity of the couplings far more reliably than with visual inspections. Avista plans to implement a planned inspection and replacement program and anticipates replacing or repairing 15% of the total population.

- Fire Retardant Coatings for Transmission Poles: Random fires can have a significant impact on the reliability of Avista's transmission system. During the past five years, Avista has lost at least 60 wooden poles to brush fires. Protective coatings are now available that can protect wood poles for 20 minutes, or more, from close contact with flames. The coating is especially effective against brush fires. A neighboring utility has used the coating and reported 80% survival rate of wood poles in situations where 20% survival would have been more typical. Avista proposes a four-year program to apply fire retardant coating to critical transmission lines in high fire areas.

- Painting of Steel Transmission Structures: The Avista transmission system was primarily built with wood pole structures prior to the 1990s. However, some critical structures were constructed of painted steel and installed in the early 1970s. These structures need more protective paint to prevent corrosion. These older steel poles are different from new steel poles that do not require protective paint because they were designed and built to have a rustic look to improve aesthetics. The first priority is to repaint an important 230kV line known as the Westside Tap located in the northwest part of Spokane. The structures are showing rust over a larger portion of their surface area. It is imperative that these structures be maintained to prevent further corrosion and loss of structural integrity.

- Steel Tower Base Plate Grout: An important component for structural integrity of steel transmission towers is the interface between the tower and the foundation. Most large steel transmission structures utilize a base plate that requires grout between the steel structure and the foundation to provide solid surface area for transfer of loads to the foundation. The grout can deteriorate from freeze-thaw cycles and requires periodic maintenance. Avista plans to inspect and repair the grout.

Q. Please describe Avista's Network Asset Management Plan.

A. The Network consists of an underground distribution system that feeds the core of downtown Spokane – the region's economic hub – with a very reliable networked distribution system. The Network includes underground vaults, manholes, handholes, substations, network protectors, network transformers, and numerous miles of duct banks and cables. The structural integrity of these vaults, manholes and handholes is vital to public safety because they are typically located under heavily-used streets and sidewalks. Reliability is also essential, because the Network serves the businesses, banks and other critical services located in downtown Spokane. The Operations and Maintenance portion of the Avista rate request to support Network maintenance work totals approximately $108,000. This represents an increase of $86,000 between the 2009 pro forma period maintenance expenses and the 2007 test year.

The Network plan includes inspecting and maintaining an aging system:

- Vaults: Almost 60% of the vaults are more than 50 years old. Avista plans to add inspection of vacant vaults and additional maintenance activities such as vault cleanings to prevent debris build-up and fire hazards. When necessary an entire vault will need to be replaced with a new one.

- The Manholes/Handholes: Nearly 98% of manholes are approaching 100 years of age. Avista plans to inspect them on a five-year cycle and perform maintenance based on the results of the inspections. Replacement of manholes and handholes may also be required.

Q. Has Avista completed all of its Asset Management Plans?

A. No. While Avista has developed multiple Asset Management Plans, some of the plans have not been implemented. Much of the work to date involved development of the processes, skills, and expertise needed to develop the plans. As additional data is gathered and analyzed, the plans will continue to be refined to maximize system reliability and cost effectiveness.

Q. Does this complete your pre-filed direct testimony?

A. Yes, it does.

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IDAHO PUBLIC
UTILITIES COMMISSION

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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-08-01 EXHIBIT NO. 10 SCOTT J. KINNEY

FOR AVISTA CORPORATION

(ELECTRIC ONLY)

Avista Corporation
- Energy Delivery -
Pro Forma Transmission Revenue/Expenses
($000s)

