

DAVID J. MEYER  
VICE PRESIDENT AND CHIEF COUNSEL FOR  
REGULATORY & GOVERNMENTAL AFFAIRS  
AVISTA CORPORATION  
P.O. BOX 3727  
1411 EAST MISSION AVENUE  
SPOKANE, WASHINGTON 99220-3727  
TELEPHONE: (509) 495-4316  
FACSIMILE: (509) 495-8851  
DAVID.MEYER@AVISTACORP.COM

**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

IN THE MATTER OF THE APPLICATION	)	CASE NO. AVU-E-12-08
OF AVISTA CORPORATION FOR THE	)	CASE NO. AVU-G-12-07
AUTHORITY TO INCREASE ITS RATES	)	
AND CHARGES FOR ELECTRIC AND	)	
NATURAL GAS SERVICE TO ELECTRIC	)	DIRECT TESTIMONY
AND NATURAL GAS CUSTOMERS IN THE	)	OF
STATE OF IDAHO	)	TARA L. KNOX
	)	

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FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

1 I. INTRODUCTION

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

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

8 Q. Would you briefly describe your duties?

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

13 Q. What is your educational background and  
14 professional experience?

15 A. I am a graduate of Washington State University  
16 with a Bachelor of Arts degree in General Humanities in  
17 1982, and a Master of Accounting degree in 1990. As an  
18 employee in the State and Federal Regulation Department at  
19 Avista since 1991, I have attended several ratemaking  
20 classes, including the EEI Electric Rates Advanced Course  
21 that specializes in cost allocation and cost of service  
22 issues. I have also been a member of the Cost of Service  
23 Working Group and the Northwest Pricing and Regulatory  
24 Forum, which are discussion groups made up of technical

1 professionals from regional utilities and utilities  
2 throughout the United States and Canada concerned with cost  
3 of service issues.

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

6 A. My testimony and exhibits will cover the  
7 Company's electric and natural gas cost of service studies  
8 performed for this proceeding. Additionally, I am  
9 sponsoring the electric and natural gas revenue  
10 normalization adjustments to the test year results of  
11 operations and the proposed Load Change Adjustment Rate  
12 (LCAR) to be used in the Power Cost Adjustment (PCA). A  
13 table of contents for my testimony is as follows:

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24 **Q. Are you sponsoring any exhibits in this case?**

25 A. Yes. I am sponsoring Exhibit 12 composed of six  
26 schedules as follows. Schedule 1, the proposed Load Change  
27 Adjustment Rate calculation; Schedule 2, the electric cost  
28 of service study process description; Schedule 3, the

1 electric cost of service study summary results; Schedule 4,  
2 the cost of service workshop presentation; Schedule 5, the  
3 natural gas cost of service study process description; and  
4 Schedule 6, the natural gas cost of service study summary  
5 results.

6 **Q. Were these exhibits prepared by you or under your**  
7 **direction?**

8 A. Yes, they were.

9 **II. REVENUE NORMALIZATION**

10 **Electric Revenue Normalization**

11 **Q. Would you please describe the electric revenue**  
12 **adjustment included in Company witness Ms. Andrews pro**  
13 **forma results of operations?**

14 A. Yes, I will. The electric revenue normalization  
15 adjustment represents the difference between the Company's  
16 actual recorded retail revenues during the twelve months  
17 ended June 2012 test period, and retail revenues on a  
18 normalized (pro forma) basis. The total revenue  
19 normalization adjustment increases Idaho net operating  
20 income by \$1,724,000, as shown in adjustment column 2.09 on  
21 page 7 of Ms. Andrews Exhibit No. 10, Schedule 1. The  
22 revenue normalization adjustment consists of three primary  
23 components: 1) re-pricing customer usage (adjusted for any  
24 known and measurable changes) at base tariff rates  
25 presently in effect, 2) adjusting customer loads and  
26 revenue to a 12-month calendar basis (unbilled revenue

1 adjustment), and 3) weather normalizing customer usage and  
2 revenue<sup>1</sup>.

3 **Q. Since these three elements are combined into a**  
4 **single adjustment, would you please identify the impact**  
5 **(before taxes and revenue related expenses) of each**  
6 **component?**

7 A. Yes. The re-pricing of billed usage comprises  
8 the majority of the change in test year revenue. The  
9 combined impact of the rate increase effective October 1,  
10 2011<sup>2</sup>, and the elimination of revenue and amortization  
11 expense from adder schedules (Schedule 59 Residential  
12 Exchange, Schedule 91 Public Purpose Tariff Rider, Schedule  
13 95 Optional Renewable Power, and Schedule 99 DSIT refund)<sup>3</sup>,  
14 is an increase in net revenue of \$2,097,000. Re-pricing of  
15 unbilled calendar usage and elimination of unbilled adder  
16 schedule revenue and expense results in a net revenue  
17 increase of \$90,000<sup>4</sup>. Finally, the weather normalization  
18 adjustment increases revenue by \$530,000. The combined  
19 impact of these elements is an increase of \$2,717,000  
20 which, after revenue-related expenses and income tax,

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<sup>1</sup> Documentation related to this adjustment is detailed in the Knox workpapers accompanying this case.

<sup>2</sup> IPUC Case No. AVU-E-11-01.

<sup>3</sup> Municipal Franchise Fee and Power Cost Adjustment revenues are eliminated in separate adjustments.

<sup>4</sup> The unbilled adjustment consists of removing June 2011 usage billed in July 2011 from the 12 Months Ended June 2012 test year, adding June 2012 usage billed in July 2012 to the 12 Months Ended June 2012 test year, and re-pricing the net adjustment to usage at October 1, 2011 base rates.

1 results in the increase to net operating income of  
2 \$1,724,000.

3 **Q. Would you please briefly discuss electric weather**  
4 **normalization?**

5 A. Yes. The Company's electric weather  
6 normalization adjustment calculates the change in kWh usage  
7 required to adjust actual loads during the twelve months  
8 ended June 2012 test period to the amount expected if  
9 weather had been normal. This adjustment incorporates the  
10 effect of both heating and cooling on weather-sensitive  
11 customer groups. The weather adjustment is developed from  
12 regression analysis of ten years of billed usage per  
13 customer and billing period heating and cooling degree-day  
14 data. The resulting seasonal weather sensitivity factors  
15 (use-per-customer-per-heating-degree day and use-per-  
16 customer-per-cooling-degree day) are applied to monthly  
17 test period customers and the difference between normal  
18 heating/cooling degree-days and monthly test period  
19 observed heating/cooling degree-days.

20 **Q. Have the seasonal weather sensitivity factors**  
21 **been updated since the last rate case?**

22 A. Yes. The factors used in the weather adjustment  
23 are based on regression analysis of monthly billed usage  
24 per customer from January 2001 through December 2010 which

1 is the most recent completed analysis. Autoregressive  
2 terms were included in the regressions in order to correct  
3 for autocorrelation in the data.

4 **Q. What data did you use to determine "normal"**  
5 **heating and cooling degree days?**

6 A. Normal heating and cooling degree days are based  
7 on a rolling 30-year average of heating and cooling degree-  
8 days reported for each month by the National Weather  
9 Service for the Spokane Airport weather station. Each year  
10 the normal values are adjusted to capture the most recent  
11 year with the oldest year dropping off, thereby reflecting  
12 the most recent information available at the end of each  
13 calendar year.

14 **Q. Is this proposed weather adjustment methodology**  
15 **consistent with the methodology utilized in the Company's**  
16 **last general rate case in Idaho?**

17 A. Yes, the process for determining the weather  
18 sensitivity factors and the monthly adjustment calculation  
19 is consistent with the methodology presented in Case No.  
20 AVU-E-11-01.

21 **Q. What was the impact of electric weather**  
22 **normalization on the twelve months ended June 2012 test**  
23 **year?**





1 rates using pro forma sales volumes that have been adjusted  
2 for unbilled sales, abnormal weather, and any material  
3 customer load or schedule changes. The rates used exclude:  
4 1) Temporary Gas Rate Adjustment Schedule 155, which  
5 reflects the approved amortization rate for prior deferred  
6 natural gas costs approved in the Company's last PGA  
7 filing, 2) Public Purposes Rider Adjustment Schedule 191,  
8 and 3) Deferred State Income Tax Adjustment Schedule 199<sup>6</sup>.

9 **Q. Does the Revenue Normalization Adjustment contain**  
10 **a component reflecting normalized natural gas costs?**

11 A. Yes. Purchase gas costs are normalized using the  
12 natural gas costs approved by the Commission in Case No.  
13 AVU-G-12-05, the Company's 2012 PGA filing, as set forth  
14 under Schedule 150. These natural gas costs, effective  
15 October 1, 2012, are applied to the pro forma retail sales  
16 volumes so that there is a matching of revenues and natural  
17 gas costs.

18 **Q. Have you determined the impact of each of the**  
19 **components of this adjustment?**

20 A. Yes. The re-pricing of billed revenue and  
21 natural gas costs increased margin<sup>7</sup> by \$240,000. Re-pricing

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<sup>6</sup> Documentation related to this adjustment is detailed in the Knox workpapers accompanying this case.

<sup>7</sup> The term "margin" in this context consists of revenues less gas costs and adder schedule amortization expenses but does not include the effect of revenue related expenses or income taxes.

1 unbilled revenue and natural gas costs decreased margin by  
2 \$116,000, and the weather adjustment at present rates  
3 increased margin by \$282,000.

4 The total net amount of the natural gas revenue  
5 normalization adjustment, which includes the related  
6 purchase gas cost normalization, is an increase to net  
7 operating income of \$275,000, as shown in adjustment column  
8 2.01, on page 5 of Ms. Andrews Exhibit No. 10, Schedule 2.

9 **Q. Would you please briefly discuss natural gas**  
10 **weather normalization?**

11 A. Yes. The natural gas weather normalization  
12 adjustment is developed from a regression analysis of ten  
13 years of billed usage per customer and billing period  
14 heating degree-day data. The resulting seasonal weather  
15 sensitivity factors (use-per-customer-per-heating-degree  
16 day) are applied to monthly test period customers and the  
17 difference between normal heating degree-days and monthly  
18 test period observed heating degree-days. This calculation  
19 produces the change in therm usage required to adjust  
20 existing loads to the amount expected if weather had been  
21 normal.

22 **Q. In your discussion of electric weather**  
23 **normalization you indicated that the adjustment utilized**  
24 **sensitivity factors from the ten year period January 2001**

1 through December 2010. Is this true for natural gas as  
2 well?

3 A. Yes, the natural gas weather adjustment utilized  
4 updated weather sensitivity factors.

5 Q. What data did you use to determine "normal"  
6 heating degree days?

7 A. Normal heating degree-days are based on a rolling  
8 30-year average of heating degree-days reported for each  
9 month by the National Weather Service for the Spokane  
10 Airport weather station. Each year the normal values are  
11 adjusted to capture the most recent year with the oldest  
12 year dropping off, thereby reflecting the most recent  
13 information available at the end of each calendar year.

14 Q. Is this proposed weather adjustment methodology  
15 consistent with the methodology utilized in the Company's  
16 last general rate case in Idaho?

17 A. Yes. The process for determining the weather  
18 sensitivity factors and the monthly adjustment calculation  
19 are consistent with the methodology presented in Case No.  
20 AVU-G-11-01.

21 Q. What was the impact of natural gas weather  
22 normalization on the twelve months ended June 2012 test  
23 year?

1           A.   Weather was slightly warmer than normal during  
2 the fall and winter months, largely offset by a cooler than  
3 normal spring.   The adjustment to normal required the  
4 addition of 92 heating degree-days from October through  
5 June.<sup>8</sup>   The adjustment to sales volumes was an addition of  
6 818,604 therms which is approximately 0.7% of billed usage.

7

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### **III. PROPOSED LOAD CHANGE ADJUSTMENT RATE**

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#### **Q.   What is the Load Change Adjustment Rate?**

10           A.   The Load Change Adjustment Rate (LCAR) is part of  
11 the Power Cost Adjustment (PCA) mechanism that prices the  
12 change in power supply-related costs associated with the  
13 change in actual retail loads from the retail loads that  
14 were used to set the PCA base costs.   The LCAR  
15 determination process for all Idaho investor-owned  
16 utilities was established in IPUC Case No. GNR-E-10-03,  
17 Order No. 32206 which was approved on March, 15, 2011.

18

#### **Q.   How is the rate determined?**

19           A.   The proposed LCAR in this case is determined by  
20 computing the proposed revenue requirement on the  
21 production and transmission costs contained within Ms.  
22 Andrews' Idaho electric pro forma total results of

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<sup>8</sup> Heating degree days that occur during July through September do not impact the natural gas weather normalization adjustment as the seasonal sensitivity factor is zero for summer months.

1 operations. The production/transmission revenue  
2 requirement amount is then divided by the Idaho normalized  
3 retail load used to set rates in order to arrive at the  
4 average production and transmission cost-per-kWh embedded  
5 in proposed rates. This amount is then multiplied by the  
6 proportion of production and transmission costs classified  
7 as energy-related in the cost of service study.

8 **Q. Do you have an exhibit schedule that shows the**  
9 **calculation of the proposed LCAR?**

10 A. Yes. Exhibit No. 12, Schedule 1 begins with the  
11 identification of the production and transmission revenue,  
12 expense and rate base amounts included in each of Ms.  
13 Andrews' actual, restating, and pro forma adjustments to  
14 results of operations. The "Pro Forma Total Production and  
15 Transmission Costs" on line 32 at the bottom of page 1  
16 shows the resulting production and transmission cost  
17 components.

18 Page 2 shows the revenue requirement calculation on  
19 the production and transmission cost components. The rate  
20 of return and debt cost percentages on Line 2 are inputs  
21 from the proposed cost of capital. The normalized retail  
22 load on Line 10 comes from the workpapers supporting the  
23 revenue normalization and energy efficiency load  
24 adjustments. Line 11 represents the average total

1 production and transmission cost-per-kWh proposed to be  
2 embedded in Idaho customer retail rates. Lines 12 and 13  
3 are values taken from the cost of service study supporting  
4 report titled Functional Cost Summary by Classification at  
5 Uniform Requested Return representing total costs at unity.  
6 Line 12 shows the amount of production and transmission  
7 costs classified as energy related, while Line 13 shows the  
8 total production and transmission costs in the study.

9 The resulting load change adjustment rate on Line 14  
10 is \$0.02768 per kWh or \$27.68 per MWh. The calculation of  
11 the load change adjustment rate will be revised based on  
12 the final production and transmission costs, and rate of  
13 return, that are approved by the Commission in this case.

14

15 **IV. ELECTRIC COST OF SERVICE**

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

18 A. I believe the Base Case cost of service study  
19 presented in this case is a fair and reasonable  
20 representation of the costs to serve each customer group.  
21 The Base Case study shows Residential Service Schedule 1,  
22 Extra Large General Service Schedule 25, Pumping Service  
23 Schedule 31 and the Street and Area Lighting Schedules  
24 provide less than the overall rate of return under present

1 rates. General Service Schedule 11, Large General Service  
2 Schedule 21 and Extra Large General Service to Clearwater  
3 Paper Schedule 25P provide more than the overall rate of  
4 return under present rates.

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

7 A. An electric cost of service study is an  
8 engineering-economic study, which separates the revenue,  
9 expenses, and rate base associated with providing electric  
10 service to designated groups of customers. The groups are  
11 made up of customers with similar load characteristics and  
12 facilities requirements. Costs are assigned or allocated  
13 to each group based on (among other things), test period  
14 load and facilities requirements, resulting in an  
15 evaluation of the cost of the service provided to each  
16 group. The rate of return by customer group indicates  
17 whether the revenue provided by the customers in each group  
18 recovers the cost to serve those customers. The study  
19 results are used as a guide in determining the appropriate  
20 rate spread among the groups of customers. Exhibit No. 12,  
21 Schedule 2 explains the basic concepts involved in  
22 performing an electric cost of service study. It also  
23 details the specific methodology and assumptions utilized  
24 in the Company's Base Case cost of service study.

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

3           A.    The electric cost of service study provided by  
4 the Company as Exhibit No. 12, Schedule 3 is based on the  
5 twelve months ended June 30, 2012 test year pro forma  
6 results of operations presented by Ms. Andrews in Exhibit  
7 No. 10, Schedule 1.

8           **Q.    Would you please explain the cost of service**  
9 **study presented in Exhibit No. 12, Schedule 3?**

10          A.    Yes.   Exhibit No. 12, Schedule 3 is composed of a  
11 series of summaries of the cost of service study results.  
12 The summary on page 1 shows the results of the study by  
13 FERC account category.  The rate of return by rate schedule  
14 and the ratio of each schedule's return to the overall  
15 return are shown on Lines 39 and 40.  This summary was  
16 provided to Company witness Mr. Ehrbar for his work on rate  
17 spread and rate design.  The results will be discussed in  
18 more detail later in my testimony.

