

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-11\_\_\_\_\_

DIRECT TESTIMONY OF

WILLIAM G. JOHNSON

REPRESENTING AVISTA CORPORATION

1 **I. INTRODUCTION**

2 **Q. Please state your name, business address, and present position with Avista**  
3 **Corporation.**

4 A. My name is William G. Johnson. My business address is 1411 East Mission  
5 Avenue, Spokane, Washington, and I am employed by the Company as a Wholesale Marketing  
6 Manager in the Energy Resources Department.

7 **Q. What is your educational background?**

8 A. I graduated from the University of Montana in 1981 with a Bachelor of Arts  
9 Degree in Political Science/Economics. I obtained a Master of Arts Degree in Economics from  
10 the University of Montana in 1985.

11 **Q. How long have you been employed by the Company and what are your duties**  
12 **as a Wholesale Marketing Manager?**

13 A. I started working for Avista in April 1990 as a Demand Side Resource Analyst. I  
14 joined the Energy Resources Department as a Power Contracts Analyst in June 1996. My  
15 primary responsibilities involve power contract origination and management and power supply  
16 regulatory issues.

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

18 A. My testimony will 1) identify and explain the proposed normalizing and pro  
19 forma adjustments to the January 2010 through December 2010 test period power supply  
20 revenues and expenses, and 2) describe the proposed level of expense and retail revenue credit  
21 for Energy Recovery Mechanism (ERM) purposes, using the pro forma costs proposed by the

1 Company in this filing. My testimony also shows the change in power supply expense  
2 incorporating the Energy Efficiency Load Adjustment proposed by the Company in this case.

3 **Q. Are you sponsoring any exhibits to be introduced in this proceeding?**

4 A. Yes. I am sponsoring Exhibit Nos.\_\_\_\_ (WGJ-2) through \_\_\_\_ (WGJ-6), which  
5 were prepared under my supervision and direction. Exhibit No. \_\_\_\_ (WGJ-2) identifies the  
6 power supply expense and revenue items that fall within the scope of my testimony. A brief  
7 description of each adjustment is provided in Exhibit No. \_\_\_\_ (WGJ-3). Exhibit No. \_\_\_\_ (WGJ-  
8 4) shows the pro forma fuel costs and short-term purchase and sales by month for each plant.  
9 The proposed authorized ERM power supply expense and revenue, transmission expense and  
10 revenue, and retail sales are shown in Exhibit No.\_\_\_\_ (WGJ-5). Exhibit No.\_\_\_\_ (WGJ-6) identifies  
11 the power supply expense and revenue without the Energy Efficiency Load Adjustment, and is  
12 provided for information purposes to isolate the impact of the Energy Efficiency Load  
13 Adjustment on power supply expense.

14 **Q. Are there other Company witnesses providing testimony regarding issues**  
15 **you are addressing?**

16 A. Yes. Company witness Mr. Kalich provides detailed testimony on the AURORA  
17 model used by the Company to develop short-term power purchase expense, fuel expense and  
18 short-term power sales revenue included in my exhibits. Mr. Ehrbar addresses the Energy  
19 Efficiency Load Adjustment in his testimony.

20

21 **II. OVERVIEW OF PRO FORMA POWER SUPPLY ADJUSTMENT**

22 **Q. Please provide an overview of the pro forma power supply adjustment.**

1           A.     The pro forma power supply adjustment involves the determination of revenues  
 2 and expenses based on the generation and dispatch of Company resources and expected  
 3 wholesale market power prices as determined by the AURORA model simulation for the pro  
 4 forma period under normal weather and hydro generation conditions. In addition, adjustments  
 5 are made to reflect contract changes between the test period and the pro forma period. The table  
 6 below shows total net power supply expense during the test period and the pro forma period. For  
 7 information purposes only, the power supply expense<sup>1</sup> currently in base retail rates, which is  
 8 based on a calendar 2011 pro forma period, is also shown.

<b>Power Supply Expense</b>	
	<u>System</u>
Power Supply Expense in Current Base Rates (2011 pro forma)	\$199,609,000
Actual Jan 10 - Dec 10 Power Supply Expense	\$190,323,000
Adjustment to Test Period	\$18,309,000
Proposed 2012 Pro forma Power Supply Expense	\$208,632,000
Increase from Expense in Current Rates	\$9,023,000

9  
 10           The net effect of my adjustments to the test year power supply expense is an increase of  
 11 \$18,309,000 (\$208,632,000 - \$190,323,000) on a system basis.

