

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-07 _____

DIRECT TESTIMONY OF

SCOTT J. KINNEY

REPRESENTING AVISTA CORPORATION

I. INTRODUCTION

1
2 **Q. Please state your name, employer and business address.**

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

5 **Q. Please briefly describe your education background and professional**
6 **experience.**

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

13 **Q. What is the scope of your testimony?**

14 A. My testimony describes Avista's transmission upgrade projects, and presents
15 Avista's pro forma period transmission revenues and expenses, including the proposed addition
16 to expense to allow the Company to recover its Grid West loan costs. I also describe the
17 Company's Wood-Pole Management Program. Company witness Ms. Andrews incorporates the
18 Washington share of the transmission upgrades and net transmission expenses and the Wood-
19 Pole Management Program O&M expenses proposed in this case.

20 **Q. Are you sponsoring any exhibits?**

21 A. Yes. I am sponsoring Exhibit Nos. ___(SJK-2) and ___(SJK-3), which were
22 prepared under my direction. Exhibit No. ___(SJK-2) includes a map of the 230 kV Upgrade

1 Project at page 1, and the “Major Transmission Additions” table at page 2. Exhibit No.
2 ____ (SJK-3) provides the Transmission Pro Forma adjustments.

3

4

II. TRANSMISSION UPGRADES

5

Q. Please describe the Company’s transmission upgrade project?

6

A. The Company is in its last year of a multi-year transmission upgrade project that is
7 estimated to exceed \$130 million (2003-2007). This multi-year transmission upgrade plan will
8 add over 100 circuit miles of new 230 kV transmission line to Avista’s system, and will increase
9 the capacity of an additional 50 miles of transmission line. The upgrade project includes
10 constructing two new 230 kV substations as well as reconstructing three existing transmission
11 substations. Six 230 kV substations are being upgraded to meet capacity requirements, upgrade
12 protective relaying systems, and meet regional and national reliability standards. In total, Avista
13 has or will perform work on eleven of its thirteen 230 kV substations. Avista is also upgrading
14 its telecommunication system by installing fiber and digital microwave systems. This will create
15 redundant communication paths, required by national reliability standards that will improve
16 system monitoring, control, and protection. Exhibit No. __ (SJK-2), page 1, includes a map
17 showing the location of the 230 kV upgrade projects.

18

Q. What transmission project costs are included in this filing?

19

A. The Company has included the cost of seven projects, with completion dates in
20 2006 and 2007. As shown in the table below (see also Exhibit No. __ (SJK-2), page 2), these
21 projects include the Palouse Reinforcement Project, the Beacon-Bell #5 230 kV line upgrade, the
22 West of Hatwai (WoH) Telecom Projects, the Dry Creek 115 kV Substation Projects, the

1 Boulder Substation Project, the Lolo Substation Project, and the Critchfield Substation Project -
 2 at a total system investment of \$66.9 million.

3 Transmission Projects	Cost: System/WA (000s)	In-Service Date
4 West of Hatwai (WoH) Telecom	\$3,207 / \$2,111	* Oct-07
5 Beacon-Bell #5 230 kV line	\$2,915 / \$1,919	Apr-07
6 Palouse Reinforcement Project	\$52,392 / \$34,489	* Nov-07
7 Dry Creek 115 kV Substation	\$2,236 / \$1,472	Nov-06
Boulder Substation	\$3,299 / \$2,172	* June 07
Lolo Substation	\$2,044 / \$1,345	Dec-07
Critchfield Substation	\$800 / \$527	Dec-07
8 Total	\$66,893 / \$44,035	

9
 10 * These projects include multiple phases with various in service dates in 2006 and 2007. The dates shown
 11 are the in service dates for the last phase of the project. See details in Exhibit No. __ (SJK-2), page 2).
 12

