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**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

IN THE MATTER OF THE APPLICATION )  
OF AVISTA CORPORATION FOR THE ) CASE NO. AVU-G-17-01  
AUTHORITY TO INCREASE ITS RATES )  
AND CHARGES FOR ELECTRIC AND )  
NATURAL GAS SERVICE TO ELECTRIC ) Exhibit No. 15  
AND NATURAL GAS CUSTOMERS IN THE )  
STATE OF IDAHO ) JOSEPH D. MILLER  
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FOR AVISTA CORPORATION

(NATURAL GAS)

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.

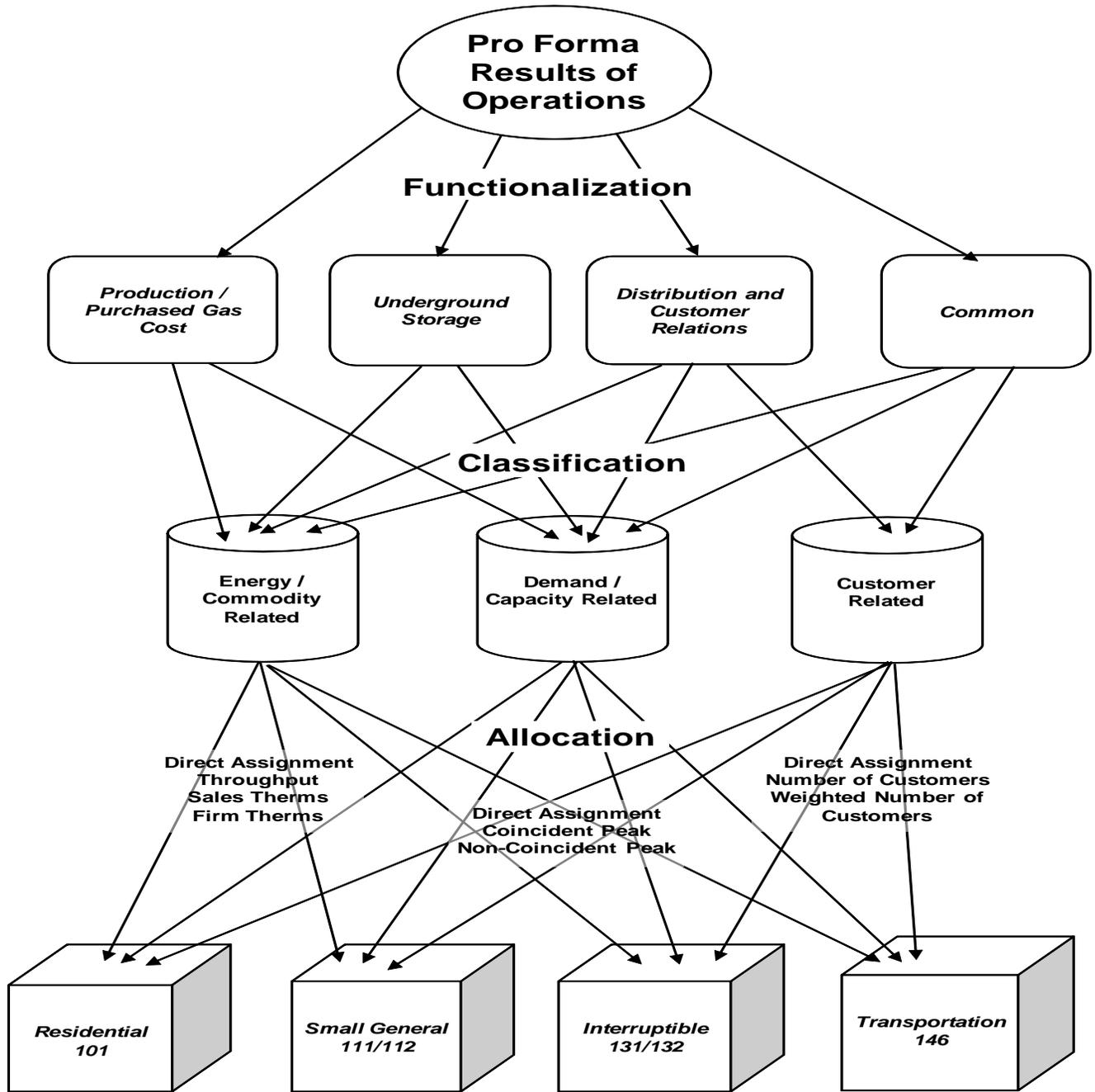
7 As shown in the flowchart below, there are three basic steps involved in a cost of service  
8 study: functionalization, classification, and allocation.