12           The increase in power supply expense compared to the authorized level in current base  
 13 rates is \$9,023,000 (system) and \$5,879,000 (Washington allocation).

14           **Q.     What are the major factors driving the increased power supply expense in**  
 15 **the pro forma year over the level of power supply expense currently in base rates?**

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<sup>1</sup> For the remainder of my testimony, for purposes of the power supply adjustment I will refer to the net of power supply revenues and expenses as power supply expense for ease of reference.

1           A.     The level of power supply expense currently in base rates is \$199,609,000  
2 (system number). This expense level is based on a calendar 2011 pro forma period. This  
3 compares to the proposed 2012 pro forma power supply expense of \$208,632,000, an increase of  
4 approximately \$9.0 million on a system basis and a Washington allocation of approximately \$5.9  
5 million.

6           This increase in pro forma power supply expense over the expense currently in base rates  
7 is caused by numerous factors, primarily higher prices for market transactions, higher effective  
8 costs for Mid-Columbia purchased hydro generation, with higher costs partially offset by the  
9 Energy Efficiency Load Adjustment.

10          Overall, the pro forma in this case has 20.8 aMW more hydro generation than was in the  
11 2010 general rate case. The cost of the Mid-Columbia purchased generation, however, is higher.  
12 This is primarily a result of the expiration of the original Rocky Reach purchase agreement,  
13 which was priced at project cost (approximately \$11.50/Mwh). The Rocky Reach and Rock  
14 Island purchase in this pro forma was acquired through a competitive bid at market prices. The  
15 cost for the other Mid-Columbia generation from the Wells project and the Priest Rapids project  
16 is also higher. Overall the net effect of higher hydro generation cost is an increase of \$3.1  
17 million on a system basis (\$2.0 million Washington allocation).

18          Pro forma loads are 15.7 aMW lower than loads that current rates are based on due to the  
19 reduced retail sales from the Energy Efficiency Load Adjustment. This decreases power supply  
20 expense by \$4.9 million on a system basis (\$3.2 million Washington allocation).

21          Changes in long-term contracts increased expense by \$1 million system (\$0.7 million  
22 Washington allocation). This is primarily a result of the expiration of the Grant PUD

1 Displacement purchase on September 30, 2011, in which the Company purchases power at a rate  
2 equivalent to the BPA Priority Firm price.

3 Finally, the largest factor increasing power supply expense over the amount in current  
4 base rates is the impact of transactions made in a market of continuously falling prices. Mr.  
5 Lafferty further describes the Company's hedging strategies, including the time horizon for  
6 future market purchases.

7 The table below shows the primary factors driving the increase in power supply expense  
8 compared to the level in current base rates.

<b>Power Supply Expense Change 2012 Pro forma vs. 2011 Authorized</b>		
<u>Factor</u>	2011 to 2012 Pro forma <u>Change</u> \$millions	Washington <u>Allocation</u> \$millions
Hydro Generation & Mid C Costs	\$3.1	\$2.0
Change in System Load	-\$4.9	-\$3.2
Thermal Plant Costs	\$0.5	\$0.3
CCCT Operating Margin	\$1.1	\$0.8
Long-Term Contract Changes	\$0.6	\$0.4
Market Transactions/Other	\$8.6	\$5.6
2011 to 2012 Power Supply Increase	\$9.0	\$5.9

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1 **III. PRO FORMA POWER SUPPLY ADJUSTMENTS**

2 **Overview**

3 **Q. Please identify the specific power supply cost items that are covered by your**  
4 **testimony and the total adjustment being proposed.**

5 A. Exhibit No. \_\_\_\_ (WGJ-2) identifies the power supply expense and revenue items  
6 that fall within the scope of my testimony. These revenue and expense items are related to  
7 power purchases and sales, fuel expenses, transmission expense, and other miscellaneous power  
8 supply expenses and revenues.

9 **Q. What is the basis for the adjustments to the test period power supply**  
10 **revenues and expenses?**

11 A. The purpose of the adjustments to the test period is to normalize power supply  
12 expenses for normal weather and normal hydroelectric generation and to reflect current forward  
13 natural gas prices and other known and measurable changes for the pro forma period.

