BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-05_____

DOCKET NO. UG-05_____

DIRECT TESTIMONY OF

TARA L. KNOX

REPRESENTING AVISTA CORPORATION

I. INTRODUCTION

Q. Please state your name, business address and present position with Avista Corporation?

A. My name is Tara L. Knox and my business address is 1411 East Mission Avenue, Spokane, Washington. I am employed as a Rate Analyst in the State and Federal Regulation Department.

Q. Would you briefly describe your duties?

A. I am responsible for preparing the regulatory cost of service models for the Company, as well as providing support for the preparation of results of operations reports.

Q. Would you describe your educational background and professional experience?

A. I am a 1982 graduate of Washington State University with a Bachelor of Arts degree in General Humanities, and a Master of Accounting degree in 1990. As an employee in the Rate Department at Avista since 1991, I have attended several ratemaking classes, including the EEI Electric Rates Advanced Course that specializes in cost allocation and cost of service issues. I have also been a member of the Cost of Service Working Group since 1999, which is a discussion group made up of technical professionals from utilities throughout the United States and Canada concerned with cost of service issues.

Q. What is the scope of your testimony in these proceedings?

A. My testimony and exhibits will cover the Company's electric and natural gas cost of service studies performed for this proceeding and the weather normalization adjustments to retail usage.

II. WEATHER NORMALIZATION

Q. Would you please briefly summarize your testimony related to electric weather normalization?

A. Yes. The Company's weather normalization adjustment calculates the change in kWh usage required to adjust actual loads during the 2004 test period to the amount expected if weather had been normal. This adjustment incorporates the effect of both heating and cooling on weather sensitive customer groups. The weather adjustment is developed from regression analysis of five years of billed usage per customer and billing period heating and cooling degree-day data. The resulting weather sensitivity factors are applied to test period customers and the difference between normal heating/cooling degree-days and test period observed heating/cooling degree-days.

Mr. Hirschkorn includes the Washington adjustment to normal usage as part of the Revenue Adjustment for pro forma results of operations. Mr. Kalich includes the combined Washington and Idaho adjustment to reflect normal loads in the modeling for the Pro Forma Power Supply costs.

Q. Would you please briefly summarize your natural gas weather normalization testimony?

A. Yes. The natural gas weather adjustment is developed from a regression analysis of five and one-half years of billed usage per customer and billing period heating degree-day data. The resulting weather sensitivity factors are applied to test period customers and the difference between normal heating degree-days and test period observed heating degree-days. This calculation produces the change in therm usage required to adjust existing loads to the amount expected if weather had been normal. Mr. Hirschkorn includes the adjustment to normalize usage as part of the Revenue/Gas Supply Adjustment for pro forma results of operations.

Q. What does the Company use for "normal" degree days?

A. The NOAA (National Oceanographic and Atmospheric Administration) publishes Monthly Station Normals for the Spokane airport weather station. The current published normals are based on the years 1971 to 2000 and are updated every ten years.

Q. Are these processes different from the methods employed in the Company's prior cases?

A. No. This electric weather normalization process was performed in Docket No. UE-991606 and Docket No. UE-011595. The natural gas weather normalization process was performed in Docket Nos. UG-041515, UG-991607, and UG-971071. Both

the electric and natural gas processes have been consistently applied in the Company's annual commission basis results of operations filings.

Q. What was the impact of electric weather normalization on the 2004 test year?

A. Weather was warmer than normal during the 2004 test year. The adjustment to normal required the addition of 535 heating degree-days and the deduction of 177 cooling degree-days. The net adjustment to Washington sales volumes was an addition of 13,579,198 kWhs which is approximately one quarter of one percent of billed usage.

Q. What was the impact of natural gas weather normalization on the 2004 test year?

A. Weather was warmer than normal during the 2004 test year. The adjustment to normal required the addition of 535 heating degree-days. The adjustment to sales volumes was an addition of 11,575,460 therms which is approximately five percent of billed usage.