9 First, the expenses and rate base associated with the natural gas system under study are  
10 assigned to functional categories. The FERC uniform system of accounts provides the basic  
11 segregation into production, underground storage, and distribution. Traditionally customer  
12 accounting, 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 and customer-related. Demand-related (capacity) costs are allocated to rate  
18 schedules on the basis of each schedule's contribution to system peak demand. Commodity-related  
19 (energy) costs are allocated based on each rate schedule's share of commodity consumption.  
20 Customer-related items are allocated to rate schedules based on the number of customers within  
21 each schedule. The number of customers may be weighted by appropriate factors such as relative  
22 cost of metering equipment. In addition to these three cost components, any revenue-related expense  
23 is allocated based on the proportion of revenues by rate schedule.

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 FLOWCHART**



***Pro Forma Results of Operations by Customer Group***

5

1           **Production - Purchased Gas Costs**

2           The Company has no natural gas production facilities to serve its retail customers. In  
3 addition, the revenue and expenses associated with the gas purchased to serve sales customers and  
4 pipeline transportation to get it to our system have been removed from the Company’s filing. The  
5 natural gas costs included in the production function include the expenses of the gas supply  
6 department.

7           The expenses of the gas supply department recorded in account 813 are classified as  
8 commodity related costs. The gas scheduling process includes transportation customers, so  
9 estimated scheduling dispatch labor expenses are allocated by throughput. The remaining gas  
10 supply department expenses are allocated 95% by sales volumes and 5% on total throughput.

11           **Underground Storage**

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

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

17           Distribution mains and regulator station equipment (both general use and city gate stations)  
18 are classified Demand and Commodity using the peak and average ratio for the distribution system.  
19 Peak demand is defined as the average of the five-day sustained peaks from the most recent three  
20 years. Average daily load is calculated by dividing annual throughput by 365 (days in the year).  
21 The average daily load is divided by peak load to arrive at the system load factor of 38.75%. This  
22 proportion is classified as commodity-related. The remaining 61.25% is classified as demand-  
23 related. Meters, services and industrial measuring & regulating equipment are classified as

1 customer-related distribution plant. Distribution operating and maintenance expenses are classified  
2 (and allocated) in relation to the plant accounts they are associated with.

3 **Customer Relations Distribution Cost Classification**

4 Customer service, customer information and sales expenses are the core of the customer  
5 relations functional unit which is included with the distribution cost category. For the most part  
6 these costs are classified as customer-related. Exceptions include uncollectible accounts expense,  
7 which is considered separately as a revenue conversion item, and any Demand Side Management  
8 amortization expense recorded in Account 908.<sup>1</sup>

9 **Distribution Cost Allocation**

10 Demand-related distribution costs are allocated to customer groups (rate schedules) by each  
11 groups' contribution to the three year average five-day sustained peak. Commodity-related  
12 distribution costs are allocated to customer groups by annual throughput. Distribution main  
13 investment has been segregated into large and small mains. Small mains are defined as less than  
14 four inches, with large mains being four inches or greater. The small main costs use the same  
15 demand and commodity data, but large usage customers (Schedules 131, 132, and 146) that connect  
16 to large system mains have been excluded from the allocations.

17 Most customer-related costs are allocated by the annualized number of customers billed  
18 during the test period. Meter investment costs are allocated using the number of customers weighted  
19 by the relative current cost of meters in service at December 31, 2016. Services investment costs  
20 are allocated using the number of customers weighted by the relative current cost of typical service

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<sup>1</sup> Any demand side management investment costs and amortization expense included in base rates would be included with the distribution function and classified to demand and commodity by the peak and average ratio. At this point in time, the Company's demand side management investments in base rates have been fully amortized. All current demand side management costs are managed through the Schedule 191 Energy Efficiency Rider Adjustment balancing account which is not included in this cost study.

1 installations. Industrial measuring and regulating equipment investment costs are allocated by  
2 number of turbine meters which effectively excludes small usage customers.