14 The AURORA Model, as explained by Mr. Kalich, dispatches Company resources using  
15 the current forward natural gas prices and calculates the level of generation from the Company's  
16 thermal resources, fuel costs for thermal resources, and the short-term purchases and sales  
17 necessary to balance system requirements and resources.

18 **Q. Are there any changes in how the pro forma in this case was developed**  
19 **versus the authorized power supply expense currently in base rates?**

20 A. No. With the exception of reducing system load for the Energy Efficiency Load  
21 Adjustment, the process to develop the pro forma net power supply expense in this case is the  
22 same as the process used to develop authorized power supply expense in current base rates. The

1 Energy Efficiency Load Adjustment, as further explained later in my testimony, lowers the  
2 system load used to develop the pro forma to a level below the weather adjusted test-year load.

3 A brief description of each adjustment is provided in Exhibit No. \_\_\_\_ (WGJ-3). Detailed  
4 workpapers have been provided to the Commission coincident to this filing to support each of  
5 the pro forma revenues and expenses. The detailed workpapers for each adjustment show the  
6 actual revenue or expense in the test period, and the pro forma revenue or expense.

7 **Long-Term Contracts**

8 **Q. How are long-term power contracts included in the pro forma?**

9 A. Long-term power contracts are included in the pro forma by including the energy  
10 receipt or obligation associated with the contract in the AURORA model and including the cost  
11 or revenue in the pro forma net power supply expense.

12 **Q. Are there any new power purchases or sales in the pro forma that are not in**  
13 **the current base rates?**

14 A. Yes. This pro forma includes the expenses and generation related to the purchase  
15 of a 3.0% slice of the output of the Rocky Reach and Rock Island dams owned and operated by  
16 Chelan PUD. This purchase was made through a competitive auction and has a term of July  
17 2011 through December 2014. The purchase was made to maintain an adequate level of Mid-  
18 Columbia generation to provide load shaping and ramping capabilities at the Mid-Columbia,  
19 which allows the Company to operate its own hydro facilities in a more efficient manner.

20 The pro forma also includes the purchase of Renewable Energy Credits to meet the  
21 requirements of Washington's Energy Independence Act (EIA). Additional information  
22 regarding this purchase is contained in Mr. Lafferty's testimony.



1           **Q.     Are there any power purchases or sales that are in current base rates but not**  
2 **in this pro forma?**

3           A.     Yes. The Company's long-term purchase of Rocky Reach generation at project  
4 cost ends October 31, 2011. The Grant PUD Displacement power purchase ends September 30,  
5 2011. The Black Creek purchase ended March 25, 2011. At the time the pro forma was  
6 developed, the Stateline wind purchase was scheduled to end on December 31, 2011, but has  
7 since been extended through April 30, 2014<sup>2</sup>. The purchase of operating reserves from BPA for  
8 the Lancaster plant ended March 29, 2011 when the Lancaster plant was put into Avista's  
9 balancing authority (electronically in Avista's balancing authority, but still connected to BPA's  
10 transmission system). On the revenue side, the load following contract with Northwestern  
11 Energy ended January 9, 2011, and the load following contract with NatuEner ends August 31,  
12 2011. The overall impact of all the long-term contracts changes is less than a \$500,000 increase  
13 on power supply expense (Washington allocation).

14 **Short-Term Power Purchases and Sales**

15           **Q.     How are short-term transactions included in the pro forma?**

16           A.     After including the actual physical forward short-term transactions as resources  
17 and obligations in the AURORA model, the balance of the short-term electric power purchases  
18 and sales are an output of the AURORA model. The model calculates both the volumes and  
19 price of short-term purchases and sales that balance the system's generation and long-term  
20 purchases with retail load and other obligations. The price of the short-term transactions  
21 represents the price of spot market power as determined by the AURORA model. Short-term

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<sup>2</sup> The Stateline wind contract was extended through April 30, 2014 on April 20, 2011.

1 financial electric and all natural gas transactions are included as a mark-to-model price line item  
2 in the pro forma and are not included as inputs in the AURORA model.

