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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 CLINT G. KALICH

FOR AVISTA CORPORATION

(ELECTRIC ONLY)

I. INTRODUCTION

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

A. My name is Clint Kalich. I am employed by Avista Corporation at 1411 East Mission Avenue, Spokane, Washington.

Q. In what capacity are you employed?

A. I am the Manager of Resource Planning & Power Supply Analyses, in the Energy Resources Department of Avista Utilities.

Q. Please state your educational background and professional experience.

A. I graduated from Central Washington University in 1991 with a Bachelor of Science Degree in Business Economics. Shortly after graduation, I accepted an analyst position with Economic and Engineering Services, Inc. (now EES Consulting, Inc.), a Northwest management-consulting firm located in Bellevue, Washington. While employed by EES, I worked primarily for municipalities, public utility districts, and cooperatives in the area of electric utility management. My specific areas of focus were economic analyses of new resource development, rate case proceedings involving the Bonneville Power Administration, integrated (least-cost) resource planning, and demand-side management program development. In late 1995, I left Economic and

Engineering Services, Inc. to join Tacoma Power in Tacoma, Washington. I provided key analytical and policy support in the areas of resource development, procurement, and optimization, hydroelectric operations and re-licensing, unbundled power supply rate-making, contract negotiations, and system operations. I helped develop, and ultimately managed, Tacoma Power's industrial market access program serving one-quarter of the company's retail load. In mid-2000 I joined Avista Utilities as a Senior Power Resource Analyst.

In 2001, I accepted my current position, assisting the Company in resource analysis, dispatch modeling, resource procurement, integrated resource planning, and rate case proceedings. Much of my career has involved resource dispatch modeling of the nature described in this testimony.

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

A. My testimony will describe the Company's use of the AURORA$_{XMP}$ dispatch model, hereinafter referred to as the "Dispatch Model." I will explain the key assumptions driving the Dispatch Model's market forecast of electricity prices. The discussion includes the variables of natural gas, Western Interconnect loads and resources, and hydroelectric conditions. I will describe how the model

dispatches our resources and contracts in a manner that maximizes benefits to customers and tracks their values for use in pro forma calculations. Finally, I will present the modeling results provided to Company Witness Mr. Johnson for his power supply pro forma adjustment calculations.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring Exhibit No. 5, Schedules 1 and 2. Schedule 1 provides a forecast of Company load and resource positions from 2009 through 2018. Schedule 2 provides summary output from the AURORA$_{XMP}$ dispatch model. All information contained in the exhibit was prepared under my direction.

II. THE DISPATCH MODEL

Q. What model is the Company using to dispatch its portfolio of resources and obligations?

A. The Company uses EPIS, Inc.'s AURORA$_{XMP}$ system dispatch model ("Dispatch Model") for determining power supply costs. The model optimizes dispatch of Company-owned resources and contracts in each hour of the pro forma year. The pro forma period is January 1, 2009 through December 31, 2009. It reflects true system operations by evaluating future resource decisions on an hourly basis.

Q. What AURORA version and database is the Company using for this case?

A. The Company is using AURORA$_{XMP}$ version 9.0., released in November 2007, and the latest available database for it (North_American_DB_2007-02).

Q. Please briefly describe the Dispatch Model.

A. The AURORA$_{XMP}$ electric market model was developed by EPIS, Inc. of Sandpoint, Idaho. AURORA$_{XMP}$ is a fundamentals-based tool containing demand and resource data for the entire Western Interconnect. It employs multi-area, transmission-constrained dispatch logic to simulate real market conditions. Its true economic dispatch captures the dynamics and economics of electricity markets. On an hourly basis the Dispatch Model develops an available resource stack, sorting resources from lowest to highest cost. It then compares this resource stack with load obligations in the same hour to arrive at the least-cost market-clearing price for the hour. Once resources are dispatched and market prices are determined, the Dispatch Model singles out Avista resources and loads and values them against the marketplace.