- 13 • **West of Hatwai (WoH) Telecom Projects:** The ability to communicate with, monitor,
 14 and control transmission equipment is an important factor in providing reliable service.
 15 The WoH Telecom initiative is comprised of several individual projects. The Noxon-
 16 Pine Creek fiber project completes a telecommunication ring from Spokane to Noxon
 17 Rapids Dam. The ring provides for redundant communication paths, where the loss of
 18 one side of the ring will not eliminate the ability to control equipment. The ring is also
 19 required to implement the Clark Fork Remedial Action Scheme (RAS) that drops
 20 generation at Noxon Rapids and Cabinet Gorge Dams after critical transmission outages
 21 to ensure system reliability. Another component of the Clark Fork RAS includes the
 22 addition of fiber from the Cabinet generation units to the 230 kV Cabinet Substation.
 23 The Hatwai-North Lewiston fiber project completed a fiber ring around the
 24 Lewiston/Clarkston load service area. This project is also part of a RAS to improve
 25 reliability in the Lewiston area. The Hatwai-North Lewiston and Clark Fork fiber projects
 26 were completed and commissioned in 2006 at a total investment of \$1,240,000 (fiber and
 27 transmission make-ready). The construction phase of the Noxon-Pine Creek fiber project
 28 commenced in August of 2006 but heavy snowfall forced the demobilization of line
 29 crews until 2007. The project is slated to commission in September of 2007 at an
 30 estimated cost of \$1,966,800. The total WoH telecomm project costs are \$3,207,000
 31 (system).
 32
- 33 • **Beacon-Bell #5 230 kV Line:** Avista is increasing the capacity of the second Beacon-
 34 Bell 230 kV line. The first Beacon-Bell 230 kV line was upgraded in December 2005.
 35 These parallel path transmission lines originate from Avista's Beacon Substation and
 36 interconnect with Bonneville Power Administration (BPA) at its Bell Substation. The
 37 project involves up-rating the line capacity, from 400 to 800 MVA, as well as increasing
 38 equipment ratings at both Beacon and Bell (BPA) substations. The project will mitigate

1 overloads between the largest Avista and BPA substations in Spokane and improve load
2 service to the Spokane area. The transmission line is scheduled to be energized in April
3 2007 with a total investment of \$2,915,000 (system).
4

- 5 • **Palouse Reinforcement Project:** This project involves the construction of 60 miles of
6 new 230 kV transmission line between the Benewah and Shawnee substations and the
7 rebuild of Benewah substation to a more reliable configuration. The project is required to
8 relieve congestion on the existing Benewah-Moscow 230 kV line by providing a second
9 230 kV transmission line between Avista's Northern and Southern load service areas,
10 significantly improving system reliability. The transmission line portion of the project
11 has been divided into three phases. Construction of the first phase was started in 2006
12 and included the double circuit Shawnee-Colfax 230 kV and 115 kV line section and the
13 Benewah Substation rebuild. This phase is expected to be moved into service in
14 September 2007. The second phase includes the construction of the Colfax-Rosalia line
15 section and will be completed in September 2007. The final stage is the Benewah-
16 Rosalia line section and will be completed in November 2007. The entire project will be
17 energized and placed into service in November 2007. The total cost of this project is
18 \$52,392,000 (system).
19
- 20 • **Dry Creek 115 kV Substation:** To improve load service and system reliability in the
21 Lewiston/Clarkston area, a 230/115 kV auto transformer was added to the Dry Creek
22 Substation. The new transformer provides a back-up for the North Lewiston 230/115 kV
23 auto transformer. This phase of the project includes the construction of the 115 kV
24 portion of the Dry Creek Substation and the loop-in of an area 115 kV transmission line.
25 The project was energized in November of 2006 at a total investment of \$2,236,000
26 (system).
27
- 28 • **Boulder Substation:** This project included the construction of a new 230kV/115kV
29 substation. Two 250 MVA 230 kV to 115 kV transformers were added in two stages at
30 Boulder Substation. The first transformer was placed into commercial operation in
31 December of 2005. The second transformer and corresponding substation work will be
32 energized in June of 2007. The Boulder station will be capable of serving customers
33 throughout eastern Washington and Northern Idaho. The added capacity at Boulder will
34 relieve congestion at Avista's largest transmission substation, Beacon. Shifting load from
35 Beacon to Boulder also improves system reliability. The cost of the second phase of this
36 project is \$3,299,000 (system).
37
- 38 • **Lolo Substation:** This project involves the rebuild of the existing Lolo substation to
39 increase the capacity of the substation bus, breakers, and supporting equipment to match
40 the upgraded transmission line ratings that were significantly increased over the last few
41 years. The new substation design significantly improves reliability and operating
42 flexibility. The existing substation bus is also susceptible to failure for different
43 contingency events. The project will be energized in December of 2007 at a total
44 investment of \$2,044,000 (system).