19          Pages 2 and 3 are both summaries that show the  
20 revenue-to-cost relationship at current and proposed  
21 revenue.  Costs by category are shown first at the existing  
22 schedule returns (revenue); next the costs are shown as if  
23 all schedules were providing equal recovery (cost).  These  
24 comparisons show how far current and proposed rates are



1 from rates that would be in alignment with the cost study.  
2 Page 2 shows the costs segregated into production,  
3 transmission, distribution, and common functional  
4 categories. Line 44 on page 2 shows the target change in  
5 revenue which would produce unity in this cost study. Page  
6 3 segregates the costs into demand, energy, and customer  
7 classifications. Page 4 is a summary identifying specific  
8 customer related costs embedded in the study.

9 The Excel model used to calculate the cost of service  
10 and supporting schedules has been included in its entirety  
11 both electronically and in hard copy in the workpapers  
12 accompanying this case.

13 **Q. Does the Company's electric Base Case cost of**  
14 **service study follow the methodology filed in the Company's**  
15 **last electric general rate case in Idaho?**

16 A. In most respects, yes. In the last case (Case  
17 No. AVU-E-11-01) the Company's electric Base Case cost of  
18 service study was prepared using the methodology presented  
19 in Case No. AVU-E-04-01 through Case No. AVU-E-09-01 except  
20 that the peak credit classification of production and  
21 transmission costs was revised. While a revision to the  
22 peak credit classification of production and transmission  
23 costs was also proposed in Case No. AVU-E-10-01, only the  
24 classification of transmission costs as 100% demand-related

1 was accepted as part of the settlement in that case. In  
2 this case the Company's Base Case cost of service study  
3 utilizes the study methodology accepted in the Settlement  
4 from Case No. AVU-E-10-01.<sup>9</sup>

5 **Q. Given that the specific details of this**  
6 **methodology are described in Exhibit No. 12, Schedule 2,**  
7 **would you please give a brief overview of the key elements**  
8 **and the history associated with those elements?**

9 A. Yes. Production costs are classified to energy  
10 and demand in this case using the Company's traditional  
11 peak credit assignments derived from replacement cost of  
12 plant investment. Transmission costs are classified as  
13 100% demand and allocated by the average of the 12 monthly  
14 coincident peaks, as accepted in the Settlement in Case No.  
15 AVU-E-10-01.

16 Distribution costs are classified and allocated by the  
17 basic customer theory<sup>10</sup> accepted by the Idaho Commission in  
18 Case No. WWP-E-98-11. Additional direct assignment of  
19 demand related distribution plant has been incorporated to  
20 reflect improvements accepted by the Commission in Case No.  
21 AVU-E-04-01.

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<sup>9</sup>This methodology contains only one methodological difference from the studies presented from Case Nos. AVU-E-04-01 through AVU-E-09-01. Namely, transmission costs are classified as 100% demand-related.

<sup>10</sup>Basic customer theory classifies only meters, services and street lights as customer-related plant; all other distribution facilities are considered demand-related

1 Administrative and general costs are first directly  
2 assigned to production, transmission, distribution, or  
3 customer relations functions. The remaining administrative  
4 and general costs are categorized as common costs and have  
5 been assigned to customer classes by the four-factor  
6 allocator accepted by the Idaho Commission in Case No. AVU-  
7 E-04-01.

8 **Q. The settlement in Case No. AVU-E-11-01 required**  
9 **the convening of a public workshop regarding cost of**  
10 **service issues before the next rate case. Please explain.**

11 A. In Order No. 32371 from Case No. AVU-E-11-01 and  
12 AVU-G-11-01, the Commission approved an all-party  
13 Settlement Stipulation. In Section 10 of the Settlement  
14 Stipulation, beginning on page 5 it states:

15 The Parties have agreed to exchange information  
16 and convene a public workshop, prior to the  
17 Company's next general rate case, with respect to  
18 the method of allocation of demand and energy  
19 among the customer classes such as the possible  
20 use of a revised peak credit method for  
21 classifying production costs, as well as  
22 consideration of the use of a 12 Coincident Peak  
23 (CP) (whether "weighted" or not) versus a 7 CP or  
24 other method for allocating transmission costs.

25 The workshop was convened on September 18, 2012 at the  
26 Idaho Public Utilities Commission, and was attended by the

1 key stakeholders regarding cost of service issues.<sup>11</sup> The  
2 Company's presentation from the workshop is included as  
3 Schedule 4 of Exhibit No. 12.

4 **Q. Was any consensus reached among the Parties**  
5 **regarding the alternative peak credit classification**  
6 **approach?**

7 A. No, there was not. Even though the system load  
8 factor approach to production peak credit, in the Company's  
9 view, is simple and straightforward, related to the test  
10 year under evaluation, and should provide a stable  
11 relationship over time, the Parties could not agree that it  
12 provides for a better representation of production cost-  
13 causation than the traditional peak credit methodology. In  
14 fact, certain parties suggested potentially removing  
15 certain items, such as fuel, from the system load factor  
16 methodology and classifying those costs as 100% energy  
17 related.

18 **Q. Was consensus reached among the parties as it**  
19 **relates to the demand allocation factor for transmission**  
20 **costs?**

21 A. No consensus was reached. The general sentiment  
22 among the parties on this issue, and even the peak credit

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<sup>11</sup> Parties attending the workshop included Avista, IPUC Staff, Idaho Forest Group, Clearwater Paper, Idaho Conservation League, and Community Action Partnership Association of Idaho (CAPAI).

1 issue, is that there should be stability in methodology  
2 over time, and that modifications to existing practices  
3 should be well founded. Enough changes occur in cost  
4 recovery relationships stemming from test year differences  
5 without layering on changes to how the cost elements are  
6 treated through a methodology change.

7 **Q. Did the workshop influence your decision to**  
8 **propose the traditional peak credit methodology and**  
9 **unweighted 12CP demand for transmission in this case?**

10 A. Yes it did. First, it is important to note that  
11 the Company believes that the revised peak credit  
12 methodology for classifying production costs into energy  
13 and demand components which it proposed in Case No. AVU-E-  
14 11-01 is a preferable methodology. That being said, some  
15 parties at the September 2012 workshop, and IPUC Staff in  
16 particular, believe that methodological consistency is very  
17 important, and that the Company's traditional peak credit  
18 methodology is a valid approach for production cost  
19 classification.

20 With that in mind, as well as to potentially limit the  
21 number of issues in this case, Avista is presenting the  
22 prior traditional peak credit methodology in the cost of  
23 service study. This methodology includes using 12 CP for  
24 allocating transmission costs instead of a weighted 12 CP

1 as proposed in the last case. The Company, however, is  
 2 proposing to continue to employ the recent change to  
 3 classify transmission costs as 100% demand-related.

4 **Q. What are the results of the Company's electric**  
 5 **cost of service study presented in this case?**

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

10 **Illustration 1**

<u>Customer Class</u>	<u>Rate of Return</u>	<u>Return Ratio</u>
Residential Service Schedule 1	5.74%	0.78
General Service Schedule 11/12	10.26%	1.40
Large General Service Schedule 21/22	8.40%	1.15
Extra Large General Service Schedule 25	7.10%	0.97
Extra Large General Service Clearwater Paper Schedule 25P	8.75%	1.20
Pumping Service Schedule 31/32	6.92%	0.95
Lighting Service Schedules 41 - 49	<u>5.51%</u>	<u>0.75</u>
Total Idaho Electric System	<u>7.32%</u>	<u>1.00</u>

11 As can be observed from the above table, residential,  
 12 extra large general service, pumping service and lighting  
 13 service schedules (1, 25, 31 and 41-49) show under-recovery  
 14 of the costs to serve them. The general service, large  
 15 general service, and extra large Clearwater Paper schedules  
 16 (11, 21, 25P) show over-recovery of the costs to serve

1 them. The summary results of this study were provided to  
2 Mr. Ehrbar as an input into development of the proposed  
3 electric rates.

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**V. NATURAL GAS COST OF SERVICE**

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

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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 group's test year load and facilities requirements, 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 one of the key inputs in determining the appropriate rate spread among the groups of customers. Exhibit No. 12, Schedule 5 explains the basic concepts involved in performing a natural gas cost of service study. It also details the specific methodology

1 and assumptions utilized in the Company's Base Case cost of  
2 service study.

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

5 A. The cost of service study provided by the Company  
6 as Exhibit 12, Schedule 6 is based on the twelve months  
7 ended June 2012 test year pro forma results of operations  
8 presented by Ms. Andrews in Exhibit 10, Schedule 2.

9 **Q. Would you please explain the natural gas cost of**  
10 **service study presented in Schedule 6?**

11 A. Yes. Exhibit 12, Schedule 6 is composed of a  
12 series of summaries of the cost of service study results.  
13 Page 1 shows the results of the study by FERC account  
14 category. The rate of return, and the ratio of each  
15 schedule's return to the overall return, are shown on lines  
16 38 and 39. This summary is provided to Mr. Ehrbar for his  
17 work on rate spread and rate design, and the results will  
18 be presented later in my testimony. Additional summaries  
19 show the costs organized by functional category (page 2)  
20 and classification (page 3), including margin and unit cost  
21 analysis at current and proposed rates. Finally, page 4 is  
22 a summary identifying specific customer related costs  
23 embedded in the study.



1           The Excel model used to calculate the natural gas cost  
2 of service and supporting schedules has been included in  
3 its entirety both electronically and hard copy in the  
4 natural gas workpapers accompanying this case.

5           **Q. Does the Natural Gas Base Case cost of service**  
6 **study utilize the methodology from the Company's last**  
7 **natural gas case in Idaho?**

8           A. Yes. The Base Case cost of service study was  
9 prepared using the methodology accepted by the Idaho  
10 Commission in Case No. AVU-G-04-01, and presented in AVU-G-  
11 08-01, AVU-G-09-01, AVU-G-10-01 and AVU-G-11-01.

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

14           A. Allocations of natural gas costs reflect the  
15 current Purchased Gas Adjustment methodology. Underground  
16 storage costs are allocated by normalized winter  
17 throughput.

18           Natural gas main investment has been segregated into  
19 large and small mains. Large usage customers that take  
20 service from large mains do not receive an allocation of  
21 small mains. Meter installation and services investment is  
22 allocated by number of customers weighted by the relative  
23 current cost of those items. System facilities that serve  
24 all customers are classified by the peak and average ratio

1 that reflects the system load factor, then allocated by  
2 coincident peak demand and throughput, respectively.

3 General plant is allocated by the sum of all other  
4 plant. Administrative & general expenses are segregated  
5 into labor-related, plant-related, revenue-related, and  
6 "other". The costs are then allocated by factors  
7 associated with labor, plant in service, or revenue,  
8 respectively. The "other" A&G amounts get a combined  
9 allocation that is one-half based on O&M expenses and one-  
10 half based on throughput. A detailed description of the  
11 methodology is included in Exhibit 12, Schedule 5.

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

14 A. I believe the Base Case cost of service study  
15 presented in this filing is a fair and reasonable  
16 representation of the costs to serve each customer group.  
17 The study indicates that General Service (primarily  
18 residential) Schedule 101, Interruptible Service Schedules  
19 131/132 and Transportation Service Schedule 146 are  
20 providing less than the overall return (unity), and Large  
21 General Service Schedules 111/112 are providing more than  
22 unity.

1           The following Illustration shows the rate of return  
2 and the relative return ratio at present rates for each  
3 rate schedule:

4           **Illustration 2**

<u>Customer Class</u>	<u>Rate of Return</u>	<u>Return Ratio</u>
General Firm Service Schedule 101	5.40%	0.92
Large Firm Service Schedule 111/112	7.98%	1.37
Interruptible Service Schedule 131/132	5.35%	0.92
Transportation Service Schedule 146	<u>4.69%</u>	<u>0.80</u>
Total Idaho Natural Gas System	<u>5.84%</u>	<u>1.00</u>

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

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

9           A. Yes, it does.

DAVID J. MEYER  
VICE PRESIDENT AND CHIEF COUNSEL FOR  
REGULATORY & GOVERNMENTAL AFFAIRS  
AVISTA CORPORATION  
P.O. BOX 3727  
1411 EAST MISSION AVENUE  
SPOKANE, WASHINGTON 99220-3727  
TELEPHONE: (509) 495-4316  
FACSIMILE: (509) 495-8851  
DAVID.MEYER@AVISTACORP.COM

**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

IN THE MATTER OF THE APPLICATION )	CASE NO. AVU-E-12-08
OF AVISTA CORPORATION FOR THE )	CASE NO. AVU-G-12-07
AUTHORITY TO INCREASE ITS RATES )	
AND CHARGES FOR ELECTRIC AND )	
NATURAL GAS SERVICE TO ELECTRIC )	EXHIBIT NO. 12
AND NATURAL GAS CUSTOMERS IN THE )	
STATE OF IDAHO )	TARA L. KNOX
_____ )	

FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

**AVISTA UTILITIES**

AVERAGE PRODUCTION AND TRANSMISSION COST  
IDAHO ELECTRIC  
TWELVE MONTHS ENDED JUNE 30, 2012

Line	Column	Description of Adjustment	(000's)	Production / Transmission					
				Revenue	Expense	Plant	Accumulated Depreciation	Deferred Debits/Credits	Deferred Tax
1	1.00	Per Results Report		101,316	226,548	585,254	(213,725)	1,765	(61,642)
2	1.01	Deferred FIT Rate Base		-	-	-	-	-	(285)
3	1.02	Deferred Debits and Credits		-	(64)	-	-	(414)	-
4	1.03	Working Capital		-	-	-	-	-	-
5	1.04	Restate 2011 Capital		-	236	9,873	(4,733)	-	(835)
6	2.01	Eliminate B & O Taxes		-	-	-	-	-	-
7	2.02	Uncollect. Expense		-	-	-	-	-	-
8	2.03	Regulatory Expense		-	-	-	-	-	-
9	2.04	Injuries and Damages		-	-	-	-	-	-
10	2.05	FIT/DFIT/ ITC/PTC Expense		-	-	-	-	-	-
11	2.06	ID PCA		-	(9,871)	-	-	-	-
12	2.07	Nez Perce Settlement Adjustment		-	(18)	-	-	-	-
13	2.08	CS2 Levelized		-	235	-	-	-	-
14	2.09	Revenue Normalization		-	9,635	-	-	-	-
15	2.10	Misc Restating		-	-	-	-	-	-
16	2.11	Restate Incentives		-	-	-	-	-	-
17	2.12	Colstrip / CS2 Maintenance		-	1,339	-	-	-	-
18	2.13	Restate Debt Interest		-	-	-	-	-	-
19	3.01	Pro Forma Power Supply		(73,823)	(76,210)	-	-	-	-
20	3.02	Pro Forma Transmission Rev/Exp		371	3	-	-	-	-
21	3.03	Pro Forma Labor Non-Exec		-	290	-	-	-	-
22	3.04	Pro Forma Generation Major O&M		-	921	-	-	-	-
23	3.05	Pro Forma Employee Benefits		-	353	-	-	-	-
24	3.06	Pro Forma Insurance		-	-	-	-	-	-
25	3.07	Pro Forma Property Tax		-	380	-	-	-	-
26	3.08	Pro Forma IS/IT Costs		-	80	-	-	-	-
27	3.09	Planned Capital Add 2012		-	534	23,728	(13,617)	-	(1,765)
28	3.10	Planned Capital Add 2013 AMA		-	128	6,735	(6,162)	-	(661)
29	3.11	PF Energy Efficiency Load Adj.		-	(976)	-	-	-	-
30	3.12	O&M Offsets		-	(35)	-	-	-	-
31	3.13	Depreciation Study		-	(1,780)	-	-	-	-
32	Pro Forma Total			27,864	151,728	625,590	(238,237)	1,351	(65,188)

