

Exhibit No. ____ T (VN-1T)
Dockets UE-090134/UG-090135
and UG-060518 (consolidated)
Witness: Vanda Novak

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND)	DOCKETS UE-090134
TRANSPORTATION COMMISSION,)	and UG-090135
)	<i>(consolidated)</i>
Complainant,)	
)	
v.)	
)	
AVISTA CORPORATION, d/b/a)	
AVISTA UTILITIES,)	
)	
Respondent.)	
.....)	
)	
In the Matter of the Petition of)	DOCKET UG-060518
)	<i>(consolidated)</i>
AVISTA CORPORATION, d/b/a)	
AVISTA UTILITIES,)	
)	
For an Order Authorizing)	
Implementation of a Natural Gas)	
Decoupling Mechanism and to Record)	
Accounting Entries Associated With)	
the Mechanism.)	
.....)	

TESTIMONY
OF
VANDA NOVAK
STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

August 17, 2009

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1 **I. INTRODUCTION**

2

3 **Q. Please state your name and business address.**

4 A. My name is Vanda Novak and my business address is the Richard Hemstad
5 Building, 1300 South Evergreen Park Drive Southwest, P.O. Box 47250, Olympia,
6 Washington 98504.

7

8 **Q. By whom are you employed and in what capacity?**

9 A. I am employed by the Washington Utilities and Transportation Commission as a
10 Regulatory Analyst in the Energy section of its Regulatory Services Division. My
11 current duties and responsibilities involve the analysis and consideration of revenue
12 normalization adjustments in energy utility rate proceedings. I am also responsible
13 for the review of integrated resource plans filed in this state and assisting in rate
14 design studies using analytical tools such as the Aurora model.

15

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

17 A. I graduated from University of Washington in 2006 with a Bachelor of Arts degree
18 in Mathematics. In 2007, I attended the annual regulatory studies program held by
19 the National Association of Regulatory Utility Commissioners (NARUC). I have
20 also attended an Aurora software training session with EPIS.

1 **II. PURPOSE AND SUMMARY OF TESTIMONY**

2 **Q. What is the purpose of your testimony in this proceeding?**

3 A. My testimony and exhibits will present Staff’s analysis and review of Avista’s
4 weather normalization adjustments both in the gas and electric rate proceedings.
5 Specifically, I will respond to the testimony of Avista witnesses Knox and
6 Hirsch Korn as it relates to the topic of weather normalization of the company’s sales
7 revenues.

8
9 **Q. Would you please summarize your testimony as it relates to Avista**
10 **Corporation’s (“Avista” or “The Company”) proposal to normalize sales**
11 **revenues?**

12 A. I have reviewed the weather normalization methodology which Avista utilized as
13 part of the revenue normalization adjustment and found it to be appropriate.

14
15 **III. DISCUSSION**

16
17 **Q. Why is a temperature normalization adjustment necessary?**

18 A. Avista’s customers use electricity and natural gas for space heating. Consequently,
19 temperature greatly affects usage of electricity and natural gas by the residential,
20 commercial, and industrial classes. This effect is reflected in the Company’s total
21 revenues.

22 A temperature normalization adjustment presents to the Commission
23 estimated electric and gas loads, and resulting revenue, as if weather had been

1 “normal” during the test year. This ensures that rates are not set too high, if the test
2 year was warmer than normal, or too low, if the test year was colder than normal.

3 The primary purpose and intent is to measure what the revenues would be absent any
4 variations in weather.

5
6 **Q. What parameters are required to compute temperature normalized electricity
7 and natural gas consumption for the test year?**

8 A. Four parameters are needed to compute electricity and natural gas temperature
9 normalized consumption for the test year. They are: (1) normal temperature; (2)
10 variations or differences between normal and test year temperature; (3) temperature
11 sensitivity coefficients; and (4) test year number of customers.

12
13 **Q. Let us begin with the first parameter. How is normal temperature determined?**

14 A. Normal temperature is determined from data published by the National
15 Oceanographic and Atmospheric Administration (NOAA). NOAA computes normal
16 heating degree days (HDD) and cooling degree days (CDD) at various locations,
17 including locations in Avista’s service area in Washington. HDD and CDD are
18 quantitative indices that reflect demand for energy to heat or cool houses. They are
19 calculated using a “balance” or “base point” outside temperature that is assumed to
20 trigger heating or cooling energy.¹ When the outside temperature is below the base
21 point, the indoor temperature needs to be increased by space heating. Conversely,
22 when the outside temperature is greater than the base point, the indoor temperature

¹ HDD is given as $HDD = 65^{\circ}F - \text{Average temperature}$, for average temperature $\leq 65^{\circ}F$. CDD is given as $CDD = \text{Average temperature} - 65^{\circ}F$, for average temperature $> 65^{\circ}F$.

1 needs to be reduced by air conditioning. 65⁰F is the most commonly used balance
2 point temperature in determining both HDD and CDD.

3

4 **Q. How are variations from normal calculated?**

5 A. Variations from normal are computed using HDD and CDD. In normalizing test year
6 electricity and natural gas consumption, the temperature for each day of the test year
7 is compared to the normal temperature for that day. The difference, or variation
8 between normal and actual test year temperature, is called “unbilled heating” or
9 “cooling degree days”.

10

11 **Q. How are temperature sensitivity coefficients and test year customers used in the
12 calculation of a weather normalization adjustment?**

13 A. Temperature sensitivity coefficients are computed from a regression analysis
14 between temperature (HDD and CDD) and energy consumption. These coefficients
15 are multiplied by the variation of test year temperature from normal temperature and
16 the number of customers. The result is temperature-normalized electricity and
17 natural gas consumption for the test year.

18

19 **Q. How were the weather sensitivity coefficients developed?**

20 A. In order to develop the weather sensitivity coefficients that measure customer
21 response to fluctuations in temperature from the base comfort temperature of 65
22 degrees Fahrenheit, a regression analysis was conducted in which ten years of billed
23 usage per customer is applied to the billing period cooling and heating degree day

1 data. Ten years is appropriate, since customer use patterns change in response
2 variables such as appliance upgrades and modern buildings, and the intent is to
3 capture customer response to fluctuations in temperature in a relevant time-frame.
4

5 **Q. Where did Avista obtain the actual heating and cooling degree data and was
6 this data representative for the service territory?**

7 A. Avista obtained the actual heating and cooling degree data for the test year ended
8 September 2008, from Spokane airport weather station. This station is within
9 Avista's Washington service territory and is also an official NOAA weather station.
10

11 **Q. How was the normal heating and cooling degree day data obtained and is it
12 appropriate?**

13 A. Avista also obtained this data from the Spokane airport weather station, using a
14 rolling average of 30 years of daily averaged minimum and maximum temperature
15 data. This approach has been used as the industry standard. It should be noted that
16 an average over a period of 24 hours generally gives a better indication of the
17 behavior of temperatures throughout the day, when this level of granularity in data is
18 available. However, Staff believes the approach used by Avista provides a
19 reasonable result.

20 **Q. How are the components of a weather normalization adjustment used in order
21 to make an adjustment to the revenue requirement amount?**
22

1 A. The adjusted kilowatt hours derived from the four parameters described above are
2 applied to each weather sensitive rate schedule to determine the weather
3 normalization adjustment.

4

5 **Q. Do you agree with the Company's calculation of the weather normalization**
6 **adjustment?**

7 A. Yes. The effects of the weather normalization adjustment are included in Exhibit
8 No. ____ (DPK-2), Schedule 1.2, page 6 of 17, column (w).

9

10 **Q. Does this conclude your testimony?**

11 A. Yes.

12

13

14

15