3 **Q. What actual forward short-term transactions are included in the pro forma?**

4 A. The pro forma includes transactions entered into through February 8, 2011 for the  
5 2012 pro forma period. These transactions include 6 physical electric transactions, 18 financial  
6 electric transactions, 15 physical natural gas transactions and 8 financial natural gas transactions.  
7 The details of these transactions are provided in workpapers.

8 **Energy Efficiency Load Adjustment**

9 **Q. How was the net power supply expense adjusted for the proposed Energy**  
10 **Efficiency Load Adjustment that is explained in Mr. Ehrbar's testimony?**

11 A. The power supply pro forma incorporates the reduction in Washington retail sales  
12 shown in Table 17 of Mr. Ehrbar's direct testimony, which was then grossed up for losses and  
13 then divided by Washington's allocation to create a system load reduction. The power supply  
14 pro forma was then developed using the lower system load incorporating the Energy Efficiency  
15 Load Adjustment.

16 **Q. What power supply expenses are affected using the Energy Efficiency Load**  
17 **Adjustment?**

18 A. The only accounts affected in the power supply pro forma for the Energy  
19 Efficiency Load Adjustment are Account 555, Purchased Power and Account 447, Sales for  
20 Resale. Purchased power expense decreased by \$3,912,000 on a system basis (\$2,549,000  
21 Washington allocation) and Sales for Resale increased by \$4,876,000 on a system basis  
22 (\$3,178,000 Washington allocation). All other power supply accounts are unaffected by the

1 Energy Efficiency Load Adjustment. Exhibit No.\_\_\_\_ (WGJ-6) is provided for information  
2 purposes and shows the power supply pro forma excluding the Energy Efficiency Load  
3 Adjustment. The difference between net power supply costs in this Exhibit and Exhibit No.\_\_\_\_  
4 (WGJ-2) reflects the change in net power supply costs associated with the Energy Efficiency  
5 Load Adjustment.

6 **Thermal Fuel Expense**

7 **Q. How are thermal fuel expenses determined in the pro forma?**

8 A. Thermal fuel expenses include Colstrip coal costs, Kettle Falls wood-waste costs  
9 and natural gas expense for the Company's gas-fired resources including Coyote Springs 2,  
10 Lancaster, Rathdrum, Northeast, Boulder Park, and the Kettle Falls combustion turbine. Unit  
11 coal costs at Colstrip are based on the long-term coal supply and transportation agreements. Unit  
12 wood fuel costs at Kettle Falls are based on multiple shorter-term contracts with fuel suppliers  
13 and inventory. Total fuel costs for each plant are based on the unit fuel cost and the plant's level  
14 of generation as determined by the AURORA model.

15 Exhibit No. \_\_\_\_ (WGJ-4) shows the pro forma fuel costs by month for each plant. Mr.  
16 Kalich provides details and supporting workpapers regarding the level of generation for the  
17 Company's thermal plants, and the fuel cost for thermal and natural gas-fired plants.

18 **Transmission Expense**

19 **Q. What changes in transmission expense are in the pro forma compared to the**  
20 **expense in current base rates?**

21 A. The only change in transmission expense is the elimination of the Black Creek  
22 wheeling expense since that contract ended March 25, 2011.

1 **IV. ERM CALCULATIONS**

2 **New Authorized Power Supply and Transmission Expense**

3 **Q. What is the authorized power supply expense and revenue proposed by the**  
4 **Company for the ERM?**

5 A. The proposed authorized level of annual system power supply expense is  
6 \$189,516,428. This is the sum of Accounts 555 (Purchased Power), 501 (Thermal Fuel), 547  
7 (Fuel), less Account 447 (Sale for Resale). The proposed level of Transmission Expense is  
8 \$17,641,176. The proposed level of Transmission Revenue is \$11,524,732.

9 The level of retail sales MWh and the retail revenue credit is also updated. The proposed  
10 authorized level of retail sales to be used in the ERM is the January 2010 through December  
11 2010 weather adjusted retail sales incorporating the Energy Efficiency Load Adjustment. The  
12 proposed retail revenue credit is \$53.01/MWh, which is the average cost of  
13 production/transmission in this filing developed by Company witness Ms. Knox.

14 The proposed authorized ERM power supply expense and revenue, transmission expense  
15 and revenue, and retail sales is shown in Exhibit No.\_\_(WGJ-5).

16 **Q. Does that conclude your pre-filed direct testimony?**

17 A. Yes.