- 1
- 2 • **Critchfield Substation:** This project is required to serve load growth in Clarkston,
3 Washington. Two other substations in the Clarkston area are at full capacity. This new
4 substation will move load off the other two and provide capacity for future load growth in
5 the area. The substation will be built with a single 115/13.8 kV transformer and have two
6 distribution feeders initially. The project will be energized in December of 2007 at a total
7 investment of \$2,412,000 (system). Only the costs (\$800,000) associated with the 115
8 kV transmission line and substation (excluding the distribution portion) are included in
9 this rate case.

10

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

14 A. No. These projects are being built to improve system reliability, improve area
15 load service, and meet national reliability standards. In the WoH agreement signed with BPA,
16 Avista preserved its existing transfer capability across the WoH cut-plane and BPA gained
17 additional transfer capacity.

18 **Q. Please discuss the national reliability standards?**

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

25 The reliability standards include several transmission planning and operating
26 requirements. The planning standards require utilities to plan and operate their transmission
27 systems in such a way as to avoid the loss of customers or impacting neighboring utilities for the

1 loss of transmission facilities. The transmission system must be designed and operated so that
2 the loss of up to two facilities simultaneously will have no impact to the interconnected
3 transmission system. These requirements drove the need for Avista to invest in its transmission
4 system.

5 III. PRO FORMA TRANSMISSION EXPENSES

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

8 A. Several revisions were made to the transmission expenses in the 2008 pro forma
9 period, in comparison to the 2006 test year. Revisions were made to incorporate updated
10 information and actual 2006 transmission expenses. The primary drivers of the additional
11 \$590,000 (system) pro forma adjustments included in this case are \$313,000 (system) for
12 Columbia Grid, \$79,000 (Washington only)¹ for Grid West, and \$132,000 (system) of additional
13 Colstrip O&M costs. Each expense item described below is at a system level, with the exception
14 of the \$79,000 Grid West adjustment which is Washington only, and is included in Exhibit
15 No. __ (SJK-3).

16 Northwest Power Pool (NWPP)– Avista pays its share of the NWPP operating costs.
17 The NWPP serves the utilities in the northwest by providing regional transmission planning,
18 coordinated transmission operations, and Columbia River water coordination. There is no
19 change in NWPP costs in the pro forma period compared to 2006 actual spend.

20 Colstrip Transmission - Avista is required to pay its portion of the O&M costs associated
21 with the Colstrip transmission system pursuant to the joint Colstrip contract. In accordance with

¹ The Idaho Commission has chosen to account for its share of the Grid West costs over a 5 year period starting Jan. 1, 2007.

1 Northwestern Energy's (NWE) 2007 Colstrip Transmission reports provided to the Company,
2 NWE will bill Avista during 2007 an annual total of \$498,000 for Avista's share of the Colstrip
3 O&M expense. This is an increase of \$132,000 over 2006 actual expense of \$366,000. The
4 significant cost increase is a result of implementing cathodic protection measures and anchor bolt
5 replacements. The existing anchor bolts are disintegrating. The replacements will start in 2007
6 and will be performed over several years. NWE expects 2008 Colstrip O&M costs to be similar
7 to 2007.

8 ColumbiaGrid (RTO Development) - In 2006, Avista elected to fund the ColumbiaGrid
9 RTO development effort. This is a regional organization whose purpose is to enhance
10 transmission system reliability and efficiency, provide cost-effective regional transmission
11 planning, develop and facilitate the implementation of solutions relating to improved use and
12 expansion of the interconnected Northwest transmission system, reduce transmission system
13 congestion, and support effective market monitoring within the Northwest and the entire Western
14 interconnection. Under the amended ColumbiaGrid funding agreement signed September 1,
15 2006, Avista will pay a total of \$518,000, which represents Avista's share of the ColumbiaGrid
16 operating costs from 2006 through Augusts 31, 2008. Prior to the amended agreement, Avista
17 paid \$104,000 of these costs. The remaining balance (\$414,000) is being amortized over the
18 remaining 20 months of the agreement. The monthly amortized amount is \$20,720. Avista
19 anticipates that ColumbiaGrid operating costs will continue beyond August 2008 and will likely
20 increase as ColumbiaGrid provides additional services in the future. Therefore, the
21 ColumbiaGrid cost for the pro forma period and beyond is anticipated to be approximately
22 \$249,000 annually based on a monthly fee of \$20,720.