Q. What experience does the Company have using AURORA$_{XMP}$?

A. The Company purchased a license to use AURORA$_{XMP}$ in April 2002. AURORA$_{XMP}$ has been used for numerous

studies, including the Company's 2003, 2005, and 2007 Integrated Resource Plans ("IRPs"), our 2004 general rate case filing in this state, and our 2005, 2007, and 2008 general rate case filings before the Washington Utilities and Transportation Commission ("WUTC"). The tool is also used for various resource evaluations, including requests for proposals.

Q. Who else uses AURORA$_{XMP}$?

A. AURORA$_{XMP}$ is used all across North America. In the Northwest specifically, AURORA$_{XMP}$ is used by the Bonneville Power Administration, the Northwest Power and Conservation Council, Puget Sound Energy, Idaho Power, Portland General Electric, Seattle City Light, Grant County PUD, and Tacoma Power, among others.

Q. What benefits does the Dispatch Model offer for this type of analysis?

A. The Dispatch Model generates hourly electricity prices across the Western Interconnect, accounting for its specific mix of resources and loads. The Dispatch Model reflects the impact of regions outside the Northwest on Northwest market prices, limited by known transfer (transmission) capabilities. Ultimately, the Dispatch Model allows the Company to generate price forecasts in-house instead of relying on exogenous forecasts.

The Company owns a number of resources, including hydroelectric plants and natural gas-fired peaking units, which serve customer loads during more valuable on-peak hours. By optimizing resource operation on an hourly basis, the Dispatch Model is able to appropriately value the capabilities of these assets. For example, actual 2006 on-peak prices were 31.9% higher than off-peak prices. In 2007 the difference was 29.9%. For comparison, Dispatch Model on-peak prices for the pro forma period average 30% higher than off-peak prices. In summary, the Dispatch Model appropriately values the energy from Avista's resources during on-peak periods in a manner similar to that recently experienced in the Northwest region.

Q. On a broader scale, what calculations are being performed by the Dispatch Model?

A. The Dispatch Model's goal is to minimize overall system operating costs across the Western Interconnect, including Avista's portfolio of loads and resources. The dispatch model generates a wholesale electric market price forecast by evaluating all Western Interconnect resources simultaneously in a least-cost equation to meet regional loads. As the Dispatch Model progresses from hour to hour, it "operates" those least-cost resources necessary to meet load. With respect to the Company's portfolio, the Dispatch Model tracks the hourly output and fuel costs

associated with portfolio generation. It also calculates hourly energy quantities and values for the Company's contractual rights and obligations. In every hour the Company's loads and obligations are compared to determine a net position. This net position is balanced using the simulated wholesale electricity market. The cost of energy purchased from or sold into the market is determined based on the electric market-clearing price for the specified hour and the amount of energy necessary to balance loads and resources.

Q. How does the Dispatch Model determine electric market prices, and how are prices used to calculate market purchases and sales?

A. The Dispatch Model calculates electricity prices for the entire Western Interconnect, separated into various geographical areas such as the Northwest and Northern and Southern California. The load in each area is compared to available resources, including resources available from other areas that are linked by transmission corridors, to determine the electricity price in each hour. Ultimately, the market price for an hour is set based on the last resource in the stack to be dispatched. This resource is referred to as the "marginal resource." Given the prominence of natural gas-fired resources on the margin,

this fuel is a key variable in the determination of wholesale electricity prices.

Q. How does the Dispatch Model operate regional hydroelectric projects?

A. The model begins by "peak shaving" loads using system hydro resources. When peak shaving, the Dispatch Model determines which hours contain the highest loads and allocates to them as much hydroelectric energy as possible. Remaining loads are then met with other available resources.