III. ELECTRIC COST OF SERVICE

Q. Please briefly summarize your testimony related to the electric cost of service study.

A. I believe the Base Case cost of service study presented in this case is a fair representation of the costs to serve each customer group. The Base Case study shows

Residential Service Schedule 1 and Extra Large General Service Schedule 25 earn substantially less than the overall rate of return under present rates. General Service Schedule 11 and Large General Service Schedule 21 earn substantially more than the overall rate of return under present rates. Pumping Service Schedule 31 and Street and Area Lights earn close to the overall rate of return under present rates.

Q. Are you sponsoring any exhibits related to the electric cost of service study?

A. Yes. I am sponsoring Exhibit No.__(TLK-2), electric cost of service study process description; and Exhibit No. ___(TLK-3), electric cost of service study model output.

Q. Were these exhibits prepared by you?

A. Yes.

Q. Please identify the Company's electric cost studies presented to this Commission in the last five years.

A. Electric cost of service studies were presented to this Commission in Docket No UE-011595 and Docket No UE-991606.

Q. What is an electric cost of service study and what is its purpose?

A. An electric cost of service study is an engineering-economic study, which separates the revenue, expenses, and rate base associated with providing electric service to designated groups of customers. The groups are made up of customers with similar

load characteristics and facilities requirements. Costs are assigned in relation to each group's characteristics, resulting in an evaluation of the cost of the service provided to each group. The rate of return by customer group indicates whether the revenue provided by the customers in each group recovers the cost to serve those customers. The study results are used as a guide in determining the appropriate rate spread among the groups of customers. Exhibit No. ___(TLK-2) explains the basic concepts involved in performing an electric cost of service study. It also details the specific methodology and assumptions utilized in the Company's Base Case cost of service study.

Q. What is the basis for the electric cost of service study provided in this case?

A. The electric cost of service study provided by the Company as Exhibit No.___(TLK-3) is based on the 2004 test year pro-forma results of operations presented by Mr. Falkner in Exhibit No.___(DMF-2).

Q. Would you please explain the cost of service study presented in Exhibit No. ___(TLK-3)?

A. Yes. Exhibit No. ___(TLK-3) includes the Excel spreadsheet model calculation of the cost of service results. This detail has been divided into three distinct segments.

Part 1 is composed of a series of summaries of the study results. The summary on page 1 shows the results of the study by FERC account category. The rate of return

by rate schedule and the ratio of each schedule's return to the overall return are shown on Lines 39 and 40. This summary was provided to Mr. Hirschkorn for his work on rate spread and rate design. The results will be discussed in more detail later in my testimony.

Pages 2 and 3 are both summaries that show the revenue to cost relationship at current and proposed revenue. Costs by category are shown first at the existing schedule returns (revenue); next the costs are shown as if all schedules were providing equal recovery (cost). These comparisons show how far current and proposed rates are from rates that would be in alignment with the cost study. Page 2 shows the costs segregated into production, transmission, distribution, and common functional categories. Page 3 segregates the costs into demand, energy, and customer classifications.

Part 2 is the cost of service calculations from the spreadsheet called "Assign" showing the functionalization, classification, and allocation of each line item in the study. The supporting schedules required to run the model made up of the allocation and classification factors used in the study are shown on pages 31 through 35.

Finally, Part 3 is the spreadsheet called "Proforma." This worksheet shows the segregation of Mr. Falkner's pro forma results of operations into the detailed accounting data used in this study.

Q. Does the Company's electric Base Case cost of service study follow the methodology filed in the Company's last electric general rate case in Washington?

A. Yes. The Base Case cost of service study was prepared using the same methodology applied to the study presented in Docket No. UE-011595.

Q. Given that the specific details of this methodology are described in Exhibit No.___(TLK-2), would you please give a brief overview of the key elements and the history associated with those elements?

A. In general the cost study follows the methodology established in Docket No. UE-920499 for Puget Sound Power and Light (now PSE). Production and transmission costs are classified to energy and demand by a peak credit analysis. The definition of peaks and peak credit are specific to Avista and were accepted by the Commission for Avista in Docket No. UE-991606. Distribution costs are classified and allocated by the basic customer theory[1] that was derived directly from the methodology approved for Puget in Docket No. UE-920499. Administrative and general costs are first directly assigned to production, transmission, distribution, or customer relations functions. The Commission found this process acceptable in Avista's Docket No. UE-991606. The remaining administrative and general costs are categorized as common costs and have been allocated by a variety of factors as approved by this Commission

[1] Basic customer theory classifies only meters, services and street lights as customer related plant, all other distribution facilities are considered demand related.

for Puget in Docket No. UE-920499. The specific factors and items they are applied to are described in detail in Exhibit No. ___(TLK-2), see pages 5 and 9.