1 ColumbiaGrid Planning - An additional service being provided by ColumbiaGrid is
2 regional planning and expansion. A functional agreement was developed and filed with the
3 Federal Energy Regulatory Commission (FERC) on February 2, 2007 and approved on April 3,
4 2007. The agreement does not have a termination date and funding is on a two-year cycle with
5 provisions to adjust for inflation. Funding is based on a fixed amount, plus a portion is based on
6 Avista's load ratio compared to the other members. Avista anticipates its share at \$466,200 for
7 the first two-year period. This results in an annual cost of \$233,100 during the pro forma period.

8 Electric Scheduling and Accounting Services - The \$52,000 decrease in the pro forma
9 period compared to actual 2006 expense for electric scheduling and accounting services is a
10 result of reductions in services provided by third party vendors. These services are no longer
11 required because of the development of an internal accounting procedure and the development of
12 a regional transmission interchange tool by the Western Electricity Coordinating Council
13 (WECC). These new applications replace the services provided by third parties.

14 OASIS Expenses - The \$5,000 increase in Open Access Same-Time Information System
15 (OASIS) expenses is a result of increased travel/training costs for transmission pre-scheduling
16 and OASIS personnel. This increase in travel is required to monitor and adhere to new OASIS
17 requirements approved by FERC in February 2007.

18 WECC – System Security Monitor & WECC Administration and Net Operating
19 Committee Systems - The WECC System Security Monitor fees have been revised from 2006
20 actual costs of \$85,600, to \$108,700 in the pro forma period. Additionally, the WECC
21 Administrative and Net Operating fees have been increased from \$145,800 in 2006 to \$237,300
22 for the pro forma period. Both changes reflect significant increases in the WECC forecasted

1 budget to fund regional reliability initiatives required to meet FERC and NERC mandatory
2 reliability standards. The 2008 WECC budget and corresponding fees are based on an expected
3 9.4% increase above the 2007 approved budget.

4 WECC - Loop Flow - WECC Loop Flow charges are dependent on transmission system
5 usage and congestion across the entire Western Interconnection. The 2008 pro forma charge is
6 \$28,000 which is equal to the 2006 actual charges as invoiced by the WECC.

8 IV. PRO FORMA TRANSMISSION REVENUES

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

11 A. Several revisions were made to the transmission revenues in the 2008 pro forma
12 period, in comparison to the 2006 test year. Revisions were made to incorporate updated
13 information and actual 2006 transmission expenses and revenues. The primary drivers for the
14 revenue reduction of \$1,371,000 in the pro forma period as compared to 2006 actual revenue is
15 the expiration of three transmission contracts in the last quarter of 2007. The contracts are with
16 Seattle City Light, Tacoma Power, and Northwestern Energy. The primary drivers of the
17 continued transmission revenue in the pro forma period are Borderline Wheeling and OASIS
18 revenues totaling \$8.65 million (system). Each revenue item described below is at a system level
19 and is included in Exhibit No. __ (SJK-3).

20 Borderline Wheeling - The Borderline Wheeling revenue in the pro forma period is set at
21 the 2006 actual revenue level of \$5,234,000. The 2006 actual revenue is being used for the 2008
22 pro forma period since 2006 was the first year under new contracts signed with BPA. The new

1 Borderline Wheeling revenue methodology is based on a Load Ratio Share², which is quite
2 different than the previous revenue calculation under the old contracts.

3 The General Transfer Agreement (GTA) with BPA expired in 2005 and, due to FERC
4 requirements, was replaced with new individual contracts under the Avista Open Access
5 Transmission Tariff (OATT). Under the old GTA, Avista billed BPA using a distance-based
6 "transfer charge" for each point of delivery. Under the new contracts, BPA, as the network
7 customer, shall pay a monthly demand charge, which shall be determined by multiplying its Load
8 Ratio Share times one twelfth (1/12) of the Transmission Provider's annual transmission revenue
9 requirement (presently \$28,566,969). The net result of the FERC-required change in rate
10 methodology is an overall reduction in revenues associated with providing transfer service to
11 BPA for service to BPA's borderline loads on Avista's system.

12 Seattle, Tacoma, and Grand Coulee Project Revenues - In March of 2006, Seattle and
13 Tacoma purchased long-term firm point-to-point transmission services from Avista under the
14 OATT to move their generation to load. The transmission was purchased from April 2006
15 through October 2007. The contracts were signed to give Seattle and Tacoma time to build new
16 facilities to bypass Avista and connect directly to BPA. Since the transmission service that was
17 purchased expires in October 2007, Avista will not receive any transmission revenue in the pro
18 forma period from Seattle or Tacoma. In the 2006 test year, Avista collected a total of \$576,500,
19 for each contract year, based on a monthly charge of approximately \$64,000 for nine months
20 (April through December).