**AVISTA UTILITIES**

AVERAGE PRODUCTION AND TRANSMISSION COST  
IDAHO ELECTRIC  
TWELVE MONTHS ENDED JUNE 30, 2012

Proposed Production and Transmission Revenue Requirement

Calculation of Load Change Adjustment Rate

Line			(\$000's)	Debt Cost
1	Prod/Trans	Pro Forma Rate Base	323,516	
2	Cost of Capital	Proposed Rate of Return	<u>8.460%</u>	3.01%
3	Rate Base	Net Operating Income Requirement	\$27,369	
4	Tax Effect	Net Operating Income Requirement (Rate Base x Debt Cost x -35%)	(\$3,408)	
5	Net Expense	Net Operating Income Requirement (Expense - Revenue)	123,864	
6	Tax Effect	Net Operating Income Requirement (Net Expense x -.35%)	(\$43,352)	
7	Total Prod/Trans	Net Operating Income Requirement	\$104,473	
8	1 - Tax Rate	Conversion Factor (Excl. Rev. Rel. Exp.)	0.65	
9	Prod/Trans	Revenue Requirement	<b>\$160,727</b>	
10	Test Year WA Normalized Retail Load	MWh	3,364,879	with EELA Billing Determinant Adjustment
11	Prod/Trans Rev Requirement	per kWh	\$ 0.04777	
12	Cost of Service Energy Classified Production/Transmission	Costs	\$94,413	Company Case at Unity AVU-E-12-08
13	Cost of Service Total Production/Transmission	Costs	\$162,919	Company Case at Unity AVU-E-12-08
14	Load Change Adjustment Rate per kWh	(Line 11 * Line 12 / Line 13)	<b>\$ 0.02768</b>	

## 1. ELECTRIC COST OF SERVICE

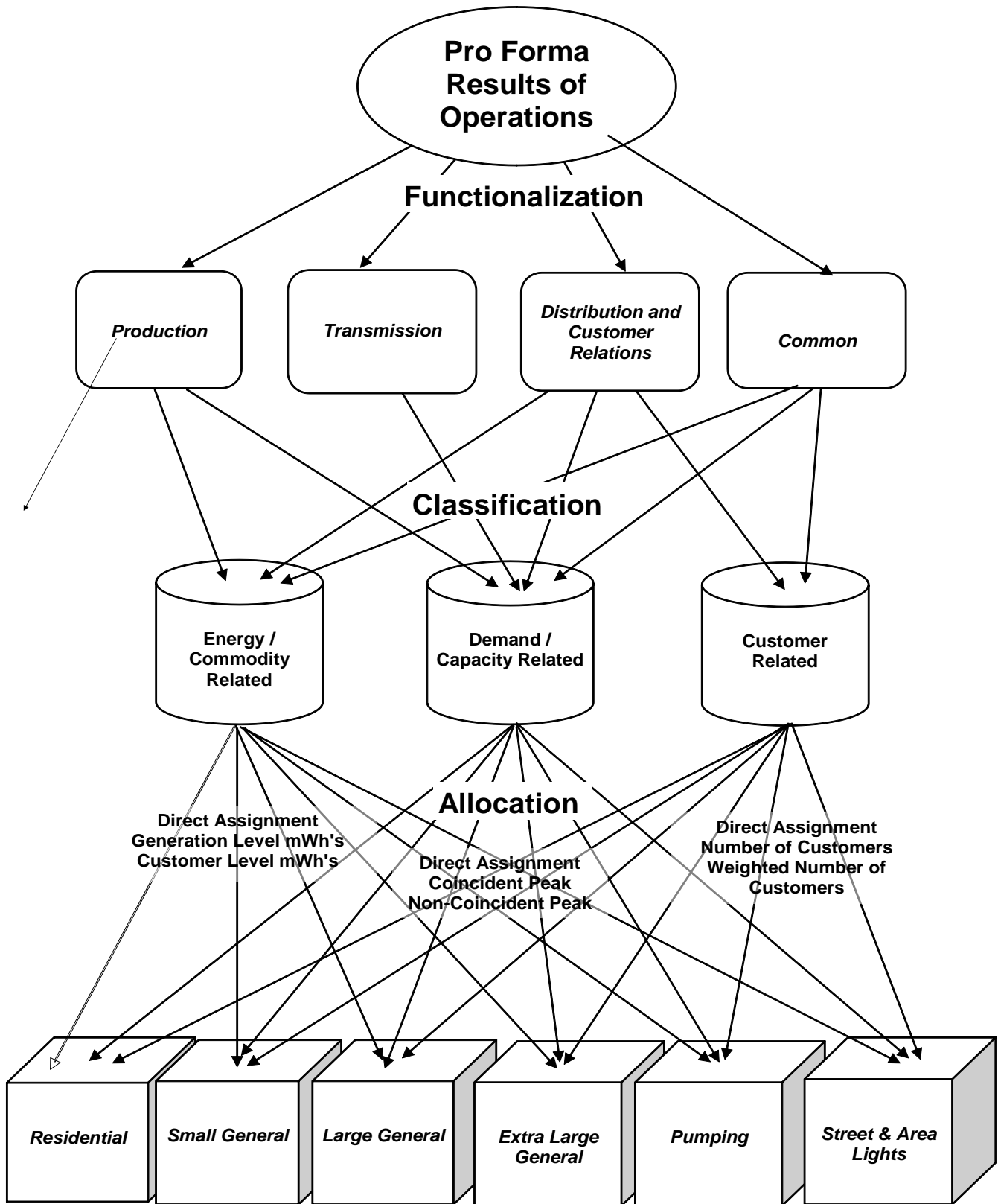
A cost of service study is an engineering-economic study, which apportions the revenue, expenses, and rate base associated with providing electric service to designated groups of customers. It indicates whether the revenue provided by customers recovers the cost to serve those customers. The study results are used as a guide in determining the appropriate rate spread among the groups of customers.

There are three basic steps involved in a cost of service study: functionalization, classification, and allocation. See flow chart below.

First, the expenses and rate base associated with the electric system under study are assigned to functional categories. The uniform system of accounts provides the basic segregation into production, transmission, and distribution. Traditionally customer accounting, customer information, and sales expenses are included in the distribution function, and administrative and general expenses and general plant rate base are allocated to all functions. This study includes a separate functional category for common costs. Administrative and general costs that cannot be directly assigned to the other functions have been placed in this category.

Second, the expenses and rate base items that cannot be directly assigned to customer groups are classified into three primary cost components: energy, demand or customer related. Energy related costs are allocated based on each rate schedule's share of commodity consumption. Demand (capacity) related costs are allocated to rate schedules on the basis of each schedule's contribution to peak demand. Customer related items are allocated to rate schedules based on the number of customers within each schedule. The number of customers may be weighted by appropriate factors such as relative cost of metering equipment. In addition to these three cost components, any revenue related expense is allocated based on the proportion of revenues by rate schedule.

# ELECTRIC COST OF SERVICE STUDY FLOWCHART



## ***Pro Forma Results of Operations by Customer Group***<sup>1</sup>

<sup>1</sup> Customer classes shown in this flowchart are illustrative and may not match the Company's actual rate schedules.



1 The final step is allocation of the costs to the various rate schedules utilizing the allocation  
2 factors selected for each specific cost item. These factors are derived from usage and customer  
3 information associated with the test period results of operations.

4 **BASE CASE COST OF SERVICE STUDY**

5 **Production Classification (Traditional Peak Credit)**

6 This study utilizes a Peak Credit methodology to classify production costs into demand and  
7 energy classifications. The Peak Credit method acknowledges that baseload production facilities  
8 provide energy throughout the year as well as capacity during system peaks. The demand/energy  
9 ratio is determined by the relationship of the current replacement cost per KW generating capacity  
10 of the Company's peaking units to the current replacement cost per KW generating capacity of the  
11 Company's thermal or hydro plant. The peak credit ratio for thermal plant is 42.00% to demand  
12 and 58.00% to energy. The peak credit ratio for hydro plant is 41.83% to demand and 58.17% to  
13 energy. As an intermediate resource (between peaking and baseload), Coyote Springs II has been  
14 included with the thermal plant costs, whereas all other plants in the 340 to 349 FERC plant  
15 accounts are considered peaking units. Fuel and load dispatching expenses are classified entirely  
16 to energy. Peaking plant related costs are classified entirely to demand. Purchased Power and  
17 Other Power Supply expenses are classified to demand and energy by the relative amounts of  
18 assigned and allocated Production Plant in Service.

19 **Production Allocation**

20 Production demand related costs are allocated to the customer classes by class contribution  
21 to the average of the twelve monthly system coincident peak loads. Although the Company is  
22 usually technically a winter peaking utility, it experiences high summer peaks and careful  
23 management of capacity requirements is required throughout the year. The use of the average of  
24 twelve monthly peaks recognizes that customer capacity needs are not limited to the heating

1 season. Energy related costs are allocated to class by pro forma annual kilowatt-hour sales  
2 adjusted for losses to reflect generation level consumption.

### 3 **Transmission Classification and Allocation**

4 Transmission costs are classified as 100% demand related due in part to the fact that the  
5 facilities are designed for meeting system peak loads. These costs are then allocated to the  
6 customer classes by class contribution to the average of the twelve monthly system coincident peak  
7 loads (12CP). The use of the average of twelve monthly peaks recognizes that customer capacity  
8 needs are not limited to the heating season.

### 9 **Distribution Facilities Classification (Basic Customer)**

10 The Basic Customer method considers only services and meters and directly assigned  
11 Street Lighting apparatus (FERC Accounts 369, 370, and 373 respectively) to be customer related  
12 distribution plant. All other distribution plant is then considered demand related. This division  
13 delineates plant which benefits an individual customer from plant which is part of the system. The  
14 basic customer method provides a reasonable, clearly definable division between plant that  
15 provides service only to individual customers from plant that is part of the interconnected  
16 distribution network.

### 17 **Customer Relations Distribution Cost Classification**

18 Customer service, customer information and sales expenses are the core of the customer  
19 relations functional unit which is included with the distribution cost category. For the most part  
20 they are classified as customer related. Exceptions are sales expenses which are classified as  
21 energy related and uncollectible accounts expense which is considered separately as a revenue  
22 conversion item. Demand Side Management expenses (if any) recorded in Account 908 would be  
23 considered separately from the other customer information costs.

1 Any demand side management investment and amortization included in base rates would  
2 be classified implicitly to demand and energy by the sum of production plant in service, then  
3 allocated to rate schedules by coincident peak demand and energy consumption respectively. At  
4 this point in time, the Company's demand side management investments in base rates have been  
5 fully amortized except for some minor outstanding loan balances that will remain on the books  
6 until satisfied. All current demand side management costs are managed through the Schedule 91  
7 Public Purpose Tariff Rider balancing account which is not included in this cost study.

### 8 **Distribution Cost Allocation**

9 Distribution demand related costs which cannot be directly assigned are allocated to  
10 customer class by the average of the twelve monthly non-coincident peaks for each class.  
11 Distribution facilities that serve only secondary voltage customers are allocated by the non-  
12 coincident peak excluding primary voltage customers or number of customers excluding primary  
13 voltage customers. This includes line transformers, services, and secondary voltage overhead or  
14 underground conductors and devices. The costs of specific substations and related primary voltage  
15 distribution facilities are directly assigned to Extra Large General Service customers based on their  
16 load ratio share of the substation capacity from which they receive service.

17 Most customer costs are allocated by average number of customers. Weighted customer  
18 allocators have been developed using typical current cost of meters, estimated meter reading time,  
19 and direct assignment of billing costs for hand-billed customers. Street and area light customers  
20 are excluded from metering and meter reading expenses as their service is not metered.

### 21 **Administrative and General Costs**

22 Administrative and general costs which are directly associated with production,  
23 transmission, distribution, or customer relations functions are directly assigned to those functions  
24 and allocated to customer class by the relevant plant or number of customers. The remainder of

1 administrative and general costs are considered common costs, and have been left in their own  
2 functional category. These common costs are classified by the implicit relationship of energy,  
3 demand and customer within the four-factor allocator applied to them. The four-factor allocator  
4 consists of a 25% weighting of each of the following: 1) operating & maintenance expenses  
5 excluding resource costs, labor expenses, and administrative and general expenses; 2) operating  
6 and maintenance labor expenses excluding administrative and general labor expenses; 3) net  
7 production, transmission, and distribution plant; and 4) number of customers.

### 8 **Revenue Conversion Items**

9 In this study uncollectible accounts and commission fees have been classified as revenue  
10 related and are allocated by pro forma revenue. These items vary with revenue and are included in  
11 the calculation of the revenue conversion factor. Income tax expense items are allocated to  
12 schedules by net income before income tax adjusted by interest expense.

13 For the functional summaries on pages 2 and 3 of the cost of service study, these items are  
14 assigned to component cost categories. The revenue related expense items have been reduced to a  
15 percent of all other costs and loaded onto each cost category by that ratio. Similarly, income tax  
16 items have been reduced to a percent of net income before tax then assigned to cost categories by  
17 relative rate base (as is net income).

18 The following matrix outlines the methodology applied in the Company Base Case cost of  
19 service study.

IPUC Case No. AVU-E-12-08 Methodology Matrix  
 Avista Utilities Idaho Jurisdiction  
 Electric Cost of Service Methodology

Line	Account	Functional Category	Classification	Allocation
<b>Production Plant</b>				
1	Thermal Production	P = Production	Demand/Energy by Thermal Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
2	Hydro Production	P = Production	Demand/Energy by Hydro Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
3	Other Production (Coyote Springs)	P = Production	Demand/Energy by Thermal Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
4	Other Production	P = Production	Demand	D01 Coincident Peak Demand (12CP)
<b>Transmission Plan</b>				
5	All Transmission	T = Transmission	Demand	D01 Coincident Peak Demand (12CP)
<b>Distribution Plan</b>				
6	360 Land	D = Distribution	Demand	D03 Non-coincident Peak Demand (NCP)
7	361 Structures	D = Distribution	Demand	D04/D05/D06 Direct Assign Large / Non-coincident Peak Demand Excl DA
8	362 Station Equipment	D = Distribution	Demand	D04/D05/D06 Direct Assign Large / Non-coincident Peak Demand Excl DA
9	364 Poles Towers & Fixtures	D = Distribution	Demand	D04/D05/D07/D08 Direct Assign Large & Lights / NCP Excl DA / NCP Secondary
10	365 Overhead Conductors & Devices	D = Distribution	Demand	D04/D05/D07 Direct Assign Large / NCP Excl DA / NCP Secondary
11	366 Underground Conduit	D = Distribution	Demand	D04/D05/D07 Direct Assign Large / NCP Excl DA / NCP Secondary
12	367 Underground Conductors & Devices	D = Distribution	Demand	D04/D05/D07 Direct Assign Large / NCP Excl DA / NCP Secondary
13	368 Line Transformers	D = Distribution	Demand	D07 Non-coincident Peak Demand Secondary
14	369 Services	D = Distribution	Customer	C02 Secondary Customers unweighted Excl Lighting
15	370 Meters	D = Distribution	Customer	C04 Customers weighted by Current Typical Meter Cost
16	373 Street and Area Lighting Systems	D = Distribution	Customer	C05 Direct Assignment to Street and Area Lights
<b>General Plant</b>				
17	All General	O=Other	Demand/Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
<b>Intangible Plant</b>				
18	301 Organization	O=Other	Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
19	302 Franchises & Consents - Hydro Relicensing	P = Production	Demand/Energy by Hydro Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
20	303 Misc Intangible Plant - Transmission Agreements	T = Transmission	Demand	D01 Coincident Peak Demand (12CP)
21	303 Misc Intangible Plant - Software	O=Other	Demand/Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
<b>Reserve for Depreciation/Amortizatio</b>				
22	Intangible	P/T/O	Follows Related Plant	S01/S02/S23 Sum of Production Plant / Sum of Transmission Plant / Corp Cost Allocator
23	Production	P = Production	Follows Related Plant	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
24	Transmission	T = Transmission	Follows Related Plant	D01 Coincident Peak Demand (12CP)
25	Distribution	D = Distribution	Follows Related Plant	D03/D04/D05/D06/D07/D08/C02/C04/C05 - See Related Plant
26	General	O=Other	Demand/Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
<b>Other Rate Base</b>				
27	252 Customer Advances for Construction	D = Distribution	Customer	S13 Sum of Account 369 Services Plant
28	282/190 Accumulated Deferred Income Tax	P/T/D/O	Follows Related Plant	S01/S02/S03/S04 Sums of Production / Transmission / Distribution / General Plant
29	Gain on Sale of General Office Building	O=Other	Demand/Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
30	Hydro Relicensing Related Settlements	P = Production	Demand/Energy by Hydro Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
31	Demand Side Management Investment	DSM	Demand/Energy from Production Plant	S01 Sum of Production Plant
32	Working Capital	P/T/D/G	Demand/Energy/Customer as in related Plant	S06 Sum of Production, Transmission, Distribution, and General Plant
<b>Production O&amp;M</b>				
33	Thermal	P = Production	Demand/Energy by Thermal Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
34	Thermal Fuel (501)	P = Production	Energy	E02 Annual Generation Level Consumption
35	Hydro	P = Production	Demand/Energy by Hydro Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption