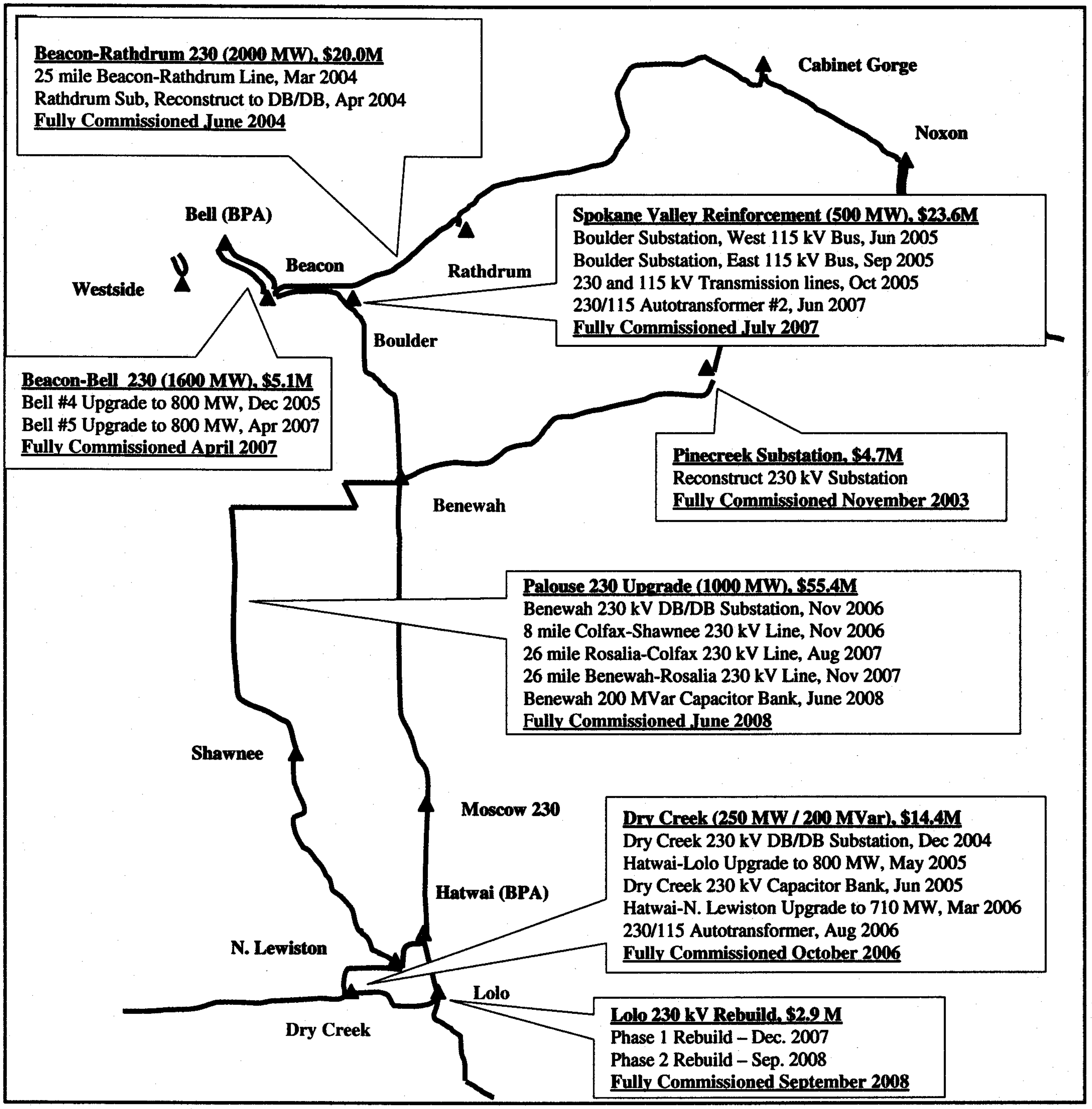
Line No.			2007 Actual	2009 Pro Forma Period	Adjusted
		556 OTHER POWER SUPPLY EXPENSES			
1		NWPP	31	31	0
		560-71.4, 935.3-.4 TRANSMISSION O&M EXPENSE			
2		Colstrip O&M - 500kV Line	459	631	172
3		ColumbiaGrid Development	249	249	0
4		ColumbiaGrid Planning	51	123	72
5		Grid West (ID)	71	71	0
6		Total Account 560-71.4, 935.3-.4	830	1,074	244
		561 TRANSMISSION EXP-LOAD DISPATCHING			
7		Elect Sched & Acctg Srv (CASSO/OATI)	212	160	-52
		566 TRANSMISSION EXP-OPRN-MISCELLANEOUS			
8		OASIS Expenses	2	6	4
9		WECC - Sys. Security Monitor	98	171	73
10		WECC Admin & Net Oper Comm Sys	217	282	65
11		WECC - Loop Flow	25	27	2
12		Total Account 556	342	486	144
13		**TOTAL EXPENSE**	1,415	1,751	336
		456 OTHER ELECTRIC REVENUE			
14		Borderline Wheeling	5,203	5,218	15
15	*	Seattle	641	0	-641
16	*	Tacoma	641	0	-641
17		Seattle/Tacoma Main Canal	0	46	46
18		Seattle/ Tacoma Summer Falls	0	74	74
19		Grand Coulee Project	8	8	0
20		OASIS nf & stf Whl (Other Whl)	3,336	3,354	18
21		PP&L - Dry Gulch	252	276	24
22	**	PP&L Series Cap -1978	9	5	-4
23		Spokane Waste to Energy Plant	160	160	0
24		Vaagen Wheeling	110	112	2
25	***	Northwestern Energy	231	0	-231
26		Total Account 456	10,591	9,253	-1,338
27		**TOTAL REVENUE**	10,591	9,253	-1,338
28		**TOTAL NET EXPENSE**	-9,176	-7,502	1,674