² Load Ratio Share is the ratio of a Transmission Customer's Network Load to the Transmission Provider's total load calculated on a rolling twelve-month basis.

1 The \$1,300 decrease in Grand Coulee Project revenue is a result of a new contract signed
2 in March 2006 with the project owner for a fixed dollar amount, replacing the previous contract
3 which expired in October 2005. The new contract results in monthly revenue of \$673 or annual
4 revenue of \$8,100. The 2006 test year revenue was \$9,400 but included several interim
5 adjustments for the first few months of the new contract.

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

13 Because these revenues vary year to year depending on electric energy market conditions,
14 Avista has, in previous rate cases, used the most recent five-year average as being representative
15 of future expectations unless there are known events or factors that occurred during the period
16 that would cause the average to not be representative of future expectations. In 2004, there were
17 some unusual events that caused Avista's OASIS revenues (\$5,475,000) to be significantly
18 higher than the other test years. The BPA had several 500 kV lines out of service for rebuild
19 projects, which resulted in a significant increase in Avista's transmission sales in 2004.
20 Therefore, Avista did not include the 2004 revenue in the calculation of the five-year average
21 revenue. Avista calculated the pro forma OASIS revenue based on years 2002, 2003, 2005, and

1 2006. The resulting four-year revenue average is \$3,417,000, which is \$40,000 higher than the
2 2006 actual revenue of \$3,377,000.

3 Dry Gulch Revenue - Dry Gulch revenue has been adjusted to \$274,000 for the pro
4 forma period, which is a \$6,000 decrease from the 2006 actual revenue of \$280,000. The current
5 methodology used to forecast Dry Gulch revenue is a five-year average of actual revenue. A
6 five-year average is used since the revenue can vary by \$60,000 from year to year. The revenue
7 is calculated using a 12-month rolling ratchet based on monthly peak demands. Load peaks are
8 very sensitive to temperatures, which vary from year to year.

9 PP&L Series Cap – 1978 - No adjustments to PP&L Series Cap revenue were made for
10 the pro forma period. The 2006 actual revenue of \$9,000 is used as the expected revenue for the
11 pro forma period. In 1989 Pacificorp paid the company a lump sum of \$178,222 in lieu of
12 annual payments provided for under the original agreement. The lump sum payment was
13 amortized at \$781 per month from August 1990 through June 2009.

14 Spokane Waste to Energy Plant - No adjustments to Spokane Waste to Energy Plant
15 revenue (\$160,000) were made for the pro forma period compared to the 2006 test year. This
16 revenue is the result of a long-term transmission interconnection agreement with the City of
17 Spokane. The contract expires in February 2011.

18 Vaagen Wheeling - No adjustments to Vaagen Wheeling revenue were made for the pro
19 forma period. The 2006 actual revenue of \$103,000 is used as the expected revenue for the pro
20 forma period since the past six years of actual data has shown a consistent reduction of revenue
21 from a peak of \$119,000 in 2001 to \$103,000 in 2006.

1 Northwestern Energy (NWE) - The revenue of \$252,000 from NWE in the 2006 test year
2 was a result of a new load following contract that Avista signed in 2005 with NWE. Under the
3 contract Avista provides up to 15 MW of energy to Northwestern to help them match hourly
4 fluctuations in loads and resources. Firm transmission has been purchased for this contract at
5 Avista’s full tariff rate. Since this contract expires in November 2007, no revenue will be
6 received in the pro forma period.

7

8

V. GRID WEST LOAN

9 **Q. Is the Company proposing to incorporate in this case costs related to loans
10 made to Grid West and its predecessor, RTO West?**

11 A. Yes. The Company is proposing to include in transmission expense an annual
12 amount of \$158,000 to recover loan costs to Grid West (and its forerunner, RTO West). Avista’s
13 total Grid West loan amount is approximately \$1.2 million including interest through March 31,
14 2006 (or \$796,000 Washington share). This amount is proposed to be amortized on a five-year
15 basis with no interest or carrying costs. None of the loan amount is presently included in
16 Avista’s rates. Other costs incurred by Avista to support Grid West, such as employee salaries,
17 employee travel, and legal expenses, were expensed as incurred and are not included in this
18 amount.