IPUC Case No. AVU-E-12-08 Methodology Matrix  
 Avista Utilities Idaho Jurisdiction  
 Electric Cost of Service Methodology

Line	Account	Functional Category	Classification	Allocation
<b>Production O&amp;M (continued)</b>				
1	Water for Power (536)	P = Production	Energy	E02 Annual Generation Level Consumption
2	Other (Coyote Springs)	P = Production	Demand/Energy by Thermal Peak Credit	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
3	Other Fuel (547)	P = Production	Energy	E02 Annual Generation Level Consumption
4	Other	P = Production	Demand	D01 Coincident Peak Demand (12CP)
5	Purchased Power and Other Expenses (555 and 557)	P = Production	Demand/Energy from Production Plant	S01 Sum of Production Plant
6	System Control & Misc (556)	P = Production	Energy	E02 Annual Generation Level Consumption
<b>Transmission O&amp;M</b>				
7	All Transmission	T = Transmission	Demand	D01 Coincident Peak Demand (12CP)
<b>Distribution O&amp;M</b>				
8	580 OP Super & Engineering	D = Distribution	Demand/Customer from Other Dist Op Exp	S16 Sum of Other Distribution Operating Expenses
9	581 Load Dispatching	D = Distribution	Demand	D03 Non-coincident Peak Demand
10	582 Station Expenses	D = Distribution	Demand	S09 Sum of Account 362 Station Equipment
11	583 Overhead Lines	D = Distribution	Demand	S10 Sum of Accounts 364 and 365 Poles, Towers, Fixtures & Overhead Conductors
12	584 Underground Lines	D = Distribution	Demand	S11 Sum of Accounts 366 and 367 Underground Conduit & Underground Conductors
13	585 Street Lights	D = Distribution	Customer	S15 Sum of Account 373 Street Light and Signal Systems
14	586 Meters	D = Distribution	Customer	S14 Sum of Account 370 Meters
15	587 Customer Installations	D = Distribution	Customer	S13 Sum of Account 369 Services
16	588 Misc Operating Expense	D = Distribution	Demand/Customer from Other Dist Op Exp	S16 Sum of Other Distribution Operating Expenses
17	589 Rents	D = Distribution	Demand	D03 Non-coincident Peak Demand
18	590 MT Super & Engineering	D = Distribution	Demand/Customer from Other Dist Mt Exp	S17 Sum of Other Distribution Maintenance Expenses
19	591 MT of Structures	D = Distribution	Demand	S08 Sum of Account 361 Structures & Improvements
20	592 MT of Station Equipment	D = Distribution	Demand	S09 Sum of Account 362 Station Equipment
21	593 MT of Overhead Lines	D = Distribution	Demand	S10 Sum of Accounts 364 and 365 Poles, Towers, Fixtures & Overhead Conductors
22	594 MT of Underground Lines	D = Distribution	Demand	S11 Sum of Accounts 366 and 367 Underground Conduit & Underground Conductors
23	595 MT of Line Transformers	D = Distribution	Demand	S12 Sum of Account 368 Line Transformers
24	596 MT of Street Lights	D = Distribution	Customer	S15 Sum of Account 373 Street Light and Signal Systems
25	597 MT of Meters	D = Distribution	Customer	S14 Sum of Account 370 Meters
26	598 Misc Maintenance Expense	D = Distribution	Demand/Customer from Other Dist Mt Exp	S17 Sum of Other Distribution Maintenance Expenses
<b>Customer Accounts Expense:</b>				
27	901 Supervision	C = Customer Relations	Customer	S18 Sum of Other Customer Accounts Expenses Excluding Uncollectibles
28	902 Meter Reading	C = Customer Relations	Customer	C03/C06 Customers Weighted by Est. Meter Reading Time/Direct Assign Handbilled Cust
29	903 Customer Records & Collections	C = Customer Relations	Customer	C01/C06 All Customers unweighted / Direct Assign Handbilled Cust
30	904 Uncollectible Accounts	R = Revenue Conversion	Revenue	R01 Retail Sales Revenue
31	905 Misc Cust Accounts	C = Customer Relations	Customer	C01 All Customers unweighted
<b>Customer Service &amp; Info Expense:</b>				
32	907 Supervision	C = Customer Relations	Customer	C01 All Customers unweighted
33	908 Customer Assistance	C = Customer Relations	Customer	C01 All Customers unweighted
34	908 DSM Amortization Expenses	DSM	Demand/Energy from Production Plant	S01 Sum of Production Plant
35	909 Advertising	C = Customer Relations	Customer	C01 All Customers unweighted
36	910 Misc Cust Service & Info	C = Customer Relations	Customer	C01 All Customers unweighted
<b>Sales Expenses</b>				
37	911 - 916	C = Customer Relations	Energy	E02 Annual Generation Level Consumption

IPUC Case No. AVU-E-12-08 Methodology Matrix  
 Avista Utilities Idaho Jurisdiction  
 Electric Cost of Service Methodology

Line	Account	Functional Category	Classification	Allocation
<b>Admin &amp; General Expenses</b>				
1	920 - 927 & 930 -935 Assigned to Production	P = Production	Demand/Energy from Production Plant	S01 Sum of Production Plant
2	920 - 927 & 930 -935 Assigned to Transmission	T = Transmission	Demand/Energy from Transmission Plant	S02 Sum of Transmission Plant
3	920 - 927 & 930 - 935 Assigned to Distribution	D = Distribution	Demand/Customer from Distribution Plant	S03 Sum of Distribution Plant
4	920 - 927 & 930 - 935 Assigned to Customer Relations	C = Customer Relations	Customer	C01 All Customers unweighted
5	920 - 935 Assigned to Other	O=Other	Demand/Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
6	928 FERC Commission Fees	P = Production	Energy	E02 Annual Generation Level Consumption
7	928 IPUC Commission Fees	R = Revenue Conversion	Revenue	R01 Retail Sales Revenue
<b>Depreciation &amp; Amortization Expens</b>				
8	Intangible	P/T/O	Demand/Energy/Customer as in related Plant	S01/S02/S23 Sum of Production Plant / Sum of Transmission Plant / Corp Cost Allocator
9	Production	P = Production	Demand/Energy by Peak Credit as in related Plant	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
10	Transmission	T = Transmission	Demand	D01 Coincident Peak Demand (12CP)
11	Distribution	D = Distribution	Demand/Customer as in related Plant	D03/D04/D05/D06/D07/D08/C02/C04/C05 - See Related Plant
12	General	O=Other	Demand/Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers
<b>Taxes</b>				
13	Property Tax	P/T/D/O	Demand/Energy/Customer from related Plant	S01/S02/S03/S04 Sums of Production / Transmission / Distribution / General Plant
14	State kWh Generation Taxes	P = Production	Demand/Energy by 1/2 Fuel, 1/2 Transmission	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
15	Misc Production Taxes	P = Production	Demand/Energy by 1/2 Fuel, 1/2 Transmission	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
16	Misc Distribution Taxes	D = Distribution	Demand/Customer from Distribution Plant	S03 Sum of Distribution Plant
17	Idaho State Income Tax	R = Revenue Conversion	Revenue	R03 Revenue less Expenses Before Income Taxes less Interest Expense
18	Federal Income Tax	R = Revenue Conversion	Revenue	R03 Revenue less Expenses Before Income Taxes less Interest Expense
19	Deferred FIT	R = Revenue Conversion	Revenue	R03 Revenue less Expenses Before Income Taxes less Interest Expense
<b>Other Income Related Item:</b>				
20	CS2 Levelized Return and Boulder Write-off Amort.	P = Production	Demand/Energy by Peak Credit as in related Plant	D01/E02 Coincident Peak Demand/Annual Generation Level Consumption
<b>Operating Revenues</b>				
21	Sales of Electricity- Retail	R = Revenue from Rates	Revenue	Input Pro Forma Revenue per Revenue Study
22	Sales for Resale (447)	P = Production	Demand/Energy from Production Plant	S01 Sum of Production Plant
23	Misc Service Revenue (451)	D = Distribution	Demand/Customer from Distribution Plant	S03 Sum of Distribution Plant
24	Sales of Water & Water Power (453)	P = Production	Demand	D01 Coincident Peak Demand (12CP)
25	Rent from Production Property (454)	P = Production	Demand/Energy from Production Plant	S01 Sum of Production Plant
26	Rent from Transmission Property (454)	T = Transmission	Demand/Energy from Transmission Plant	S02 Sum of Transmission Plant
27	Rent from Distribution Property (454)	D = Distribution	Demand/Customer from Distribution Plant	S03 Sum of Distribution Plant
28	Other Electric Revenues - Generation (456)	P = Production	Demand/Energy from Production Plant	S01 Sum of Production Plant
29	Other Electric Revenues - Wheeling (456)	T = Transmission	Demand/Energy from Transmission Plant	S02 Sum of Transmission Plant
30	Other Electric Revenues - Energy Delivery (456)	D = Distribution	Demand/Customer from Distribution Plant	S03 Sum of Distribution Plant
<b>Salaries &amp; Wages (allocation factor input</b>				
Operation & Maintenance Expenses				
31	Production Total	P = Production	Demand/Energy from Production Plant	S01 Sum of Production Plant
32	Transmission Total	T = Transmission	Demand/Energy from Transmission Plant	S02 Sum of Transmission Plant
33	Distribution Total	D = Distribution	Demand/Customer from Distribution Plant	S03 Sum of Distribution Plant
34	Customer Accounts Total	C = Customer Relations	Customer	S18 Sum of Other Customer Accounts Expenses Excluding Uncollectibles
35	Customer Service Total	C = Customer Relations	Customer	C01 All Customers unweighted
36	Sales Total	C = Customer Relations	Energy	E02 Annual Generation Level Consumption
37	Admin & General Total	O=Other	Energy/Customer by Corp Cost Allocator	S23 25% direct O&M, 25% direct labor, 25% net direct plant, 25% number of customers

Sumcost  
Scenario: AVU-E-12-08 Company Case  
AVU-E-10-01 Settlement Method  
Transmission By Demand 12 CP

AVISTA UTILITIES  
Cost of Service Basic Summary  
For the Twelve Months Ended June 30, 2012

Idaho Jurisdiction  
Electric Utility  
10-10-12

	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Description	System Total	Residential Service Sch 1	General Service Sch 11-12	Large Gen Service Sch 21-22	Extra Large Gen Service Sch 25	Extra Large Service CP Sch 25P	Pumping Service Sch 31-32	Street & Area Lights Sch 41-49				
1 Plant In Service												
1 Production Plant	402,565,000	149,638,011	40,682,236	80,301,297	34,458,283	89,941,661	6,239,766	1,303,746				
2 Transmission Plant	193,225,000	78,729,256	19,788,854	37,732,611	15,884,481	37,989,699	2,676,142	423,958				
3 Distribution Plant	449,614,000	225,605,267	64,270,329	110,145,165	9,287,020	2,737,865	15,430,461	22,137,894				
4 Intangible Plant	54,867,000	23,810,109	6,166,529	9,958,073	3,823,947	9,725,364	922,792	460,186				
5 General Plant	88,487,000	48,015,959	11,628,726	13,352,814	3,786,351	8,559,695	1,659,918	1,483,536				
6 Total Plant In Service	1,188,758,000	525,798,603	142,536,673	251,489,960	67,240,083	148,954,284	26,929,078	25,809,319				
7 Accum Depreciation												
7 Production Plant	(174,598,000)	(64,910,989)	(17,644,862)	(34,826,500)	(14,943,998)	(39,000,750)	(2,705,768)	(565,134)				
8 Transmission Plant	(66,055,000)	(26,914,017)	(6,764,925)	(12,899,095)	(5,430,195)	(12,986,982)	(914,853)	(144,932)				
9 Distribution Plant	(151,682,000)	(75,312,738)	(20,623,837)	(37,302,715)	(2,961,053)	(731,153)	(5,147,372)	(9,603,132)				
10 Intangible Plant	(11,443,000)	(5,817,267)	(1,434,259)	(1,838,075)	(587,737)	(1,397,545)	(207,226)	(160,891)				
11 General Plant	(34,403,000)	(18,668,200)	(4,521,151)	(5,191,462)	(1,472,101)	(3,327,937)	(645,362)	(576,786)				
12 Total Accumulated Depreciation	(438,181,000)	(191,623,212)	(50,989,034)	(92,057,846)	(25,395,084)	(57,444,367)	(9,620,582)	(11,050,875)				
13 Net Plant	750,577,000	334,175,391	91,547,639	159,432,113	41,844,999	91,509,917	17,308,496	14,758,444				
14 Accumulated Deferred FIT	(119,554,000)	(52,622,048)	(14,256,245)	(25,204,201)	(6,885,548)	(15,403,257)	(2,673,478)	(2,509,223)				
15 Miscellaneous Rate Base	8,007,000	3,223,674	914,043	1,813,323	519,015	1,185,858	181,919	169,167				
16 Total Rate Base	639,030,000	284,777,017	78,205,437	136,041,236	35,478,467	77,292,518	14,816,938	12,418,388				
17 Revenue From Retail Rates	248,720,000	99,497,000	32,432,000	51,400,000	16,036,000	41,091,000	4,859,000	3,405,000				
18 Other Operating Revenues	29,727,000	11,482,225	3,089,386	5,992,225	2,405,525	6,094,169	487,054	176,415				
19 Total Revenues	278,447,000	110,979,225	35,521,386	57,392,225	18,441,525	47,185,169	5,346,054	3,581,415				
20 Operating Expenses												
20 Production Expenses	121,242,000	43,633,193	12,198,017	24,352,993	10,513,928	28,163,848	1,945,460	434,561				
21 Transmission Expenses	10,671,000	4,347,884	1,092,855	2,083,813	877,233	2,098,011	147,792	23,413				
22 Distribution Expenses	11,311,000	5,419,369	1,684,669	2,570,085	255,627	97,643	373,434	910,172				
23 Customer Accounting Expenses	4,343,000	3,248,473	675,400	175,647	64,162	113,336	53,439	12,544				
24 Customer Information Expenses	601,000	490,809	96,818	6,057	44	5	6,640	626				
25 Sales Expenses	4,000	1,357	399	813	355	991	68	17				
26 Admin & General Expenses	23,863,000	12,589,773	3,107,324	3,796,522	1,066,358	2,428,810	461,067	413,147				
27 Total O&M Expenses	172,035,000	69,730,858	18,855,482	32,985,930	12,777,706	32,902,644	2,987,901	1,794,479				
28 Taxes Other Than Income Taxes	9,171,000	3,795,741	1,035,428	1,938,010	614,626	1,454,900	187,375	144,920				
29 Other Income Related Items	397,000	141,952	39,907	79,851	34,515	92,913	6,413	1,450				
30 Depreciation Expense												
30 Production Plant Depreciation	8,771,000	3,284,857	887,308	1,746,702	748,439	1,941,191	134,816	27,687				
31 Transmission Plant Depreciation	3,550,000	1,446,443	363,568	693,237	291,835	697,961	49,167	7,789				
32 Distribution Plant Depreciation	13,770,000	6,991,324	2,124,901	3,257,960	269,195	48,617	474,761	603,243				
33 General Plant Depreciation	9,283,000	5,037,261	1,219,947	1,400,818	397,219	897,981	174,139	155,635				
34 Amortization Expense	472,000	185,047	48,113	93,090	39,422	98,111	6,905	1,312				
35 Total Depreciation Expense	35,846,000	16,944,931	4,643,837	7,191,808	1,746,110	3,683,860	839,788	795,666				
36 Income Tax	14,195,000	4,008,667	2,920,617	3,773,418	747,990	2,285,559	298,625	160,125				
37 Total Operating Expenses	231,644,000	94,622,149	27,495,271	45,969,016	15,920,947	40,419,875	4,320,102	2,896,640				
38 Net Income	46,803,000	16,357,077	8,026,115	11,423,208	2,520,578	6,765,294	1,025,952	684,775				
39 Rate of Return	7.32%	5.74%	10.26%	8.40%	7.10%	8.75%	6.92%	5.51%				
40 Return Ratio	1.00	0.78	1.40	1.15	0.97	1.20	0.95	0.75				
41 Interest Expense	19,235,000	8,571,876	2,354,008	4,094,883	1,067,913	2,326,529	445,994	373,797				
42 Revenue Related Operating Expenses	1,259,000	503,646	164,168	260,183	81,173	207,999	24,596	17,236				