### 3 **Administrative and General Costs**

4 General and intangible rate base items are allocated by the Company's four-factor allocator.  
5 Administrative and general expenses are segregated into plant-related, labor-related, revenue-related  
6 and other. The plant-related items are allocated based on total plant in service. Labor-related items  
7 are allocated by operating and maintenance labor expense. Revenue-related items are allocated by  
8 pro forma revenue. Other administrative and general expenses are allocated by the Company's four-  
9 factor.

### 10 **Special Contract Customer Revenue**

11 Two special contract customers receive transportation service from the Company. Rates for  
12 these customers were individually negotiated to cover any incremental costs together with some  
13 contribution to margin. The rates for these customers are not being adjusted in this case. The  
14 revenue from these special contract customers has been segregated from general rate revenue and  
15 allocated back to all the other rate classes by relative rate base. In treating these revenues like other  
16 operating revenues their system contribution reduces costs for all rate schedules.

### 17 **Revenue Conversion Items**

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

22 For the functional summaries on pages 2 and 3 of the cost of service study, these items are  
23 assigned to the component cost categories. The revenue-related expense items have been reduced

1 to a percent of all other costs and loaded onto each cost category by that ratio. Similarly, income  
2 tax items have been assigned to cost categories by relative rate base (as is net income).

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

IPUC Case No. AVU-G-17-01 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 cost
9 381 Meters	Distribution	Customer	C03, Customers weighted by average current meter cost
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	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
<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	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
<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	Removed all Purchased Gas Costs from Filing	N/A
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-17-01 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 cost
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-17-01 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	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
2 921 Office Supplies	Common	Demand/Commodity/Customer from Other O&M	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
3 922 Admin Expense Transferred - Credit	Common	Demand/Commodity/Customer from Other O&M	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
4 923 Outside Services	Common	Demand/Commodity/Customer from Other O&M	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
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	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
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	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
9 928 Regulatory Commission	Common	Demand/Commodity/Customer from Other O&M	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
10 928 Commission Fees	Revenue Conversion	Revenue	R01 Retail Sales Revenue
11 930 Miscellaneous General	Common	Demand/Commodity/Customer from Other O&M	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
12 931 Rents	Common	Demand/Commodity/Customer from Other O&M	4-Factor (O&M less resource & labor, O&M labor, net direct plant, & customers)
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

Company Base Case AVISTA UTILITIES  
 Cost of Service General Summary  
 For the Year Ended December 31, 2016

Natural Gas Utility  
 Idaho Jurisdiction

Line Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
					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					12,393,000	9,166,589	2,942,053	-	284,358
3 Distribution Plant					217,930,000	180,176,484	35,351,294	-	2,402,222
4 Intangible Plant					11,241,000	9,955,572	1,202,107	-	83,321
5 General Plant					38,116,000	34,057,278	3,794,587	-	264,135
6 Total Plant In Service					279,680,000	233,355,922	43,290,041	-	3,034,037
Accum Depreciation									
7 Production Plant									
8 Underground Storage Plant					(4,913,000)	(3,633,943)	(1,166,328)	-	(112,729)
9 Distribution Plant					(79,803,000)	(66,992,890)	(11,993,854)	-	(816,256)
10 Intangible Plant					(2,730,000)	(2,428,286)	(282,120)	-	(19,594)
11 General Plant					(14,631,000)	(13,073,041)	(1,456,569)	-	(101,390)
12 Total Accumulated Depreciation					(102,077,000)	(86,128,160)	(14,898,872)	-	(1,049,968)
13 Net Plant					177,603,000	147,227,763	28,391,169	-	1,984,068
14 Accumulated Deferred FIT					(41,561,000)	(34,677,151)	(6,432,986)	-	(450,864)
15 Miscellaneous Rate Base					10,405,000	8,309,420	1,935,879	-	159,701
16 Total Rate Base					146,447,000	120,860,032	23,894,063	-	1,692,906
17 Revenue From Retail Rates					39,475,000	32,290,969	6,782,356	-	401,675
18 Other Operating Revenues					172,000	141,963	28,054	-	1,983
19 Total Revenues					39,647,000	32,432,932	6,810,409	-	403,658
Operating Expenses									
20 Purchased Gas Costs					444,000	316,512	124,072	-	3,416
21 Underground Storage Expenses					407,000	301,041	96,620	-	9,339
22 Distribution Expenses					6,432,000	5,570,881	793,079	-	68,040
23 Customer Accounting Expenses					2,550,000	2,486,954	61,774	-	1,272
24 Customer Information Expenses					385,000	378,133	6,838	-	29
25 Sales Expenses					(0)	(0)	(0)	-	(0)
26 Admin & General Expenses					5,935,000	5,238,188	651,402	-	45,410
27 Total O&M Expenses					16,153,000	14,291,710	1,733,784	-	127,506
28 Taxes Other Than Income Taxes					1,942,000	1,594,425	324,643	-	22,933
29 Depreciation Expense									
30 Underground Storage Plant Depr					231,000	170,861	54,839	-	5,300
31 Distribution Plant Depreciation					5,575,000	4,615,191	899,569	-	60,240
32 General Plant Depreciation					3,936,000	3,516,881	391,843	-	27,276
33 Amortization of Intangible Plant					1,486,000	1,233,846	235,648	-	16,505
34 Total Depr & Amort Expense					11,228,000	9,536,780	1,581,899	-	109,321
35 Income Tax					2,333,000	1,355,550	941,216	-	36,234
36 Total Operating Expenses					31,656,000	26,778,464	4,581,542	-	295,994
37 Net Income					7,991,000	5,654,468	2,228,867	-	107,664
38 Rate of Return					5.46%	4.68%	9.33%	0.00%	6.36%
39 Return Ratio					1.00	0.86	1.71	-	1.17
40 Interest Expense					4,141,000	3,417,492	675,639	-	47,869