19 **Q. Please provide background related to Avista’s participation in establishing a
20 regional transmission organization (RTO).**

21 A. Avista has been actively involved in the development of a Pacific Northwest
22 RTO. This activity has been aimed at meeting the policies of the FERC, promoting competitive

1 electric markets. More specifically, FERC Order 888 encouraged the development of
2 independent system operators, and FERC Order 2000 required transmission owners to develop
3 and submit a proposal to establish an RTO, or to explain why such an organization could not be
4 developed. Therefore, the Company's effort and associated costs related to Grid West were
5 essential in the ongoing ownership, development, and operation of Avista's transmission system.

6 Avista signed an initial funding agreement in 2000, as did all other Pacific Northwest
7 investor-owned electric utilities, to provide funding for the start-up phase of Grid West (then
8 named "RTO West"). These start-up costs included retaining experts and facilitators, as well as
9 other expenses associated with transmission studies and stakeholder participation. The total
10 balance of Avista's loan to Grid West is approximately \$1,217,500, including interest of
11 approximately \$188,000. Grid West had planned to repay the loans to Avista and other funding
12 utilities through surcharges to customers once it became operational. With the dissolution of
13 Grid West, this repayment will not occur. As a result, Avista filed a petition with the
14 Commission to defer these costs, with the opportunity for later recovery in retail rates. The
15 Commission approved, on July 26, 2006, in Docket No. UE-060665, the Company's request for
16 an order authorizing deferred accounting treatment for loan amounts made to Grid West. The
17 Order required the Company to begin amortization of the loan balance beginning July 1, 2006,
18 for five years, and explain why any amortization of this loan balance should be borne by
19 Washington ratepayers. During the pro forma period Avista would amortize a total of \$158,200
20 associated with Grid West development costs.

21 **Q. Why is the Company proposing that these costs be included in the requested**
22 **revenue requirement?**

1 A. This activity was required by FERC and necessary for the continued planning and
2 operation of the Company's transmission system. As stated earlier, the Company continues to
3 work with other regional parties to explore ways in which the region's transmission providers
4 can better operate and manage the region's transmission system. On April 10, 2006, Avista
5 joined ColumbiaGrid as one of its six founding members³ and in August of 2006, ColumbiaGrid
6 members elected an independent board of directors. ColumbiaGrid is drawing upon elements
7 developed in both the Grid West and Transmission Improvements Group (TIG) processes to
8 provide transmission-related coordination and administrative services as soon as possible.
9 Accordingly, ColumbiaGrid has offered a Planning & Expansion Functional Agreement for
10 execution by ColumbiaGrid members and other regional transmission owners. Because the
11 ColumbiaGrid effort is, and will continue to be, using many of the concepts and technical work
12 that began under Grid West, the Company and its customers will benefit from the prior work of
13 Grid West.

14

15 **VI. ELECTRIC SYSTEM WOOD POLE MANAGEMENT**

16 **Q. Would you please provide an overview of the Company's Wood Pole Plant?**

17 A. Yes. Avista's electric distribution and transmission circuits combined span is
18 over 14,000 miles, and contains approximately 340,000 wood poles. The wood-pole population
19 is predominantly distribution (300,000). Approximately half the distribution poles have been
20 installed in the past forty-five years, while the population of transmission poles is somewhat

³ Incorporated as a non-profit organization, the founding members, in addition to Avista, include Puget Sound Energy, Seattle City Light, Grant County Public Utility District, Chelan County Public Utility District, and the Bonneville Power Administration.

1 older; 58% were installed in the period between 1950 and 1970 and approximately 20% are pre-
2 1940.

3 **Q. Are transmission and distribution poles managed under separate programs?**

4 A. Yes, they are.

5 **Q. Please describe the management program for wood poles in Avista's electric**
6 **distribution system.**

7 A. A key element of the distribution wood-pole management program is the strength
8 evaluation of a certain percentage of the pole population each year. Depending on the test results
9 for a given pole, that pole is either considered satisfactory, reinforced with a steel stub, or
10 replaced. The current inspection cost for each pole is \$26. Stubbing⁴ adds 50% to the life of the
11 pole and currently costs \$650, while replacement of the pole costs on average \$2,800. The
12 Company is changing its test cycle to ensure the entire pole population is surveyed every twenty
13 years.