Q. What are the results of the Company's Base Case cost of service study?

A. The following table shows the rate of return and the relationship of the customer class return to the overall return (relative return ratio) at present rates for each rate schedule:

Table 1

Customer Class	Rate of Return	Return Ratio
Residential Service Schedule 1	4.23%	0.61
General Service Schedule 11	13.14%	1.91
Large General Service Schedule 21	10.53%	1.53
Extra Large General Service Schedule 25	4.56%	0.66
Pumping Service Schedule 31	7.25%	1.06
Lighting Service Schedules 41 - 49	7.86%	1.14
Total Washington Electric System	6.87%	1.00

As can be observed from the above table, residential and extra large general service schedules (1 and 25) show significant under-recovery of the costs to serve them, while the general and large general service schedules (11 and 21) show over-recovery of the costs to serve them. The summary results of this study were provided to Mr. Hirschkorn as an input into development of the proposed rates.

IV. NATURAL GAS COST OF SERVICE

Q. Are you sponsoring any exhibits related to the natural gas cost of service study?

A. Yes. I am sponsoring Exhibit No.__(TLK-4), natural gas cost of service study process description; and Exhibit No. ___(TLK-5), natural gas cost of service study model output.

Q. Were these exhibits prepared by you?

A. Yes.

Q. Please identify the natural gas cost studies presented to this Commission in the last five years.

A. Natural gas cost of service studies were filed with this Commission in Docket No. UG-041515 and Docket No. UG-991607.

Q. Please describe the natural gas cost of service study and its purpose.

A. A natural gas cost of service study is an engineering-economic study which separates the revenue, expenses, and rate base associated with providing natural gas service to designated groups of customers. The groups are made up of customers with similar usage characteristics and facility requirements. Costs are assigned in relation to each groups' characteristics, resulting in an evaluation of the cost of the service provided to each group. The rate of return by customer group indicates whether the revenue provided by the customers in each group recovers the cost to serve

those customers. The study results are used as a guide in determining the appropriate rate spread among the groups of customers. Exhibit No.__(TLK-4) explains the basic concepts involved in performing a natural gas cost of service study. It also details the specific methodology and assumptions utilized in the Company's Base Case cost of service study.

Q. What is the basis for the natural gas cost of service study provided in this case?

A. The cost of service study provided by the Company as Exhibit No.__(TLK-5) is based on the 2004 test year pro-forma results of operations presented by Mr. Falkner in Exhibit No.__(DMF-3).

Q. Would you please explain the cost of service study presented in Exhibit No.__(TLK-5)?

A. Yes. Exhibit No. __(TLK-5) includes the Excel spreadsheet model calculation of the cost of service results. This detail has been divided into three distinct segments.

Part 1 is composed of a series of summaries of the study results. Page 1 shows the results of the study by FERC account category. The rate of return and the ratio of each schedule's return to the overall return are shown on lines 38 and 39. This summary is provided to Mr. Hirschkorn for his work on rate spread and rate design. The results will be discussed in more detail later in my testimony. The additional

summaries show the costs organized by functional category (page 2) and classification (page 3), including margin and unit cost analysis at current and proposed rates.

Part 2 is the cost of service calculation from the spreadsheet called "Assign" showing the functionalization, classification, and allocation of each line item in the study. The supporting schedules required to run the model are shown on pages 28 through 44.

Finally, Part 3 is the spreadsheet called "Proforma." This worksheet shows the segregation of Mr. Falkner's pro-forma results of operations into the detailed accounting data used in this study.

Q. Does the Natural Gas Base Case cost of service study utilize the methodology from the Company's last Washington natural gas case?