AVISTA UTILITIES  
 Summary by Function with Margin Analysis  
 For the Year Ended December 31, 2016

Natural Gas Utility  
 Idaho Jurisdiction

Line Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
					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					446,250	318,116	124,700	0	3,433
2 Underground Storage					1,484,314	969,036	479,335	0	35,943
3 Distribution					24,294,102	19,566,716	4,472,984	0	254,401
4 Common					13,250,335	11,437,101	1,705,336	0	107,898
5 <b>Total Current Rate Revenue</b>					<b>39,475,000</b>	<b>32,290,969</b>	<b>6,782,356</b>	<b>0</b>	<b>401,675</b>
6 Exclude Cost of Gas w / Revenue Exp.					0	0	0	0	0
7 <b>Total Margin Revenue at Current Rates</b>					<b>39,475,000</b>	<b>32,290,969</b>	<b>6,782,356</b>	<b>0</b>	<b>401,675</b>
Margin per Therm at Current Rates									
8 Production					\$0.00540	\$0.00556	\$0.00556	\$0.00000	\$0.00119
9 Underground Storage					\$0.01797	\$0.01692	\$0.02136	\$0.00000	\$0.01243
10 Distribution					\$0.29413	\$0.34172	\$0.19928	\$0.00000	\$0.08799
11 Common					\$0.16042	\$0.19974	\$0.07598	\$0.00000	\$0.03732
12 <b>Total Current Margin Melded Rate per Therm</b>					<b>\$0.47792</b>	<b>\$0.56394</b>	<b>\$0.30217</b>	<b>\$0.00000</b>	<b>\$0.13893</b>
<b>Functional Cost Components at Uniform Current Return</b>									
13 Production					446,250	318,116	124,700	0	3,433
14 Underground Storage					1,428,759	1,056,794	339,182	0	32,783
15 Distribution					24,230,121	20,663,944	3,329,879	0	236,299
16 Common					13,369,871	11,769,958	1,495,432	0	104,482
17 <b>Total Uniform Current Cost</b>					<b>39,475,000</b>	<b>33,808,811</b>	<b>5,289,192</b>	<b>0</b>	<b>376,996</b>
18 Exclude Cost of Gas w / Revenue Exp.					0	0	0	0	0
19 <b>Total Uniform Current Margin</b>					<b>39,475,000</b>	<b>33,808,811</b>	<b>5,289,192</b>	<b>0</b>	<b>376,996</b>
Margin per Therm at Uniform Current Return									
20 Production					\$0.00540	\$0.00556	\$0.00556	\$0.00000	\$0.00119
21 Underground Storage					\$0.01730	\$0.01846	\$0.01511	\$0.00000	\$0.01134
22 Distribution					\$0.29335	\$0.36088	\$0.14835	\$0.00000	\$0.08173
23 Common					\$0.16187	\$0.20555	\$0.06662	\$0.00000	\$0.03614
24 <b>Total Current Uniform Margin Melded Rate per</b>					<b>\$0.47792</b>	<b>\$0.59045</b>	<b>\$0.23564</b>	<b>\$0.00000</b>	<b>\$0.13040</b>
25 <b>Margin to Cost Ratio at Current Rates</b>					<b>1.00</b>	<b>0.96</b>	<b>1.28</b>	<b>0.00</b>	<b>1.07</b>