Q. Has the Company made any modifications to the database for this case?

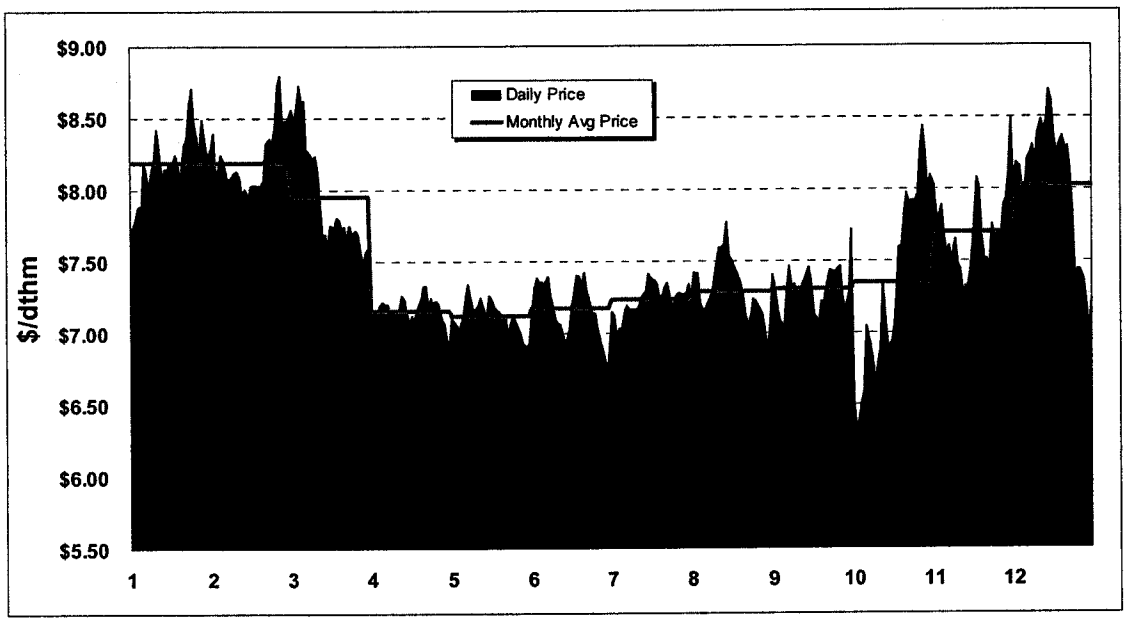
A. Yes. Avista's portfolio of resources is modified to reflect actual operating characteristics, natural gas prices are modified to match projected forward prices over the pro-forma period, regional resources are modified where better information is known, and northwest hydro data is replaced with Northwest Power Pool data.

Q. Please describe your update to pro forma period natural gas prices.

A. Natural gas prices for this filing are based on a 3-month average of 2009 monthly forwards from October 1, 2007 to December 31, 2007. This method is consistent with our present case before the WUTC. Prices are fitted to a daily shape based on daily spot market prices at AECO

between January 2003 and December 2007. Daily and monthly gas price shapes at AECO are shown in Chart No. 1. Other basins retain the same daily shape.

Chart No. 1 - Daily Natural Gas Price Shape at AECO



Natural gas prices are modified to ensure prices across the Western Interconnect are consistent with changes made to the Northwest. Annual average natural gas prices at the various trading hubs are presented below in Table No. 1.

Table No. 1 - Pro Forma Natural Gas Prices

Basin	Price ($/dth)	Basin	Price ($/dth)
AECO	7.55	Stanfield	7.92
Malin	7.99	Sumas	8.15
Spokane	8.28	Henry Hub	8.36
Rockies	7.02	Topock	7.97

Q. What hydro record is the Company using in this filing?

A. The Company bases this case on the 50-year hydrological record beginning in 1929. As with natural gas, this method is consistent with our present case before the WUTC. The Dispatch Model is run one time for each hydroelectric year, with the average of all 50 being used to set power supply expenses.

Data is sourced from the Northwest Power Pool's (NWPP) 2006-07 Headwater Benefits Study. This study is the latest available.

Q. How does Coyote Springs 2 dispatch relate to historical dispatch?

A. Coyote Springs 2 was modified from the default database to more accurately simulate actual plant operations. Chart No. 2 shows actual Coyote Springs 2 dispatch for calendar year 2007.

Chart No. 2 - CS2 Dispatch (Calendar Year 2007 Actual)