* Seattle and Tacoma - contracts ended 10/31/07
** PP&L Series Cap - contract ended 6/30/09
*** Northwestern Energy - contract ended 11/30/07

230 kV Upgrade Project
Project Milestones & Forecasted Cost

Avista 230 kV
Upgrade Projects

March 2008



Avista's 230 kV Facilities

▲ **Substation**

— **Transmission Line**

▲ — *New or Upgraded*

Other 230 kV Upgrade Project Costs

Remedial Action Scheme (RAS)	**$1.1M**
Digital Communication	**$8.2M**
Associated Communication Projects	**$1.0M**
Total Project Upgrades	**$136.4M**

Exhibit No. 10
Case No. AVU-E-08-1
S. Kinney, Avista
Schedule 2, pg. 1

Avista 5-Year Transmission Upgrade Project

	ANNUAL COSTS ($000s)								
PROJECT	**Prior**	**2003**	**2004**	**2005**	**2006**	**2007**	**Sub-total**	**2008**	**Total**
Pine Creek Substation	2,231	2,072	442	0	0	0	**4,745**	0	**4,745**
Beacon-Rathdrum 230 kV	498	15,706	3,762	25	0	0	**19,991**	0	**19,991**
Dry Creek Substation	0	2,139	8,051	3,400	864	0	**14,454**	0	**14,454**
Beacon-Bell #4 230 kV	0	2	5	1,424	0	0	**1,431**	0	**1,431**
Beacon-Bell #5 230 kV	0	0	0	0	1,952	1,705	**3,657**	0	**3,657**
Spokane Valley Reinforcement	9	412	8,359	12,231	2,195	417	**23,623**	0	**23,623**
WoH Telecom	0	115	964	2,894	2,060	2,151	**8,184**	0	**8,184**
Line Upgrades	0	0	0	259	695	12	**966**	0	**966**
Clark Fork RAS	229	36	496	129	113	68	**1,071**	0	**1,071**
Palouse Reinforcement	5	513	1,252	6,612	22,205	24,071	**54,658**	772	**55,430**
Lolo Substation	0	251	0	0	0	1,888	**2,139**	737	**2,876**
TOTAL	**2,972**	**21,246**	**23,331**	**26,974**	**30,084**	**30,312**	**134,919**	**1,509**	**136,428**

Exhibit No. 10
Case No. AVU-E-08-1
S. Kinney, Avista
Schedeule 2, pg 2

Asset Management Plan Model