<b>Functional Cost Components at Proposed Rates</b>									
26 Production					446,254	318,120	124,701	0	3,433
27 Underground Storage					1,698,022	1,152,077	505,521	0	40,424
28 Distribution					26,821,976	21,855,334	4,686,568	0	280,074
29 Common					13,988,748	12,131,439	1,744,565	0	112,744
30 <b>Total Proposed Rate Revenue</b>					<b>42,955,000</b>	<b>35,456,969</b>	<b>7,061,356</b>	<b>0</b>	<b>436,675</b>
31 Exclude Cost of Gas w / Revenue Exp.					0	0	0	0	0
32 <b>Total Margin Revenue at Proposed Rates</b>					<b>42,955,000</b>	<b>35,456,969</b>	<b>7,061,356</b>	<b>0</b>	<b>436,675</b>
Margin per Therm at Proposed Rates									
33 Production					\$0.00540	\$0.00556	\$0.00556	\$0.00000	\$0.00119
34 Underground Storage					\$0.02056	\$0.02012	\$0.02252	\$0.00000	\$0.01398
35 Distribution					\$0.32473	\$0.38169	\$0.20880	\$0.00000	\$0.09687
36 Common					\$0.16936	\$0.21187	\$0.07772	\$0.00000	\$0.03900
37 <b>Total Proposed Margin Melded Rate per Therm</b>					<b>\$0.52006</b>	<b>\$0.61923</b>	<b>\$0.31460</b>	<b>\$0.00000</b>	<b>\$0.15104</b>
<b>Functional Cost Components at Uniform Proposed Return</b>									
38 Production					446,254	318,120	124,701	0	3,433
39 Underground Storage					1,653,244	1,222,836	392,474	0	37,934
40 Distribution					26,770,373	22,740,028	3,764,540	0	265,806
41 Common					14,085,129	12,399,821	1,575,256	0	110,051
42 <b>Total Uniform Proposed Cost</b>					<b>42,955,000</b>	<b>36,680,805</b>	<b>5,856,971</b>	<b>0</b>	<b>417,224</b>
43 Exclude Cost of Gas w / Revenue Exp.					0	0	0	0	0
44 <b>Total Uniform Proposed Margin</b>					<b>42,955,000</b>	<b>36,680,805</b>	<b>5,856,971</b>	<b>0</b>	<b>417,224</b>
Margin per Therm at Uniform Proposed Return									
45 Production					\$0.00540	\$0.00556	\$0.00556	\$0.00000	\$0.00119
46 Underground Storage					\$0.02002	\$0.02136	\$0.01749	\$0.00000	\$0.01312
47 Distribution					\$0.32411	\$0.39714	\$0.16772	\$0.00000	\$0.09194
48 Common					\$0.17053	\$0.21655	\$0.07018	\$0.00000	\$0.03806
49 <b>Total Proposed Uniform Margin Melded Rate pe</b>					<b>\$0.52006</b>	<b>\$0.64060</b>	<b>\$0.26094</b>	<b>\$0.00000</b>	<b>\$0.14431</b>
50 <b>Margin to Cost Ratio at Proposed Rates</b>					<b>1.00</b>	<b>0.97</b>	<b>1.21</b>	<b>0.00</b>	<b>1.05</b>
51 <b>Current Margin to Proposed Cost Ratio</b>					<b>0.92</b>	<b>0.88</b>	<b>1.16</b>	<b>0.00</b>	<b>0.96</b>