	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Description	System Total	Residential Service Sch 1	General Service Sch 11-12	Large Gen Service Sch 21-22	Extra Large Gen Service Sch 25	Extra Large Service CP Sch 25P	Pumping Service Sch 31-32	Street & Area Lights Sch 41-49				
<b>Functional Cost Components at Current Return by Schedule</b>												
1 Production	136,364,788	47,060,028	14,621,765	27,931,027	11,690,137	32,448,878	2,150,089	462,864				
2 Transmission	21,689,704	7,685,638	2,701,310	4,544,899	1,736,647	4,692,231	288,429	40,550				
3 Distribution	55,412,989	26,385,511	10,099,956	13,372,398	1,092,762	369,065	1,760,044	2,333,253				
4 Common	35,252,519	18,365,822	5,008,969	5,551,676	1,516,454	3,580,826	660,438	568,334				
5 Total Current Rate Revenue	248,720,000	99,497,000	32,432,000	51,400,000	16,036,000	41,091,000	4,859,000	3,405,000				
Expressed as \$/kWh												
6 Production	\$0.04053	\$0.04180	\$0.04412	\$0.04129	\$0.03896	\$0.03770	\$0.03809	\$0.03328				
7 Transmission	\$0.00645	\$0.00683	\$0.00815	\$0.00672	\$0.00579	\$0.00545	\$0.00511	\$0.00292				
8 Distribution	\$0.01647	\$0.02344	\$0.03048	\$0.01977	\$0.00364	\$0.00043	\$0.03118	\$0.16774				
9 Common	\$0.01048	\$0.01631	\$0.01512	\$0.00821	\$0.00505	\$0.00416	\$0.01170	\$0.04086				
10 Total Current Melded Rates	\$0.07392	\$0.08837	\$0.09787	\$0.07599	\$0.05344	\$0.04774	\$0.08608	\$0.24480				
<b>Functional Cost Components at Uniform Current Return</b>												
11 Production	135,669,121	48,969,282	13,654,976	27,233,957	11,751,370	31,407,161	2,170,311	482,063				
12 Transmission	21,490,270	8,756,180	2,200,894	4,196,579	1,766,654	4,225,172	297,638	47,152				
13 Distribution	56,126,482	29,467,448	8,428,038	12,355,724	1,110,937	330,840	1,813,571	2,619,924				
14 Common	35,434,128	19,156,149	4,648,672	5,391,551	1,525,634	3,446,346	667,697	598,078				
15 Total Uniform Current Cost	248,720,000	106,349,060	28,932,579	49,177,812	16,154,596	39,409,519	4,949,216	3,747,217				
Expressed as \$/kWh												
16 Production	\$0.04032	\$0.04349	\$0.04121	\$0.04026	\$0.03916	\$0.03649	\$0.03845	\$0.03466				
17 Transmission	\$0.00639	\$0.00778	\$0.00664	\$0.00620	\$0.00589	\$0.00491	\$0.00527	\$0.00339				
18 Distribution	\$0.01668	\$0.02617	\$0.02543	\$0.01827	\$0.00370	\$0.00038	\$0.03213	\$0.18835				
19 Common	\$0.01053	\$0.01701	\$0.01403	\$0.00797	\$0.00508	\$0.00400	\$0.01183	\$0.04300				
20 Total Current Uniform Melded Rates	\$0.07392	\$0.09446	\$0.08731	\$0.07271	\$0.05383	\$0.04578	\$0.08768	\$0.26940				
21 Revenue to Cost Ratio at Current Rates	1.00	0.94	1.12	1.05	0.99	1.04	0.98	0.91				
<b>Functional Cost Components at Proposed Return by Schedule</b>												
22 Production	140,184,410	48,492,742	14,991,954	28,713,644	12,016,444	33,285,836	2,212,176	471,615				
23 Transmission	23,642,289	8,489,027	2,892,935	4,935,990	1,896,563	5,067,511	316,703	43,559				
24 Distribution	59,930,158	28,698,341	10,740,181	14,513,912	1,189,616	399,779	1,924,395	2,463,934				
25 Common	36,356,143	18,958,890	5,146,930	5,731,454	1,565,377	3,688,875	682,726	581,892				
26 Total Proposed Rate Revenue	260,113,000	104,639,000	33,772,000	53,895,000	16,668,000	42,442,000	5,136,000	3,561,000				
Expressed as \$/kWh												
27 Production	\$0.04166	\$0.04307	\$0.04524	\$0.04245	\$0.04004	\$0.03867	\$0.03919	\$0.03391				
28 Transmission	\$0.00703	\$0.00754	\$0.00873	\$0.00730	\$0.00632	\$0.00589	\$0.00561	\$0.00313				
29 Distribution	\$0.01781	\$0.02549	\$0.03241	\$0.02146	\$0.00396	\$0.00046	\$0.03409	\$0.17714				
30 Common	\$0.01080	\$0.01684	\$0.01553	\$0.00847	\$0.00522	\$0.00429	\$0.01210	\$0.04183				
31 Total Proposed Melded Rates	\$0.07730	\$0.09294	\$0.10191	\$0.07968	\$0.05554	\$0.04931	\$0.09099	\$0.25601				
<b>Functional Cost Components at Uniform Requested Return</b>												
32 Production	139,481,645	50,383,935	14,040,165	27,994,752	12,077,948	32,260,841	2,229,521	494,483				
33 Transmission	23,437,170	9,549,442	2,400,283	4,576,766	1,926,703	4,607,949	324,602	51,424				
34 Distribution	60,656,479	31,751,124	9,094,204	13,465,411	1,207,871	362,167	1,970,308	2,805,394				
35 Common	36,537,706	19,741,741	4,792,223	5,566,316	1,574,598	3,556,553	688,952	617,321				
36 Total Uniform Cost	260,113,000	111,426,243	30,326,875	51,603,244	16,787,120	40,787,511	5,213,383	3,968,622				
Expressed as \$/kWh												
37 Production	\$0.04145	\$0.04475	\$0.04237	\$0.04139	\$0.04025	\$0.03748	\$0.03950	\$0.03555				
38 Transmission	\$0.00697	\$0.00848	\$0.00724	\$0.00677	\$0.00642	\$0.00535	\$0.00575	\$0.00370				
39 Distribution	\$0.01803	\$0.02820	\$0.02744	\$0.01991	\$0.00403	\$0.00042	\$0.03491	\$0.20169				
40 Common	\$0.01086	\$0.01753	\$0.01446	\$0.00823	\$0.00525	\$0.00413	\$0.01221	\$0.04438				
41 Total Uniform Melded Rates	\$0.07730	\$0.09897	\$0.09152	\$0.07629	\$0.05594	\$0.04738	\$0.09236	\$0.28532				
42 Revenue to Cost Ratio at Proposed Rates	1.00	0.94	1.11	1.04	0.99	1.04	0.99	0.90				
43 Current Revenue to Proposed Cost Ratio	0.96	0.89	1.07	1.00	0.96	1.01	0.93	0.86				
44 Target Revenue Increase	11,393,000	11,929,000	(2,105,000)	203,000	751,000	(303,000)	354,000	564,000				

Sumcost  
Scenario: AVU-E-12-08 Company Case  
AVU-E-10-01 Settlement Method  
Transmission By Demand 12 CP

AVISTA UTILITIES  
Revenue to Cost By Classification Summary  
For the Twelve Months Ended June 30, 2012

Idaho Jurisdiction  
Electric Utility

10-10-12

	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Description					System Total	Residential Service Sch 1	General Service Sch 11-12	Large Gen Service Sch 21-22	Extra Large Gen Service Sch 25	Extra Large Service CP Sch 25P	Pumping Service Sch 31-32	Street & Area Lights Sch 41-49
<b>Cost Classifications at Current Return by Schedule</b>												
1 Energy					99,505,249	32,531,602	10,437,176	20,531,033	8,737,229	25,198,840	1,669,300	400,069
2 Demand					121,741,170	48,056,898	16,472,134	30,165,949	7,258,252	15,886,884	2,788,487	1,112,567
3 Customer					27,473,580	18,908,500	5,522,690	703,018	40,519	5,276	401,213	1,892,364
4 Total Current Rate Revenue					248,720,000	99,497,000	32,432,000	51,400,000	16,036,000	41,091,000	4,859,000	3,405,000
Expressed as Unit Cost												
5 Energy	\$/kWh				\$0.02957	\$0.02889	\$0.03150	\$0.03035	\$0.02912	\$0.02927	\$0.02957	\$0.02876
6 Demand	\$/kW/mo				\$16.47	\$17.46	\$20.82	\$17.41	\$13.03	\$12.27	\$12.54	\$26.84
7 Customer	\$/Cust/mo				\$18.54	\$15.62	\$23.13	\$47.07	\$375.18	\$439.66	\$24.50	\$1,225.62
<b>Cost Classifications at Uniform Current Return</b>												
8 Energy					98,939,877	33,556,100	9,876,410	20,114,130	8,774,446	24,521,928	1,682,297	414,565
9 Demand					121,619,568	52,793,443	14,088,965	28,393,268	7,339,470	14,882,475	2,859,134	1,262,812
10 Customer					28,160,555	19,999,517	4,967,205	670,413	40,679	5,116	407,785	2,069,840
11 Total Uniform Current Cost					248,720,000	106,349,060	28,932,579	49,177,812	16,154,596	39,409,519	4,949,216	3,747,217
Expressed as Unit Cost												
12 Energy	\$/kWh				\$0.02940	\$0.02980	\$0.02980	\$0.02974	\$0.02924	\$0.02849	\$0.02980	\$0.02980
13 Demand	\$/kW/mo				\$16.45	\$19.18	\$17.81	\$16.39	\$13.18	\$11.50	\$12.86	\$30.47
14 Customer	\$/Cust/mo				\$19.00	\$16.53	\$20.81	\$44.89	\$376.66	\$426.35	\$24.91	\$1,340.57
15 Revenue to Cost Ratio at Current Rates					1.00	0.94	1.12	1.05	0.99	1.04	0.98	0.91
<b>Cost Classifications at Proposed Return by Schedule</b>												
16 Energy					101,745,475	33,300,372	10,651,891	20,999,090	8,935,553	25,742,689	1,709,204	406,677
17 Demand					129,723,846	51,611,403	17,384,713	32,156,285	7,691,075	16,693,907	3,005,406	1,181,057
18 Customer					28,643,678	19,727,226	5,735,396	739,625	41,372	5,404	421,389	1,973,266
19 Total Proposed Rate Revenue					260,113,000	104,639,000	33,772,000	53,895,000	16,668,000	42,442,000	5,136,000	3,561,000
Expressed as Unit Cost												
20 Energy	\$/kWh				\$0.03024	\$0.02958	\$0.03214	\$0.03105	\$0.02978	\$0.02991	\$0.03028	\$0.02924
21 Demand	\$/kW/mo				\$17.55	\$18.75	\$21.98	\$18.56	\$13.81	\$12.89	\$13.52	\$28.49
22 Customer	\$/Cust/mo				\$19.33	\$16.30	\$24.02	\$49.52	\$383.08	\$450.36	\$25.74	\$1,278.02
<b>Cost Classifications at Uniform Requested Return</b>												
23 Energy					101,178,013	34,315,179	10,099,826	20,569,136	8,972,935	25,076,643	1,720,353	423,943
24 Demand					129,574,068	56,303,142	15,038,521	30,328,109	7,772,653	15,705,622	3,066,004	1,360,017
25 Customer					29,360,919	20,807,922	5,188,529	706,000	41,533	5,247	427,026	2,184,662
26 Total Uniform Cost					260,113,000	111,426,243	30,326,875	51,603,244	16,787,120	40,787,511	5,213,383	3,968,622
Expressed as Unit Cost												
27 Energy	\$/kWh				\$0.03007	\$0.03048	\$0.03048	\$0.03041	\$0.02990	\$0.02913	\$0.03048	\$0.03048
28 Demand	\$/kW/mo				\$17.53	\$20.45	\$19.01	\$17.50	\$13.96	\$12.13	\$13.79	\$32.81
29 Customer	\$/Cust/mo				\$19.81	\$17.19	\$21.73	\$47.27	\$384.56	\$437.26	\$26.08	\$1,414.94
30 Revenue to Cost Ratio at Proposed Rates					1.00	0.94	1.11	1.04	0.99	1.04	0.99	0.90
31 Current Revenue to Proposed Cost Ratio					0.96	0.89	1.07	1.00	0.96	1.01	0.93	0.86
32 Annual Consumption (mWh's)					3,364,879	1,125,882	331,376	676,398	300,092	860,777	56,445	13,910
33 Monthly Average NCP Demand (kW)					615,990	229,407	65,917	144,389	46,413	107,884	18,526	3,454
34 Monthly Average Number of Customers					123,495	100,853	19,895	1,245	9	1	1,364	129

Sumcost  
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Transmission By Demand 12 CP

AVISTA UTILITIES  
Customer Cost Analysis  
For the Twelve Months Ended June 30, 2012

Idaho Jurisdiction  
Electric Utility

10-10-12

	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Description					System Total	Residential Service Sch 1	General Service Sch 11-12	Large Gen Service Sch 21-22	Extra Large Gen Service Sch 25	Extra Large Service CP Sch 25P	Pumping Service Sch 31-32	Street & Area Lights Sch 41-49
<b>Meter, Services, Meter Reading &amp; Billing Costs by Schedule at Requested Rate of Return</b>												
<b>Rate Base</b>												
1	Services				45,622,000	37,307,157	7,359,316	450,806	0	0	504,721	0
2	Services Accum. Depr.				(16,622,000)	(13,592,556)	(2,681,306)	(164,247)	0	0	(183,891)	0
3	<b>Total Services</b>				<b>29,000,000</b>	<b>23,714,602</b>	<b>4,678,010</b>	<b>286,558</b>	<b>0</b>	<b>0</b>	<b>320,830</b>	<b>0</b>
4	Meters				20,634,000	11,920,038	6,231,158	1,759,439	35,061	6,159	682,146	0
5	Meters Accum. Depr.				(1,530,000)	(883,864)	(462,037)	(130,461)	(2,600)	(457)	(50,581)	0
6	<b>Total Meters</b>				<b>19,104,000</b>	<b>11,036,173</b>	<b>5,769,121</b>	<b>1,628,977</b>	<b>32,461</b>	<b>5,702</b>	<b>631,565</b>	<b>0</b>
7	<b>Total Rate Base</b>				<b>48,104,000</b>	<b>34,750,775</b>	<b>10,447,131</b>	<b>1,915,536</b>	<b>32,461</b>	<b>5,702</b>	<b>952,395</b>	<b>0</b>
8	Return on Rate Base @ 8.46%				4,069,603	2,939,919	883,828	162,054	2,746	482	80,573	0
9	Revenue Conversion Factor				0.63711	0.63711	0.63711	0.63711	0.63711	0.63711	0.63711	0.63711
10	<b>Rate Base Revenue Requirement</b>				<b>6,387,629</b>	<b>4,614,482</b>	<b>1,387,253</b>	<b>254,360</b>	<b>4,310</b>	<b>757</b>	<b>126,467</b>	<b>0</b>
<b>Expenses</b>												
11	Services Depr Exp				1,255,000	1,026,270	202,445	12,401	0	0	13,884	0
12	Meters Depr Exp				1,533,000	885,597	462,943	130,717	2,605	458	50,680	0
13	Services Operations Exp				333,000	272,309	53,716	3,290	0	0	3,684	0
14	Meters Operating Exp				545,000	314,841	164,582	46,472	926	163	18,017	0
15	Meters Maintenance Exp				29,000	16,753	8,758	2,473	49	9	959	0
16	Meter Reading				430,000	336,412	66,362	4,152	16,671	1,852	4,551	0
17	Billing				2,945,000	2,402,643	473,952	29,652	2,865	318	32,505	3,065
18	<b>Total Expenses</b>				<b>7,070,000</b>	<b>5,254,824</b>	<b>1,432,757</b>	<b>229,157</b>	<b>23,116</b>	<b>2,800</b>	<b>124,280</b>	<b>3,065</b>
19	Revenue Conversion Factor				0.995010	0.995010	0.995010	0.995010	0.995010	0.995010	0.995010	0.995010
20	<b>Expense Revenue Requirement</b>				<b>7,105,456</b>	<b>5,281,177</b>	<b>1,439,943</b>	<b>230,306</b>	<b>23,232</b>	<b>2,814</b>	<b>124,904</b>	<b>3,081</b>
21	<b>Total Meter, Service, Meter Reading, and</b>				<b>13,493,085</b>	<b>9,895,660</b>	<b>2,827,195</b>	<b>484,666</b>	<b>27,542</b>	<b>3,571</b>	<b>251,370</b>	<b>3,081</b>
22	Total Customer Bills				1,481,940	1,210,233	238,734	14,936	108	12	16,373	1,544
23	<b>Average Unit Cost per Month</b>				<b>\$9.11</b>	<b>\$8.18</b>	<b>\$11.84</b>	<b>\$32.45</b>	<b>\$255.02</b>	<b>\$297.57</b>	<b>\$15.35</b>	<b>\$2.00</b>
<b>Distribution Fixed Costs per Customer</b>												
24	Total Customer Related Cost				29,360,919	20,807,922	5,188,529	706,000	41,533	5,247	427,026	2,184,662
25	Customer Related Unit Cost per Month				\$19.81	\$17.19	\$21.73	\$47.27	\$384.56	\$437.26	\$26.08	\$1,414.94
26	Total Distribution Demand Related Cost				51,861,024	24,639,071	7,079,654	15,152,454	1,384,083	426,568	1,989,689	1,189,506
27	Dist Demand Related Unit Cost per Month				\$35.00	\$20.36	\$29.65	\$1,014.49	\$12,815.59	\$35,547.33	\$121.52	\$770.41
28	<b>Total Distribution Unit Cost per Month</b>				<b>\$54.81</b>	<b>\$37.55</b>	<b>\$51.39</b>	<b>\$1,061.76</b>	<b>\$13,200.15</b>	<b>\$35,984.59</b>	<b>\$147.60</b>	<b>\$2,185.34</b>



# Avista Utilities

## Cost of Service / Rate Design Workshop

September 18, 2012 IPUC Workshop

## Settlement Stipulation (AVU-E-11-01)

10. Cost of Service. The Parties have agreed to exchange information and convene a public workshop, prior to the Company's next general rate case, with respect to the method of allocation of demand and energy among the customer classes such as the possible use of a revised peak credit method for classifying production costs, as well as consideration of the use of a 12 Coincident Peak (CP) (whether "weighted" or not) versus a 7 CP or other method for allocating transmission costs. This workshop will also address the merits of inclining or declining block rates for service schedules 11, 21, 25 and 31.