14 **Q. How does this differ for transmission poles?**

15 A. The Company is planning to survey the entire transmission pole population every
16 15 years. The per-pole inspection cost is \$100. Stubbing a transmission pole currently averages
17 \$750, while replacement of the pole ranges between \$3,500 and \$4,500 when the work is
18 performed during regular work shifts.

19 **Q. Does the planned wood-pole management program differ from the current**
20 **approach?**

⁴ Stubbing involves driving a galvanized rounded steel plate into the ground next to the pole and banding the plate and pole together. The plate covers approximately 1/3 of the circumference of the pole. Two plates are used if necessary.

1 A. Yes. In recent years, Avista has tested between 1% and 2% of the distribution
2 pole population each year. This testing schedule was driven by a low rate of pole failures
3 experienced over the past few decades, and produced a survey “cycle time” of between 50 and
4 100 years for the entire distribution system pole population. In recent years, the Company began
5 to evaluate the costs and benefits of shortening the cycle time for testing as the average age of the
6 pole population increased.

7 The transmission testing cycle was also reevaluated. The original test period was
8 approximately ten years, but the cycle time has gradually increased over time. About 20% of the
9 transmission system has been inspected twice since 1988.

10 **Q. What has Avista done to evaluate the costs and benefits of revising the cycle**
11 **time for its wood-pole population?**

12 A. Recently, new mathematical models have been developed by the industry to assist
13 in the evaluation of operational and financial consequences of varying testing cycles for wood-
14 pole populations. In 2006, Avista acquired these models with a software application and began
15 calibrating them to the particulars of our distribution and transmission wood-pole populations.
16 Included in the model are several risk factors and a financial analysis that determines the best
17 overall cycle time and program.

18 **Q. What did the Company learn from the evaluation of cycle times on its**
19 **distribution pole population?**

20 A. Three cycle times were modeled for the distribution population, including a 100-
21 year cycle, a ten-year cycle, and a model-derived optimized cycle of twenty years. The model
22 results forecast significantly better operational performance for poles tested under both a ten and

1 a twenty-year cycle, as opposed to the 100-year scenario. Operational performance between the
2 ten and twenty-year cycles did not differ significantly. There was a substantial difference,
3 however, in the financial comparisons of the three testing cycles over a fifty-year outlook.

4 **Q. Were the results similar for the transmission pole population?**

5 A. Yes they were. Six scenarios were modeled for the transmission pole population,
6 including testing intervals of 10, 15, 20, 25 and 30 years, and one where no testing program was
7 employed. Operational performance and cumulative costs over a fifty-year horizon were
8 determined to be very similar for the 10 and 15-year cycles, \$92 and \$98 million, respectively.
9 The results are even closer when the 15-year cycle is coupled with the programmed replacement
10 of very old poles (greater than 80 years old) in the transmission system. Under this scenario,
11 once the programmed replacements of very old poles are completed, the optimized cycle time
12 would be fifteen years. Based on this evaluation and historical testing results, Avista is planning
13 to employ a testing cycle time of fifteen years for its transmission poles.

14 **Q. Do the proposed changes in the Company's wood-pole management program**
15 **result in changes in annual costs going forward?**

16 A. Yes. Even though this program will result in optimized and much lower life-cycle
17 costs for our customers, it results in an immediate increase in annual funding from current
18 spending levels. For the distribution system, the annual O&M expenses will increase from
19 \$206,000 in 2006 to \$390,000 (system) in the pro forma period, while the annual capital
20 requirement will increase from approximately \$1.1 million to \$4.9 million. For the transmission
21 system, the planned annual O&M expenditures will increase from \$44,000 in 2006 to \$322,000
22 (system), and \$576,000 for capital, from \$306,000. No Transmission O&M expenses have been

1 incurred since 2003, because the completed replacements were in support of significant
2 Transmission upgrades that were capitalized.

3 **Q. Are these increases in expense and capital requirements part of the**
4 **Company's current proposed general rate increase?**

5 A. The O&M expenses only are included in the proposed general rate increase. The
6 combined Transmission and Distribution O&M adjustment for the pro forma period compared to
7 the 2006 test year is \$461,000 (system), or \$304,000 Washington share, before taxes. Ms.
8 Andrews incorporates these costs in her testimony and exhibits. The capital costs will be
9 included in future rate case filings.

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

11 A. Yes, it does.