**AVISTA UTILITIES**  
 Summary by Classification with Unit Cost Analysis  
 For the Year Ended December 31, 2016

Natural Gas Utility  
 Idaho Jurisdiction

Line	Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
						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					8,465,240	5,488,549	2,832,608	0	144,083
2	Demand					9,037,567	6,265,411	2,611,627	0	160,529
3	Customer					21,972,193	20,537,009	1,338,120	0	97,064
4	Total Current Rate Revenue					39,475,000	32,290,969	6,782,356	0	401,675
Revenue per Therm at Current Rates										
5	Commodity					\$0.10249	\$0.09585	\$0.12620	\$0.00000	\$0.04984
6	Demand					\$0.10942	\$0.10942	\$0.11635	\$0.00000	\$0.05552
7	Customer					\$0.26602	\$0.35866	\$0.05962	\$0.00000	\$0.03357
8	Total Revenue per Therm at Current Rates					\$0.47792	\$0.56394	\$0.30217	\$0.00000	\$0.13893
Cost per Unit at Current Rates										
9	Commodity Cost per Therm					\$0.10249	\$0.09585	\$0.12620	\$0.00000	\$0.04984
10	Demand Cost per Peak Day Therms					\$15.48	\$14.31	\$20.01	\$0.00	\$10.18
11	Customer Cost per Customer per Month					\$22.88	\$21.77	\$78.45	\$0.00	\$1,348.10
<b>Cost by Classification at Uniform Current Return</b>										
12	Commodity					8,159,302	5,836,622	2,188,213	0	134,466
13	Demand					8,824,993	6,682,845	1,992,372	0	149,776
14	Customer					22,490,705	21,289,344	1,108,607	0	92,754
15	Total Uniform Current Cost					39,475,000	33,808,811	5,289,192	0	376,996
Cost per Therm at Current Return										
16	Commodity					\$0.09878	\$0.10193	\$0.09749	\$0.00000	\$0.04651
17	Demand					\$0.10684	\$0.11671	\$0.08876	\$0.00000	\$0.05181
18	Customer					\$0.27230	\$0.37180	\$0.04939	\$0.00000	\$0.03208
19	Total Cost per Therm at Current Return					\$0.47792	\$0.59045	\$0.23564	\$0.00000	\$0.13040
Cost per Unit at Uniform Current Return										
20	Commodity Cost per Therm					\$0.09878	\$0.10193	\$0.09749	\$0.00000	\$0.04651
21	Demand Cost per Peak Day Therms					\$15.11	\$15.27	\$15.27	\$0.00	\$9.50
22	Customer Cost per Customer per Month					\$23.42	\$22.57	\$64.99	\$0.00	\$1,288.25
23	<b>Revenue to Cost Ratio at Current Rates</b>					<b>1.00</b>	<b>0.96</b>	<b>1.28</b>	<b>0.00</b>	<b>1.07</b>
<b>Cost by Classification at Proposed Return by Schedule</b>										
24	Commodity					9,325,294	6,214,559	2,953,013	0	157,721
25	Demand					10,039,202	7,136,089	2,727,334	0	175,778
26	Customer					23,590,505	22,106,321	1,381,008	0	103,176
27	Total Proposed Rate Revenue					42,955,000	35,456,969	7,061,356	0	436,675
Revenue per Therm at Proposed Rates										
28	Commodity					\$0.11290	\$0.10853	\$0.13156	\$0.00000	\$0.05455
29	Demand					\$0.12154	\$0.12463	\$0.12151	\$0.00000	\$0.06080
30	Customer					\$0.28561	\$0.38607	\$0.06153	\$0.00000	\$0.03569
31	Total Revenue per Therm at Proposed Rates					\$0.52006	\$0.61923	\$0.31460	\$0.00000	\$0.15104
Cost per Unit at Proposed Rates										
32	Commodity Cost per Therm					\$0.11290	\$0.10853	\$0.13156	\$0.00000	\$0.05455
33	Demand Cost per Peak Day Therms					\$17.19	\$16.30	\$20.90	\$0.00	\$11.15
34	Customer Cost per Customer per Month					\$24.56	\$23.44	\$80.96	\$0.00	\$1,433.00
<b>Cost by Classification at Uniform Proposed Return</b>										
35	Commodity					9,078,597	6,495,211	2,433,245	0	150,141
36	Demand					9,867,812	7,472,666	2,227,843	0	167,303
37	Customer					24,008,591	22,712,928	1,195,883	0	99,779
38	Total Uniform Proposed Cost					42,955,000	36,680,805	5,856,971	0	417,224
Cost per Therm at Proposed Return										
39	Commodity					\$0.10991	\$0.11343	\$0.10841	\$0.00000	\$0.05193
40	Demand					\$0.11947	\$0.13050	\$0.09926	\$0.00000	\$0.05787
41	Customer					\$0.29067	\$0.39666	\$0.05328	\$0.00000	\$0.03451
42	Total Cost per Therm at Proposed Return					\$0.52006	\$0.64060	\$0.26094	\$0.00000	\$0.14431
Cost per Unit at Uniform Proposed Return										
43	Commodity Cost per Therm					\$0.10991	\$0.11343	\$0.10841	\$0.00000	\$0.05193
44	Demand Cost per Peak Day Therms					\$16.90	\$17.07	\$17.07	\$0.00	\$10.61
45	Customer Cost per Customer per Month					\$25.00	\$24.08	\$70.11	\$0.00	\$1,385.82
46	<b>Revenue to Cost Ratio at Proposed Rates</b>					<b>1.00</b>	<b>0.97</b>	<b>1.21</b>	<b>0.00</b>	<b>1.05</b>
47	<b>Current Revenue to Proposed Cost Ratio</b>					<b>0.92</b>	<b>0.88</b>	<b>1.16</b>	<b>0.00</b>	<b>0.96</b>