## Workshop Topics

Item # 1 – Peak Credit Classification Method

Item # 2 – Allocation of Transmission Costs

Item # 3 – Merits of Inclining or Declining Block Rates

## Item #1 - Peak Credit Classification Method

1. Review Previous Peak Credit Methodology
2. Discuss Avista Proposed Peak Credit Methodology
3. Why the change is preferable from Avista's viewpoint
4. Is the Proposed Peak Credit Methodology stable over time?

## Item #1 - Peak Credit Classification Method (continued)

### Prior Method

Avista's electric system resource costs were classified to energy and demand using a comparison of the replacement cost-per-kW of the Company's peaking units, to the replacement cost-per-kW of the Company's thermal and hydro generating facilities (separately).

- Created separate peak credit ratios applied to thermal plant and hydro plant.
- Transmission costs were assigned to energy and demand by a 50/50 weighting of the thermal and hydro peak credit ratios.
- Fuel and load dispatching expenses were classified entirely to energy.
- Peaking plant related costs were classified entirely to demand.



## Item #1 - Peak Credit Classification Method (continued)

### Proposed Method

Uses the system load factor to determine peak credit ratio.

- Stemmed from discussions at the February 2011 Cost of Service workshop.
- The Classification ratio is applied to all production costs.
- Calculation: One minus the load factor equals the demand percentage or peak credit ratio.

**Net effect** – slightly increases the overall production costs that are classified as demand-related.

- Using the prior method, approximately 32% of total production costs were classified as demand-related.
- Under the proposed load factor peak credit method, 36.4% of total production costs would be classified as demand-related.

## Item #1 - Peak Credit Classification Method (continued)

### Why does Avista view this methodology to be preferable?

- Tied to the Company's actual use of the system in the test year.
- Actual load factor represents current use of the system vs. historical replacement cost analysis which is based on vintage investments.
- Less complicated single ratio applied to all production costs vs. multiple ratios, weight dependent on each cost item's relationship to plant investment.
- Overall weighted demand/energy relationship stays the same when power costs are updated – not impacted by swings in the cost of fuel, unlike prior method.

## **Item #1 - Peak Credit Classification Method (continued)**

**Will the new methodology provide a “stable” demand/energy classification over time?**

- Avista believes the proposed method will be more consistent over time versus the prior method.
- Proposed method demand proportion has varied from 34% to 39% in the last 5 years – a range of 5%.
- Prior method demand proportion has varied from 23% to 34% in the last 5 years – a range of 11% (driven in part by the cost of fuel)

## Item #2 – Allocation of Transmission Costs

Historically, transmission costs were included in the production peak credit classification as they were considered extension of generation facilities

- Demand classified portion allocated to customer classes by 12 CP (average of the 12 monthly system coincident peak hours)

In the Settlement approved in AVU-E-10-01, the methodology was changed to now classify transmission costs as 100% demand.

- This is consistent with traditional NARUC approach.
- While the Settlement approved transmission classification as 100% demand, it kept the 12 CP allocation and required February 2011 workshop to discuss alternatives.
- In the AVU-E-11-01 general rate case, Avista proposed a weighted 12 CP allocation for transmission costs (stemming from February 2011 workshop discussions).

## Item #2 – Allocation of Transmission Costs (continued)

Workshop Discussion – “consideration of the use of a 12 CP (whether “weighted” or not) versus a 7 CP or other method for allocating transmission costs”.

1. 12 CP (average of the monthly system coincident peaks)
  - Captures relative contribution to demand throughout the year
  - Aligns with FERC Open Access transmission cost methodology
2. Weighted 12 CP - see Handout
  - Weighted by Relative Monthly System Peaks
  - Captures seasonal impacts of capacity utilization
3. 7 CP (average of 4 winter and 3 summer monthly system coincident peaks)
  - Assumes no transmission demand cost in shoulder months

## **Item #3 – Merits of Inclining or Declining Block Rates for Schedules 11, 21, 25 and 31**

# Present Base Rates

## Schedule 1 (Residential)

Basic Charge	\$5.25
First 600 kWh	7.848¢
Over 600 kWh	8.764¢

## Schedule 11 (General Service)

Basic charge	\$10.00
First 3,650 kWh	9.338¢
Over 3,650 kWh	6.958¢
Demand over 20 kW	\$5.25

## Schedule 21 (Large General Service)

First 250,000 kWh	6.039¢
Over 250,000 kWh	5.154¢
Demand 1st 50 kW	\$350
Over 50 kW	\$4.75

## Schedule 25 (Extra Large General Service)

First 500,000 kWh	5.047¢
Over 500,000 kWh	4.275¢
Demand 1st 3,000 kVa	\$12,500
Over 3,000 kVa	\$4.50

## Schedule 31 (Pumping)

Basic charge	\$8.00
1st block	8.939¢
2nd block	8.939¢
3rd block	7.620¢

## Support for Declining Block Rates – Schedules 11, 21, and 25:

Generally, the incremental fixed costs required to provide service to commercial and industrial customers do not increase proportionately with increasing energy usage.

- As most of the Company’s fixed costs of service are recovered through the energy charges (and demand charges where applicable), larger use customers are generally less costly to serve than smaller use customers on an embedded cost per kWh basis, as fixed costs are spread over a larger base of usage.
- Within the Company’s commercial and industrial schedules, there is also a substantial range of energy usage. Therefore, declining block rates for commercial and industrial customers generally reflect the cost of providing service within rate schedules, as well as across rate schedules.

Implementing rate structure changes can create potential customer bill volatility resulting from the new rate structure.



## Merits for Inclining Block Rates:

- Sends a conservation price signal, and penalizes large users.
- Can promote fuel conversion – electric to natural gas fuel switching for residential customers.

1 **NATURAL GAS COST OF SERVICE STUDY**

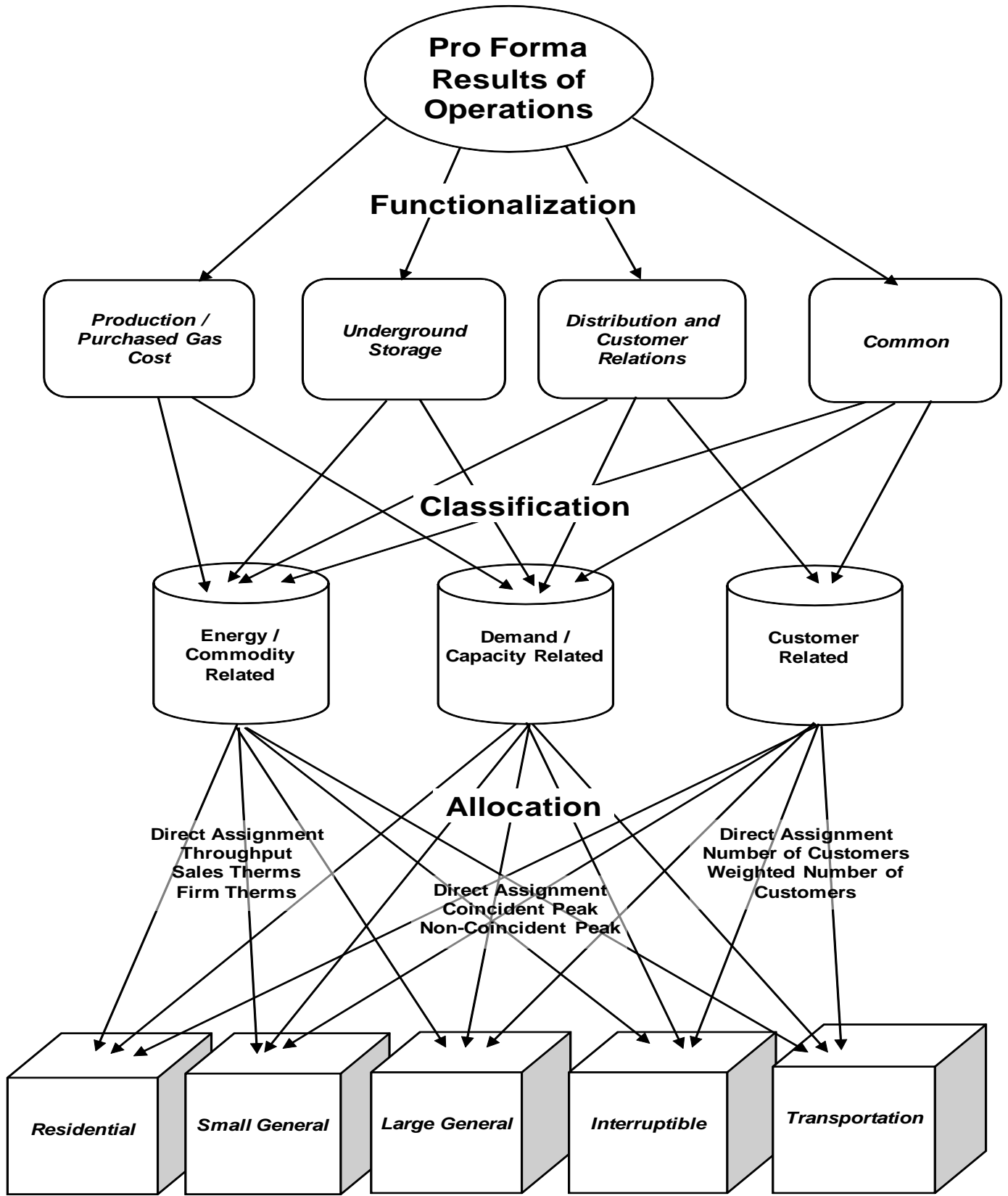
2 A cost of service study is an engineering-economic study, which apportions the revenue,  
3 expenses, and rate base associated with providing natural gas service to designated groups of  
4 customers. It indicates whether the revenue provided by customers recovers the cost to serve those  
5 customers. The study results are used as a guide in determining the appropriate rate spread among  
6 the groups of customers.

7 There are three basic steps involved in a cost of service study: functionalization,  
8 classification, and allocation. See flow chart.

9 First, the expenses and rate base associated with the natural gas system under study are  
10 assigned to functional categories. The uniform system of accounts provides the basic segregation  
11 into production, underground storage, and distribution. Traditionally customer accounting,  
12 customer information, and sales expenses are included in the distribution function and  
13 administrative and general expenses and general plant rate base are allocated to all functions. This  
14 study includes a separate functional category for common costs. Administrative and general costs  
15 that cannot be directly assigned to the other functions have been placed in this category.

16 Second, the expenses and rate base items are classified into three primary cost components:  
17 Demand, commodity or customer related. Demand (capacity) related costs are allocated to rate  
18 schedules on the basis of each schedule's contribution to system peak demand. Commodity  
19 (energy) related costs are allocated based on each rate schedule's share of commodity  
20 consumption. Customer related items are allocated to rate schedules based on the number of  
21 customers within each schedule. The number of customers may be weighted by appropriate  
22 factors such as relative cost of metering equipment. In addition to these three cost components,  
23 any revenue related expense is allocated based on the proportion of revenues by rate schedule.

# NATURAL GAS COST OF SERVICE STUDY FLOWCHART



## ***Pro Forma Results of Operations by Customer Group***<sup>1</sup>

<sup>1</sup> Customer classes shown in this flowchart are illustrative and may not match the Company's actual rate schedules.

1 The final step is allocation of the costs to the various rate schedules utilizing the allocation  
2 factors selected for each specific cost item. These factors are derived from usage and customer  
3 information associated with the test period results of operations.

#### 4 **BASE CASE COST OF SERVICE STUDY**

##### 5 **Production - Purchased Gas Costs**

6 The Company has no natural gas production facilities to serve its retail customers. The  
7 natural gas costs included in the production function include the cost of gas purchased to serve  
8 sales customers, pipeline transportation to get it to our system, and expenses of the gas supply  
9 department.

10 The demand and commodity components of account 804 have been determined directly  
11 from the weighted average cost of gas (WACOG) approved in the most recent purchased gas  
12 adjustment (PGA) filing effective October 1, 2012. The allocation of these costs agrees with the  
13 gas costs computation used to determine pro forma results of operations.

14 The expenses of the gas supply department recorded in account 813 are classified as  
15 commodity related costs. The gas scheduling process includes transportation customers, so  
16 estimated scheduling dispatch labor expenses are allocated by throughput. The remaining gas  
17 supply department expenses are allocated by sales volumes.

##### 18 **Underground Storage**

19 Underground storage rate base, operating and maintenance expenses are classified as  
20 commodity related and allocated to customer groups by winter throughput. This approach was  
21 proposed by commission Staff and accepted by the Idaho Public Utilities Commission in Case No.  
22 AVU-G-04-01.

1           **Distribution Facilities Classification (Peak and Average)**

2           Distribution mains and regulator station equipment (both general use and city gate stations)  
3 are classified Demand and Commodity using the peak and average ratio for the distribution  
4 system. Peak demand is defined as the average of the five-day sustained peaks from the most  
5 recent three years. Average daily load is calculated by dividing annual throughput by 365 (days in  
6 the year). The average daily load is divided by peak load to arrive at the system load factor of  
7 34.40%. This proportion is classified as commodity related. The remaining 65.60% is classified  
8 as demand related. Meters, services and industrial measuring & regulating equipment are  
9 classified as customer related distribution plant. Distribution operating and maintenance expenses  
10 are classified (and allocated) in relation to the plant accounts they are associated with.

11           **Customer Relations Distribution Cost Classification**

12           Customer service, customer information and sales expenses are the core of the customer  
13 relations functional unit which is included with the distribution cost category. For the most part  
14 these costs are classified as customer related. Exceptions include uncollectible accounts expense,  
15 which is considered separately as a revenue conversion item, and any Demand Side Management  
16 amortization expense recorded in Account 908. Any demand side management investment costs  
17 and amortization expense included in base rates would be included with the distribution function  
18 and classified to demand and commodity by the peak and average ratio. At this point in time, the  
19 Company's demand side management investments in base rates have been fully amortized. All  
20 current demand side management costs are managed through the Schedule 191 Public Purpose  
21 Tariff Rider balancing account which is not included in this cost study.

22           **Distribution Cost Allocation**

23           Demand related distribution costs are allocated to customer groups (rate schedules) by each  
24 groups' contribution to the three year average five-day sustained peak. Commodity related

1 distribution costs are allocated to customer groups by annual throughput. Distribution main  
2 investment has been segregated into large and small mains. Small mains are defined as less than  
3 four inches, with large mains being four inches or greater. The small main costs use the same  
4 demand and commodity data, but large usage customers (Schedules 131, and 146) that connect to  
5 large system mains have been excluded from the allocations.