A. In general, it does follow the same methodology. However, the Company agreed to certain modifications to purchased gas and underground storage allocations in the settlement agreement in Avista's Docket No. UG-041515 that will be explained later in my testimony. Those modifications have been incorporated into this cost study.

Q. What are the key elements that define the cost of service methodology?

A. Gas costs and underground storage costs are tied to the current purchased gas tracker methodology. Natural gas main investment has been segregated into large and small mains. Large usage customers that take service from large mains do not receive an allocation of small mains. Meter installation and services investment is

allocated by number of customers weighted by the relative current cost of those items. System facilities that serve all customers are classified by the peak and average ratio that reflects the system load factor, then allocated by coincident peak demand and throughput, respectively. Demand side management costs are treated in the same way as system facilities. General plant is allocated by the sum of all other plant. Administrative & general expenses are segregated into labor related, plant related, revenue related, and "other". The costs are then allocated by factors associated with labor, plant in service, or revenue, respectively. The "other" A&G amounts get a combined allocation that is one-half based on O&M expenses and one-half based on throughput. A detailed description of the methodology is included in Exhibit No.__(TLK-4).

Q. Does this methodology follow previously approved methods?

A. Yes, with the exception of Company-specific purchased gas and related items, the methodology I have presented here, and in prior cases before this Commission, replicates the methodology established in Docket No. UG-940814 for Washington Natural (now PSE).

Q. You mentioned modifications have been made to the purchased gas and underground storage allocations. What are those changes?

A. In the last purchased gas adjustment filing, the Company changed the allocation of transportation costs related to the Jackson Prairie underground storage

facility to agree with the UG-940814 method, such that 80% would be allocated based on sales therms, and 20% annual throughput. Prior to that filing, the allocation for underground storage related items had been 23% firm coincident peak demand, and 77% annual throughput. Also in that purchased gas adjustment filing, transportation customers were excluded from GRI contribution rates and the Company agreed these expenditures would no longer be reflected in future purchased gas adjustments. These costs were rolled into base rates with the implementation of Avista's Docket No. UG-041515.

Q. Paragraph 10, on page 3 of the Company's Settlement Agreement to Docket No. UG-041515 states "in its next general rate case filing, (the Company) will allocate all applicable underground storage costs and GRI/GTI contributions in a manner consistent with the allocation methodology used in the PGA filing...." How are those items treated in this cost of service study?

A. Undergound storage operating and maintenance expenses, property taxes, depreciation expense, storage capacity release revenue, and rate base are all allocated 80% by sales therms, and 20% by annual throughput consistent with related transportation costs included in the PGA. The GRI contribution amount booked to Account 804 during the test year in the amount of $48,000 has been excluded from pro-forma gas costs, but added to purchased gas expenses in Account 807, where it is allocated to customer classes by sales therms.

Q. Have there been any additional changes to the allocation of gas costs beyond those described above?

A. Yes, one change is proposed. Mr. Hirschkorn presents a modification to the allocation of certain demand costs by service schedule. The effect of the proposed change in the allocation of these costs has been incorporated into the cost of service study. This change moves the Company's gas cost allocation process further into conformance with the UG-940814 methodology, as explained further by Mr. Hirschkorn.

Q. What are the results of the Company's natural gas cost of service study?

A. I believe the Base Case cost of service study presented in this filing is a fair representation of the costs to serve each customer group. The study indicates that Residential Service Schedule 101 is earning slightly less than the overall return, and all other schedules are earning more than the overall return to varying degrees. Small Firm, Large Firm, and Transportation service schedules are all slightly above unity, but below the requested return, whereas Interruptible Service appears to be over-earning.

The following table shows the rate of return and the relative return ratio at present rates for each rate schedule:

Table 2

Customer Class	Rate of Return	Return Ratio
Residential Service Schedule 101	7.99%	0.97
Small Firm Service Schedule 111	9.16%	1.11
Large Firm Service Schedule 121	9.07%	1.10
Interruptible Service Schedule 131	16.13%	1.95
Transportation Service Schedule 146	9.48%	1.15
Total Washington Natural Gas System	8.27%	1.00

The summary results of this study were provided to Mr. Hirschkorn as an input into development of the proposed rates.

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

A. Yes.