Company Base Case		AVISTA UTILITIES Customer Cost Analysis For the Year Ended December 31, 2016			Natural Gas Utility Idaho Jurisdiction					
Line	Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
						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					71,412,000	\$ 69,233,974	\$ 2,083,286	\$ -	\$ 94,740
2	Services Accum. Depr.					(31,121,000)	\$ (30,171,827)	\$ (907,886)	\$ -	\$ (41,287)
3	Total Services					40,291,000	39,062,147	1,175,400	0	53,453
4	Meters					25,635,000	\$ 22,279,576	\$ 3,218,056	\$ -	\$ 137,369
5	Meters Accum. Depr.					(8,478,000)	\$ (7,368,295)	\$ (1,064,274)	\$ -	\$ (45,431)
6	Total Meters					17,157,000	14,911,281	2,153,781	0	91,938
7	Total Rate Base					57,448,000	53,973,428	3,329,181	0	145,391
8	Return on Rate Base @ 7.62%					4,377,538	4,112,775	253,684	0	11,079
9	Tax Benefit of Interest Expense					(536,852)	(504,382)	(31,111)	0	(1,359)
10	Revenue Conversion Factor					0.61459	0.61459	0.61459	0.61459	0.61459
11	<b>Rate Base Revenue Requirement</b>					<b>6,249,184</b>	<b>5,871,221</b>	<b>362,148</b>	<b>0</b>	<b>15,816</b>
<b>Expenses</b>										
12	Services Depr Exp					1,793,000	\$ 1,738,315	\$ 52,307	\$ -	\$ 2,379
13	Meters Depr Exp					732,000	\$ 636,187	\$ 91,891	\$ -	\$ 3,923
14	Services Maintenance Exp					1,112,000	\$ 1,078,085	\$ 32,440	\$ -	\$ 1,475
15	Meters Maintenance Exp					712,000	\$ 618,805	\$ 89,380	\$ -	\$ 3,815
16	Meter Reading					242,000	\$ 237,684	\$ 4,298	\$ -	\$ 18
17	Billing					2,072,000	\$ 2,035,044	\$ 36,800	\$ -	\$ 155
18	Total Expenses					6,663,000	6,344,119	307,116	0	11,765
19	Revenue Conversion Factor					0.994886	0.994886	0.994886	0.994886	0.994886
20	<b>Expense Revenue Requirement</b>					<b>6,697,250</b>	<b>6,376,729</b>	<b>308,695</b>	<b>0</b>	<b>11,826</b>
21	<b>Total Meter, Service, Meter Reading, and</b>					<b>12,946,434</b>	<b>12,247,950</b>	<b>670,842</b>	<b>0</b>	<b>27,641</b>
22	Total Customer Bills					960,374	943,245	17,057	0	72
23	<b>Average Unit Cost per Month</b>					<b>\$13.48</b>	<b>\$12.98</b>	<b>\$39.33</b>	<b>\$0.00</b>	<b>\$383.91</b>
<b>Fixed Costs per Customer</b>										
24	Total Customer Related Cost					24,008,591	22,712,928	1,195,883	0	99,779
25	Customer Related Unit Cost per Month					\$25.00	\$24.08	\$70.11	\$0.00	\$1,385.82
26	Other Non-Gas Costs					18,946,409	13,967,876	4,661,088	0	317,445
27	Other Non-Gas Unit Cost per Month					\$19.73	\$14.81	\$273.27	\$0.00	\$4,408.96
28	<b>Total Fixed Unit Cost per Month</b>					<b>\$44.73</b>	<b>\$38.89</b>	<b>\$343.38</b>	<b>\$0.00</b>	<b>\$5,794.78</b>