6 Most customer related costs are allocated by the annualized number of customers billed  
7 during the test period. Meter investment costs are allocated using the number of customers  
8 weighted by the relative current cost of meters in service at December 31, 2011. Services  
9 investment costs are allocated using the number of customers weighted by the relative current cost  
10 of typical service installations. Industrial measuring and regulating equipment investment costs  
11 are allocated by number of turbine meters which effectively excludes small usage customers.

#### 12 **Administrative and General Costs**

13 General and intangible rate base items are allocated by the sum of Underground Storage  
14 and Distribution plant. Administrative and general expenses are segregated into plant related,  
15 labor related, revenue related and other. The plant related items are allocated based on total plant  
16 in service. Labor related items are allocated by operating and maintenance labor expense.  
17 Revenue related items are allocated by pro forma revenue. Other administrative and general  
18 expenses are allocated 50% by annual throughput (classified commodity related) and 50% by the  
19 sum of operating and maintenance expenses not including purchased gas cost or administrative &  
20 general expenses. Whenever costs are allocated by sums of other items within the study,  
21 classifications are imputed from the relationship embedded in the summed items.

#### 22 **Special Contract Customer Revenue**

23 Three special contract customers receive transportation service from the Company. Rates  
24 for these customers were individually negotiated to cover any incremental costs and retain some

1 contribution to margin. The rates for these customers are not being adjusted in this case. The  
2 revenue from these special contract customers has been segregated from general rate revenue and  
3 allocated back to all the other rate classes by relative rate base. In treating these revenues like  
4 other operating revenues their system contribution reduces costs for all rate schedules.

5 **Revenue Conversion Items**

6 In this study uncollectible accounts and commission fees have been classified as revenue  
7 related and are allocated by pro forma revenue. These items vary with revenue and are included in  
8 the calculation of the revenue conversion factor. Income tax expense items are allocated to  
9 schedules by net income before income tax less interest expense.

10 For the functional summaries on pages 2 and 3 of the cost of service study, these items are  
11 assigned to the component cost categories. The revenue related expense items have been reduced  
12 to a percent of all other costs and loaded onto each cost category b that ratio. Similarly, income  
13 tax items have been assigned to cost categories by relative rate base (as is net income).

14 The following matrix outlines the methodology applied in the Company Base Case natural  
15 gas cost of service study.

IPUC Case No. AVU-G-12-07 Methodology Matrix  
 Avista Utilities Idaho Jurisdiction  
 Natural Gas Cost of Service Methodology

Line Account	Functional Category	Classification	Allocation
<b>Underground Storage Plant</b>			
1 350 - 357 Underground Storage	Underground Storage	Commodity	E08 Winter throughput
<b>Distribution Plant</b>			
2 374 Land	Distribution	Demand/Commodity/Customer from Other Dist Plant	S05 Sum of accounts 376-385
3 375 Structures	Distribution	Demand/Commodity/Customer from Other Dist Plant	S05 Sum of accounts 376-385
4 376(S) Small Mains	Distribution	Demand/Commodity by Peak & Average	D02/E06 Coincident peak, annual therms (both excl lg use cust)
5 376(L) Large Mains	Distribution	Demand/Commodity by Peak & Average	D01/E01 Coincident peak (all), annual throughput (all)
6 378 M&R General	Distribution	Demand/Commodity by Peak & Average	D01/E01 Coincident peak (all), annual throughput (all)
7 379 M&R City Gate	Distribution	Demand/Commodity by Peak & Average	D01/E01 Coincident peak (all), annual throughput (all)
8 380 Services	Distribution	Customer	C02, Customers weighted by current typical service cor
9 381 Meters	Distribution	Customer	C03, Customers weighted by average current meter cor
10 385 Industrial M&R	Distribution	Customer	C06, Large use customers
11 387 Other	Distribution	Demand/Commodity/Customer from Other Dist Plant	S05 Sum of accounts 376-385
<b>General Plant</b>			
12 389-399 All General Plant	Common	Demand/Commodity/Customer from UG & D Plant	S03 Sum of Underground Storage and Distribution Plant in Service
<b>Intangible Plant</b>			
13 303 Misc Intangible Plant	Distribution	Demand/Commodity/Customer from Dist Plant	S15 Sum of Distribution Plant in Service
14 303 Computer Software	Common	Demand/Commodity/Customer from UG & D Plant	S03 Sum of Underground Storage and Distribution Plant in Service
<b>Reserve for Depreciation</b>			
15 Underground Storage	Underground Storage	Commodity same as related plant	Allocations linked to related plant accounts
16 Distribution	Distribution	Demand/Commodity/Customer same as related plant	Allocations linked to related plant accounts
17 General	Common	Demand/Commodity/Customer same as related plant	Allocations linked to related plant accounts
18 Intangible	Distribution/Common	Demand/Commodity/Customer same as related plant	Allocations linked to related plant accounts
<b>Other Rate Base</b>			
19 Accumulated Deferred FIT	All	Demand/Commodity/Customer from Plant in Service	S17 Sum of Total Plant in Service
20 Constuction Advances	Distribution	Customer	C10 Residential only
21 Gas Inventory	Underground Storage	Commodity from Underground Storage Plant	S14 Sum of Underground Storage Plant in Service
22 Gain on Sale of Office Bldg	Common	Demand/Commodity/Customer from UG & D Plant	S03 Sum of Underground Storage and Distribution Plant in Service
23 DSM Investment	Distribution	Demand/Commodity by Peak & Average	D01/E01 Coincident peak (all), annual throughput (all)
<b>Purchased Gas Expenses</b>			
24 804 Purchased Gas Cost	Production	Demand/Commodity from PGA Tracker WACOG	D05/E07 PGA Demand / PGA Commodity
25 813 Other Gas Expenses	Production	Commodity	E01/E04 Annual Throughput / Annual Sales Therms
<b>Underground Storage O&amp;M</b>			
26 814 - 837 Underground Storage Exp	Underground Storage	Commodity	E08 Winter throughput



IPUC Case No. AVU-G-12-07 Methodology Matrix  
 Avista Utilities Idaho Jurisdiction  
 Natural Gas Cost of Service Methodology

Line Account	Functional Category	Classification	Allocation
<b>Distribution O&amp;M</b>			
1 870 OP Super & Engineering	Distribution	Demand/Commodity/Customer from Dist Plant	S15 Sum of Distribution Plant in Service
2 871 Load Dispatching	Distribution	Commodity	E01 Annual throughput
3 874 Mains & Services	Distribution	Demand/Commodity/Customer from related plant	S06 Sum of Mains and Services Plant in Service
4 875 M&R Station - General	Distribution	Demand/Commodity from related plant	S08 Sum of Meas & Reg Station - General Plant in Service
5 876 M&R Station - Industrial	Distribution	Customer from related plant	S19 Sum of Meas & Reg Station - Industrial Plant in Service
6 877 M&R Station - City Gate	Distribution	Demand/Commodity from related plant	S09 Sum of Meas & Reg Station - City Gate Plant in Service
7 878 Meter & House Regulator	Distribution	Customer from related plant	S07 Sum of Meter and Installation Plant in Service
8 879 Customer Installations	Distribution	Customer	C05, Customers weighted by average current meter cos
9 880 Other OP Expenses	Distribution	Demand/Commodity/Customer from other dist expenses	S04 Sum of Accounts 870 - 879 and 881 - 894
10 881 Rents	Distribution	Demand/Commodity/Customer from other dist expenses	S04 Sum of Accounts 870 - 879 and 881 - 894
11 885 MT Super & Engineering	Distribution	Demand/Commodity/Customer from Dist Plant	S15 Sum of Distribution Plant in Service
12 886 MT of Structures	Distribution	Demand/Commodity/Customer from Other Dist Plant	S05 Sum of accounts 376-385
13 887 MT of Mains	Distribution	Demand/Commodity from related plant	S21 Sum of Distribution Mains Plant in Service
14 889 MT of M&R General	Distribution	Demand/Commodity from related plant	S08 Sum of Meas & Reg Station - General Plant in Service
15 890 MT of M&R Industrial	Distribution	Customer from related plant	S19 Sum of Meas & Reg Station - Industrial Plant in Service
16 891 MT of M&R City Gate	Distribution	Demand/Commodity from related plant	S09 Sum of Meas & Reg Station - City Gate Plant in Service
17 892 MT of Services	Distribution	Customer from related plant	S20 Sum of Services Plant in Services
18 893 MT of Meters & Hs Reg	Distribution	Customer from related plant	S07 Sum of Meter and Installation Plant in Service
19 894 MT of Other Equipment	Distribution	Demand/Commodity/Customer from Dist Plant	S15 Sum of Distribution Plant in Service
<b>Customer Accounting Expenses</b>			
20 901 Supervision	Customer Relations	Customer	C01 All customers (unweighted)
21 902 Meter Reading	Customer Relations	Customer	C01 All customers (unweighted)
22 903 Customer Records & Collections	Customer Relations	Customer	C01 All customers (unweighted)
23 904 Uncollectible Accounts	Revenue Conversion	Revenue	R03 Retail Sales Revenue
24 905 Misc Cust Accounts	Customer Relations	Customer	C01 All customers (unweighted)
<b>Customer Service &amp; Info Expenses</b>			
25 907 Supervision	Customer Relations	Customer	C01 All customers (unweighted)
26 908 Customer Assistance	Customer Relations	Customer	C01 All customers (unweighted)
27 908 DSM Amortization	Distribution	Demand/Commodity by Peak & Average	D01/E01 Coincident peak (all), annual throughput (all)
28 909 Advertising	Customer Relations	Customer	C01 All customers (unweighted)
29 910 Misc Cust Service & Info	Customer Relations	Customer	C01 All customers (unweighted)
<b>Sales Expenses</b>			
30 911 - 916 Sales Expenses	Customer Relations	Customer	C01 All customers (unweighted)

IPUC Case No. AVU-G-12-07 Methodology Matrix  
 Avista Utilities Idaho Jurisdiction  
 Natural Gas Cost of Service Methodology

Line Account	Functional Category	Classification	Allocation
<b>Admin &amp; General Expenses</b>			
1 920 Salaries	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
2 921 Office Supplies	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
3 922 Admin Expense Transferred - Credit	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
4 923 Outside Services	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
5 924 Property Insurance	Common	Demand/Commodity/Customer from Plant in Service	S17 Sum of Total Plant in Service
6 925 Injuries & Damages	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
7 926 Pensions & Benefits	Common	Demand/Commodity/Customer from Labpr O&M	S13 O&M Labor Expense
8 927 Franchise Requirements	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
9 928 Regulatory Commision	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
10 928 Commission Fees	Revenue Conversion	Revenue	R01 Retail Sales Revenue
11 930 Miscellaneous General	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
12 931 Rents	Common	Demand/Commodity/Customer from Other O&M	S02/E01 50% O&M excl Gas Purchases and A&G / 50% throughput
13 935 MT of General Plant	Common	Demand/Commodity/Customer from Plant in Service	S17 Sum of Total Plant in Service
<b>Depreciation Expense</b>			
14 Underground Storage	Underground Storage	Commodity same as related plant	Allocations linked to related plant accounts
15 Distribution	Distribution	Demand/Commodity/Customer same as related plant	Allocations linked to related plant accounts
16 General	Common	Demand/Commodity/Customer same as related plant	Allocations linked to related plant accounts
17 Intangible	Distribution/Common	Demand/Commodity/Customer same as related plant	Allocations linked to related plant accounts
<b>Taxes</b>			
18 Property Tax	All	Demand/Commodity/Customer from related plant	S14/S15/S16 Sum of UG Plant/Sum of Dist Plant/Sum of Gen Plant
19 Miscellaneous Dist Tax	Distribution	Demand/Commodity/Customer from Dist Plant	S15 Sum of Distribution Plant in Service
20 State Income Tax	Revenue Conversion	Revenue	R02 Net Income before Taxes less Interest Expense
21 Federal Income Tax	Revenue Conversion	Revenue	R02 Net Income before Taxes less Interest Expense
22 Deferred FIT	Revenue Conversion	Revenue	R02 Net Income before Taxes less Interest Expense
23 ITC	Revenue Conversion	Revenue	R02 Net Income before Taxes less Interest Expense
<b>Operating Revenues</b>			
24 Revenue from Rates	Revenue	Revenue	Pro Forma Revenue per Revenue Study
25 Special Contract Revenue	All	Demand/Commodity/Customer from Rate Base	S01 Sum of Rate Base
26 Off System Sales	Production	Commodity from PGA Tracker	E04 Sales Therms
27 Miscellaneous Service Revenue	Distribution	Demand/Commodity/Customer from Dist Plant	S15 Sum of Distribution Plant in Service
28 Rent From Gas Property	All	Demand/Commodity/Customer from Rate Base	S01 Sum of Rate Base
29 Other Gas Revenue	Underground Storage	Commodity from Underground Storage Plant	S14 Sum of Underground Storage Plant in Service

Sumcost  
Company Base Case  
AVU-G-04-01 Method

AVISTA UTILITIES  
Cost of Service General Summary  
For the Year Ended June 30, 2012

Natural Gas Utility  
Idaho Jurisdiction

10-Oct-12

Line Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(k)
					System Total	Residential Service Sch 101	Large Firm Service Sch 111	Interrupt Service Sch 131	Transport Service Sch 146
Plant In Service									
1 Production Plant									
2 Underground Storage Plant					10,832,000	7,986,151	2,606,033	40,792	199,024
3 Distribution Plant					160,940,000	134,562,866	24,897,046	381,443	1,098,645
4 Intangible Plant					2,880,000	2,391,170	460,142	7,063	21,625
5 General Plant					21,237,000	17,624,022	3,400,338	52,203	160,437
6 Total Plant In Service					195,889,000	162,564,209	31,363,559	481,502	1,479,731
Accum Depreciation									
7 Production Plant									
8 Underground Storage Plant					(3,970,000)	(2,926,978)	(955,128)	(14,951)	(72,944)
9 Distribution Plant					(56,320,000)	(47,953,864)	(7,900,330)	(122,542)	(343,264)
10 Intangible Plant					(1,273,000)	(1,056,672)	(203,614)	(3,126)	(9,589)
11 General Plant					(7,261,000)	(6,025,711)	(1,162,587)	(17,848)	(54,854)
12 Total Accumulated Depreciation					(68,824,000)	(57,963,224)	(10,221,659)	(158,467)	(480,650)
13 Net Plant					127,065,000	104,600,985	21,141,900	323,035	999,081
14 Accumulated Deferred FIT					(24,281,000)	(20,150,297)	(3,887,603)	(59,683)	(183,417)
15 Miscellaneous Rate Base					8,146,000	6,128,328	1,854,175	28,951	134,547
16 Total Rate Base					110,930,000	90,579,015	19,108,473	292,302	950,211
17 Revenue From Retail Rates					63,338,000	47,851,692	14,995,946	201,088	289,275
18 Other Operating Revenues					156,000	127,635	26,644	408	1,314
19 Total Revenues					63,494,000	47,979,327	15,022,590	201,496	290,588
Operating Expenses									
20 Purchased Gas Costs					33,351,000	23,596,182	9,619,766	133,184	1,868
21 Underground Storage Expenses					275,000	202,750	66,161	1,036	5,053
22 Distribution Expenses					4,972,000	4,151,083	748,901	9,399	62,617
23 Customer Accounting Expenses					2,306,000	2,227,555	76,950	571	923
24 Customer Information Expenses					399,000	392,154	6,815	5	27
25 Sales Expenses					3,000	2,949	51	0	0
26 Admin & General Expenses					5,900,000	4,632,934	1,139,648	18,541	108,877
27 Total O&M Expenses					47,206,000	35,205,607	11,658,293	162,736	179,364
28 Taxes Other Than Income Taxes					1,024,000	854,789	159,613	2,447	7,152
29 Depreciation Expense									
30 Underground Storage Plant Depr					165,000	121,650	39,697	621	3,032
31 Distribution Plant Depreciation					4,076,000	3,415,369	623,992	9,436	27,203
32 General Plant Depreciation					1,974,000	1,638,170	316,065	4,852	14,913
33 Amortization of Intangible Plant					549,000	455,625	87,881	1,349	4,145
34 Total Depr & Amort Expense					6,764,000	5,630,814	1,067,634	16,259	49,292
35 Income Tax					2,021,000	1,394,722	611,619	4,408	10,251
36 Total Operating Expenses					57,015,000	43,085,932	13,497,159	185,849	246,060
37 Net Income					6,479,000	4,893,395	1,525,430	15,646	44,529
38 Rate of Return					5.84%	5.40%	7.98%	5.35%	4.69%
39 Return Ratio					1.00	0.92	1.37	0.92	0.80
40 Interest Expense					3,339,000	2,726,434	575,166	8,798	28,601

Line	Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
						System Total	Residential Service Sch 101	Large Firm Service Sch 111	Interrupt Service Sch 131	Transport Service Sch 146
<b>Functional Cost Components at Current Rates</b>										
1	Production					33,521,417	23,716,754	9,668,921	133,864	1,878
2	Underground Storage					1,415,902	953,474	436,491	4,833	21,105
3	Distribution					19,044,897	15,749,532	3,127,224	35,691	132,449
4	Common					9,355,784	7,431,932	1,763,310	26,700	133,843
5	<b>Total Current Rate Revenue</b>					<b>63,338,000</b>	<b>47,851,692</b>	<b>14,995,946</b>	<b>201,088</b>	<b>289,275</b>
6	Exclude Cost of Gas w / Revenue Exp.					33,188,726	23,482,973	9,573,613	132,140	0
7	<b>Total Margin Revenue at Current Rates</b>					<b>30,149,274</b>	<b>24,368,719</b>	<b>5,422,333</b>	<b>68,948</b>	<b>289,275</b>
Margin per Therm at Current Rates										
8	Production					\$0.00424	\$0.00436	\$0.00436	\$0.00436	\$0.00073
9	Underground Storage					\$0.01806	\$0.01780	\$0.01999	\$0.01223	\$0.00817
10	Distribution					\$0.24295	\$0.29399	\$0.14319	\$0.09036	\$0.05125
11	Common					\$0.11935	\$0.13873	\$0.08074	\$0.06760	\$0.05179
12	<b>Total Current Margin Melded Rate per Therm</b>					<b>\$0.38460</b>	<b>\$0.45488</b>	<b>\$0.24827</b>	<b>\$0.17456</b>	<b>\$0.11193</b>
<b>Functional Cost Components at Uniform Current Return</b>										
13	Production					33,521,417	23,716,754	9,668,921	133,864	1,878
14	Underground Storage					1,381,729	1,018,713	332,425	5,203	25,387
15	Distribution					19,072,494	16,256,713	2,634,104	37,400	144,277
16	Common					9,362,360	7,515,337	1,684,192	26,977	135,854
17	<b>Total Uniform Current Cost</b>					<b>63,338,000</b>	<b>48,507,517</b>	<b>14,319,643</b>	<b>203,444</b>	<b>307,397</b>
18	Exclude Cost of Gas w / Revenue Exp.					33,188,726	23,482,973	9,573,613	132,140	0
19	<b>Total Uniform Current Margin</b>					<b>30,149,274</b>	<b>25,024,544</b>	<b>4,746,030</b>	<b>71,303</b>	<b>307,397</b>
Margin per Therm at Uniform Current Return										
20	Production					\$0.00424	\$0.00436	\$0.00436	\$0.00436	\$0.00073
21	Underground Storage					\$0.01763	\$0.01902	\$0.01522	\$0.01317	\$0.00982
22	Distribution					\$0.24330	\$0.30346	\$0.12061	\$0.09469	\$0.05583
23	Common					\$0.11943	\$0.14029	\$0.07711	\$0.06830	\$0.05257
24	<b>Total Current Uniform Margin Melded Rate per</b>					<b>\$0.38460</b>	<b>\$0.46712</b>	<b>\$0.21731</b>	<b>\$0.18052</b>	<b>\$0.11894</b>
25	<b>Margin to Cost Ratio at Current Rates</b>					<b>1.00</b>	<b>0.97</b>	<b>1.14</b>	<b>0.97</b>	<b>0.94</b>
<b>Functional Cost Components at Proposed Rates</b>										
26	Production					33,521,324	23,716,688	9,668,895	133,864	1,878
27	Underground Storage					1,920,688	1,319,496	564,632	6,688	29,872
28	Distribution					22,530,362	18,595,034	3,734,430	44,235	156,663
29	Common					9,926,626	7,899,855	1,860,727	28,083	137,961
30	<b>Total Proposed Rate Revenue</b>					<b>67,899,000</b>	<b>51,531,073</b>	<b>15,828,685</b>	<b>212,869</b>	<b>326,373</b>
31	Exclude Cost of Gas w / Revenue Exp.					33,188,634	23,482,908	9,573,586	132,140	0
32	<b>Total Margin Revenue at Proposed Rates</b>					<b>34,710,366</b>	<b>28,048,165</b>	<b>6,255,098</b>	<b>80,729</b>	<b>326,373</b>
Margin per Therm at Proposed Rates										
33	Production					\$0.00424	\$0.00436	\$0.00436	\$0.00436	\$0.00073
34	Underground Storage					\$0.02450	\$0.02463	\$0.02585	\$0.01693	\$0.01156
35	Distribution					\$0.28741	\$0.34710	\$0.17099	\$0.11199	\$0.06062
36	Common					\$0.12663	\$0.14746	\$0.08520	\$0.07110	\$0.05338
37	<b>Total Proposed Margin Melded Rate per Therm</b>					<b>\$0.44278</b>	<b>\$0.52356</b>	<b>\$0.28640</b>	<b>\$0.20438</b>	<b>\$0.12629</b>
<b>Functional Cost Components at Uniform Proposed Return</b>										
38	Production					33,521,324	23,716,688	9,668,895	133,864	1,878
39	Underground Storage					1,884,238	1,389,199	453,322	7,096	34,620
40	Distribution					22,559,790	19,136,920	3,206,979	46,115	169,777
41	Common					9,933,648	7,988,967	1,776,102	28,388	140,191
42	<b>Total Uniform Proposed Cost</b>					<b>67,899,000</b>	<b>52,231,774</b>	<b>15,105,298</b>	<b>215,462</b>	<b>346,466</b>
43	Exclude Cost of Gas w / Revenue Exp.					33,188,634	23,482,908	9,573,586	132,140	0
44	<b>Total Uniform Proposed Margin</b>					<b>34,710,366</b>	<b>28,748,866</b>	<b>5,531,712</b>	<b>83,322</b>	<b>346,466</b>
Margin per Therm at Uniform Proposed Return										
45	Production					\$0.00424	\$0.00436	\$0.00436	\$0.00436	\$0.00073
46	Underground Storage					\$0.02404	\$0.02593	\$0.02076	\$0.01796	\$0.01340
47	Distribution					\$0.28778	\$0.35722	\$0.14684	\$0.11675	\$0.06569
48	Common					\$0.12672	\$0.14913	\$0.08132	\$0.07187	\$0.05425
49	<b>Total Proposed Uniform Margin Melded Rate per</b>					<b>\$0.44278</b>	<b>\$0.53664</b>	<b>\$0.25328</b>	<b>\$0.21095</b>	<b>\$0.13406</b>
50	<b>Margin to Cost Ratio at Proposed Rates</b>					<b>1.00</b>	<b>0.98</b>	<b>1.13</b>	<b>0.97</b>	<b>0.94</b>
51	<b>Current Margin to Proposed Cost Ratio</b>					<b>0.87</b>	<b>0.85</b>	<b>0.98</b>	<b>0.83</b>	<b>0.83</b>

	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
Line	Description	System Total	Residential Service Sch 101	Large Firm Service Sch 111	Interrupt Service Sch 131	Transport Service Sch 146			
<b>Cost by Classification at Current Return by Schedule</b>									
1	Commodity	34,160,448	23,838,005	9,991,218	172,884	158,342			
2	Demand	15,568,367	11,351,736	4,131,987	27,201	57,443			
3	Customer	13,609,184	12,661,951	872,741	1,003	73,489			
4	Total Current Rate Revenue	63,338,000	47,851,692	14,995,946	201,088	289,275			
Revenue per Therm at Current Rates									
5	Commodity	\$0.43577	\$0.44497	\$0.45747	\$0.43770	\$0.06127			
6	Demand	\$0.19860	\$0.21190	\$0.18919	\$0.06886	\$0.02223			
7	Customer	\$0.17361	\$0.23635	\$0.03996	\$0.00254	\$0.02844			
8	Total Revenue per Therm at Current Rates	\$0.80797	\$0.89322	\$0.68662	\$0.50910	\$0.11193			
Cost per Unit at Current Rates									
9	Commodity Cost per Therm	\$0.43577	\$0.44497	\$0.45747	\$0.43770	\$0.06127			
10	Demand Cost per Peak Day Therms	\$24.94	\$23.55	\$32.33	\$12.37	\$4.72			
11	Customer Cost per Customer per Month	\$15.09	\$14.28	\$56.65	\$83.60	\$1,224.82			
<b>Cost by Classification at Uniform Current Return</b>									
12	Commodity	34,031,219	24,006,790	9,682,672	174,093	167,665			
13	Demand	15,512,746	11,562,903	3,858,320	28,310	63,214			
14	Customer	13,794,035	12,937,824	778,652	1,041	76,518			
15	Total Uniform Current Cost	63,338,000	48,507,517	14,319,643	203,444	307,397			
Cost per Therm at Current Return									
16	Commodity	\$0.43412	\$0.44812	\$0.44334	\$0.44076	\$0.06488			
17	Demand	\$0.19789	\$0.21584	\$0.17666	\$0.07167	\$0.02446			
18	Customer	\$0.17596	\$0.24150	\$0.03565	\$0.00264	\$0.02961			
19	Total Cost per Therm at Current Return	\$0.80797	\$0.90547	\$0.65565	\$0.51507	\$0.11894			
Cost per Unit at Uniform Current Return									
20	Commodity Cost per Therm	\$0.43412	\$0.44812	\$0.44334	\$0.44076	\$0.06488			
21	Demand Cost per Peak Day Therms	\$24.85	\$23.99	\$30.19	\$12.87	\$5.19			
22	Customer Cost per Customer per Month	\$15.29	\$14.59	\$50.55	\$86.75	\$1,275.30			
23	Revenue to Cost Ratio at Current Rates	1.00	0.99	1.05	0.99	0.94			
<b>Cost by Classification at Proposed Return by Schedule</b>									
24	Commodity	35,512,391	24,784,909	10,371,125	178,930	177,427			
25	Demand	17,107,424	12,536,458	4,468,962	32,747	69,257			
26	Customer	15,279,184	14,209,705	988,597	1,193	79,690			
27	Total Proposed Rate Revenue	67,899,000	51,531,073	15,828,685	212,869	326,373			
Revenue per Therm at Proposed Rates									
28	Commodity	\$0.45301	\$0.46265	\$0.47486	\$0.45300	\$0.06865			
29	Demand	\$0.21823	\$0.23401	\$0.20462	\$0.08291	\$0.02680			
30	Customer	\$0.19491	\$0.26525	\$0.04526	\$0.00302	\$0.03084			
31	Total Revenue per Therm at Proposed Rates	\$0.86615	\$0.96191	\$0.72475	\$0.53893	\$0.12629			
Cost per Unit at Proposed Rates									
32	Commodity Cost per Therm	\$0.45301	\$0.46265	\$0.47486	\$0.45300	\$0.06865			
33	Demand Cost per Peak Day Therms	\$27.40	\$26.00	\$34.97	\$14.89	\$5.69			
34	Customer Cost per Customer per Month	\$16.94	\$16.03	\$64.17	\$99.38	\$1,328.16			
<b>Cost by Classification at Uniform Proposed Return</b>									
35	Commodity	35,374,366	24,965,244	10,041,098	180,260	187,764			
36	Demand	17,047,939	12,762,074	4,176,242	33,968	75,655			
37	Customer	15,476,695	14,504,456	887,957	1,234	83,048			
38	Total Uniform Proposed Cost	67,899,000	52,231,774	15,105,298	215,462	346,466			
Cost per Therm at Proposed Return									
39	Commodity	\$0.45125	\$0.46601	\$0.45975	\$0.45637	\$0.07265			
40	Demand	\$0.21747	\$0.23822	\$0.19122	\$0.08600	\$0.02927			
41	Customer	\$0.19743	\$0.27075	\$0.04066	\$0.00312	\$0.03213			
42	Total Cost per Therm at Proposed Return	\$0.86615	\$0.97499	\$0.69162	\$0.54549	\$0.13406			
Cost per Unit at Uniform Proposed Return									
43	Commodity Cost per Therm	\$0.45125	\$0.46601	\$0.45975	\$0.45637	\$0.07265			
44	Demand Cost per Peak Day Therms	\$27.31	\$26.47	\$32.68	\$15.45	\$6.21			
45	Customer Cost per Customer per Month	\$17.16	\$16.36	\$57.64	\$102.85	\$1,384.13			
46	Revenue to Cost Ratio at Proposed Rates	1.00	0.99	1.05	0.99	0.94			
47	Current Revenue to Proposed Cost Ratio	0.93	0.92	0.99	0.93	0.83			

Line	Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(k)
						System Total	Residential Service Sch 101	Large Firm Service Sch 111	Interrupt Service Sch 131	Transport Service Sch 146
<b>Meter, Services, Meter Reading &amp; Billing Costs by Schedule at Requested Rate of Return</b>										
<b>Rate Base</b>										
1	Services					49,451,000	\$ 48,578,554	\$ 844,170	\$ 1,973	\$ 26,303
2	Services Accum. Depr.					(22,558,000)	\$ (22,160,017)	\$ (385,084)	\$ (900)	\$ (11,999)
3	<b>Total Services</b>					<b>26,893,000</b>	<b>26,418,537</b>	<b>459,086</b>	<b>1,073</b>	<b>14,305</b>
4	Meters					21,321,000	\$ 18,565,797	\$ 2,658,436	\$ 5,024	\$ 91,743
5	Meters Accum. Depr.					(4,746,000)	\$ (4,132,699)	\$ (591,761)	\$ (1,118)	\$ (20,422)
6	<b>Total Meters</b>					<b>16,575,000</b>	<b>14,433,099</b>	<b>2,066,675</b>	<b>3,906</b>	<b>71,321</b>
7	<b>Total Rate Base</b>					<b>43,468,000</b>	<b>40,851,635</b>	<b>2,525,761</b>	<b>4,978</b>	<b>85,625</b>
8	Return on Rate Base @ 8.46%					3,677,393	3,456,048	213,679	421	7,244
9	Revenue Conversion Factor					0.63711	0.63711	0.63711	0.63711	0.63711
10	<b>Rate Base Revenue Requirement</b>					<b>5,771,990</b>	<b>5,424,571</b>	<b>335,389</b>	<b>661</b>	<b>11,370</b>
<b>Expenses</b>										
11	Services Depr Exp					1,224,000	\$ 1,202,405	\$ 20,895	\$ 49	\$ 651
12	Meters Depr Exp					632,000	\$ 550,330	\$ 78,802	\$ 149	\$ 2,719
13	Services Maintenance Exp					418,000	\$ 410,625	\$ 7,136	\$ 17	\$ 222
14	Meters Maintenance Exp					415,000	\$ 361,372	\$ 51,745	\$ 98	\$ 1,786
15	Meter Reading					252,000	\$ 247,676	\$ 4,304	\$ 3	\$ 17
16	Billing					1,702,000	\$ 1,672,795	\$ 29,069	\$ 23	\$ 113
17	<b>Total Expenses</b>					<b>4,643,000</b>	<b>4,445,204</b>	<b>191,950</b>	<b>338</b>	<b>5,509</b>
18	Revenue Conversion Factor					0.995009	0.995009	0.995009	0.995009	0.995009
19	<b>Expense Revenue Requirement</b>					<b>4,666,289</b>	<b>4,467,501</b>	<b>192,913</b>	<b>340</b>	<b>5,536</b>
20	<b>Total Meter, Service, Meter Reading, and</b>					<b>10,438,280</b>	<b>9,892,072</b>	<b>528,301</b>	<b>1,001</b>	<b>16,906</b>
21	Total Customer Bills					901,972	886,495	15,405	12	60
22	<b>Average Unit Cost per Month</b>					<b>\$11.57</b>	<b>\$11.16</b>	<b>\$34.29</b>	<b>\$83.41</b>	<b>\$281.77</b>
<b>Fixed Costs per Customer</b>										
23	Total Customer Related Cost					15,476,695	14,504,456	887,957	1,234	83,048
24	Customer Related Unit Cost per Month					\$17.16	\$16.36	\$57.64	\$102.85	\$1,384.13
25	Other Non-Gas Costs					19,233,671	14,244,410	4,643,754	82,088	263,419
26	Other Non-Gas Unit Cost per Month					\$21.32	\$16.07	\$301.44	\$6,840.63	\$4,390.31
27	<b>Total Fixed Unit Cost per Month</b>					<b>\$38.48</b>	<b>\$32.43</b>	<b>\$359.09</b>	<b>\$6,943.48</b>	<b>\$5,774.44</b>