Oregon

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January 29, 2015

Via Electronic Filing

OREGON PUBLIC UTILITY COMMISSION
ATTENTION: FILING CENTER
PO BOX 2148
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RE: Docket No. UG 284 – In the Matter of AVISTA CORPORATION, DBA AVISTA UTILITIES' Request for a General Rate Revision.

Enclosed for electronic filing in the above-captioned docket is the Public Utility Commission Staff's Exhibit 102.

/s/ Kay Barnes
Kay Barnes
Filing on Behalf of Public Utility Commission Staff
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c: UG 284 Service List (parties)

CASE: Docket No. UG 284
WITNESSES: MARIANNE GARDNER AND MATT MULDOON

PUBLIC UTILITY COMMISSION OF OREGON

STAFF EXHIBIT 102

Staff Testimony in Support of the Stipulation Resolving All Issues

January 29, 2015

Q. Please state your names and business address.

A. Our names are Marianne Gardner and Matt Muldoon. Our business address is 3930 Fairview Industrial Drive SE, Salem, Oregon 97302.

Q. Ms. Gardner, please state your occupation and your witness qualifications.

A. I am a Senior Revenue Requirement Analyst employed in the Rates, Finance, and Audit Section of the Energy Division of the Public Utility Commission of Oregon (OPUC). My qualifications are set forth in Exhibit 100, the Joint Testimony of the Stipulating Parties.

Q. Mr. Muldoon, please state your occupation and your witness qualifications.

A. I am employed as a Senior Financial Economist in the Rates, Finance, and Audit Section of the Commission's Energy Division. I am a graduate of Portland State University with a Masters of Business Administration with a certificate in Finance and a graduate of the University of Chicago with a Bachelor of Arts. I joined the PUC in April 2008. I have prepared, and defended formal testimony in contested hearings before the OPUC, Interstate Commerce Commission, U.S. Transportation Board, Washington Utilities and Transportation Commission and Oregon Department of Transportation. I have also prepared OPUC Staff ("Staff") testimony in Bonneville Power Administration rate cases. My qualifications are further set forth in Exhibit 100.

Q. Mr. Muldoon, which portions of this exhibit contain your testimony?

A. I am responsible just for the portion describing Staff's analysis and review of cost of capital and justification for the stipulated cost of capital.

Q. Ms. Gardner, which portions of this exhibit contain your testimony?

A. I am responsible for all other portions of this testimony. For Docket No. UG 284, I am the revenue requirement summary witness for Staff. As such, I introduce and summarize Staff's review of Avista Utilities' ("Avista", "AVA" or "Company") filing in this docket (except for cost of capital) as well as provide support for the settlement reached with Avista, Citizens' Utility Board of Oregon (CUB) and, Northwest Industrial Gas Users (NWIGU).

Q. What is the purpose of your testimony?

A. The purpose of our testimony is to provide additional information for specific issues in support of the Stipulation resolving all Issues ("Stipulation") and the joint testimony filed by the Parties in this docket. This testimony represents Staff's perspective on the issues only, and should not be construed as necessarily reflecting the positions or views of the other parties to the Stipulation.

Q. How is your testimony organized?

A. Staff's testimony is divided into two parts:

Part I explains the settlement.

Part II introduces the adjustments proposed by Staff.

PART I – EXPLANATION OF SETTLEMENT

Q. Please provide a list of issues that Staff reviewed and identify the Staff analyst who reviewed the issue and list the revenue requirement effect of the issue.

A. The table below provides item numbers for each revenue requirement topic reviewed by Staff, identifies the Staff analyst responsible for that review, and any resulting revenue requirement adjustment from the Company filing.

Table 1. Stipulated changes to Revenue Requirement ($ in thousands).

Company filed General Rate Case Required Change to Revenue Requirement			$9,140
Item	**Staff**	**Topic**	**Agreed Adjustment**
S-0	Matt Muldoon	**Rate of Return**	**($853)**
S-1.1, S-4.1	Marianne Gardner	**Revenue Sensitive – Uncollectible Rate and State Income Tax (SIT) Rate**	**($147)**
S-1	Marianne Gardner	**Uncollectibles**	**($39)**
S-2	Marianne Gardner	**Working Cash**	**($501)**
S-3	Marianne Gardner	**Interest Synchronization**	**$61**
S-4	Marianne Gardner	**SIT expense**	**($317)**
S-5	Marianne Gardner	**Escalation**	**($97)**
S-6	Deborah Garcia	**Advertising and Marketing**	**($40)**
S-7.1	Linnea Wittekind	**D&O Expense**	**($31)**
S-7.2	Linnea Wittekind	**Various A&G Expenses**	**($44)**
S-7.3	Linnea Wittekind	**Property Tax**	**$134**

S-7.4	Linnea Wittekind	**Insurance**	**($28)**
S-8	Jorge Ordonez & Judy Johnson	**Capital Additions**	**$286**
S-9	Jorge Ordonez	**Distribution O&M**	**($602)**
S-10	Erik Colville	**Other Gas Supply Expense**	**($60)**
S-11	Erik Colville	**Purchased Gas**	**($0)**
S-12	Paul Rossow	**Membership and Dues**	**($3)**
S-13	Linnea Wittekind	**Regulatory Commission Expense (Acct. 928)**	**($76)**
S-14	Marianne Gardner	**Allocation Factors**	**($100)**
S-15	Brian Bahr	**Incentives**	**($11)**
S-16	Brian Bahr	**Wages & Salaries**	**($108)**
S-17	Brian Bahr	**Medical Benefits**	**($170)**
S-18	Brian Bahr	**Pensions**	**($282)**
S-19	Suparna Bhattacharya and Robert Fonner	**Load Forecast**	**($0)**
Subtotal Adjustments			**($3,028)**
Revenue Requirement Change before adjustments to Schedules 497 and 491.			**$6,112**
Expiration of Schedule 497			**($262)**
Early Rate Implementation Credit Schedule 491			**($850)**
Net Revenue Increase Effective Mar. 1, 2015			**$5,000**

Q. Does the above summary represent all of the agreements incorporated into the Stipulation?

A. No. In addition to agreeing to revenue requirements, agreement was also reached on rate spread and rate design; Staff's perspective on this is also presented in this testimony.

PART II – DISCUSSION OF STIPULATED ISSUES AND STAFF REVIEW

Q. Mr. Muldoon, what is the purpose of your testimony?

A. The purpose of my testimony is to support three issues regarding Cost of Capital (CoC) stipulated in this docket:

1. **Capital Structure**

   Avista proposed 49 percent Long Term (LT) Debt, 51 percent Equity. Staff and parties support this proposal. I note that Avista has no preferred stock.

2. **Cost of LT Debt**

   The Company initially proposed 5.560 percent Cost of LT Debt.

   Staff and parties support a long-term cost of debt of 5.452 percent.

3. **Return on Common Equity** (**ROE**)

   Avista filed for a 9.9 percent ROE.

   Staff and parties support a ROE of 9.50 percent.

Q. What is your summary recommendation?

A. I recommend that the Commission adopt the Stipulation, which includes a 51 percent Equity Capital Structure, 5.452 percent Cost of LT Debt, and 9.50 percent ROE for Avista.

These recommendations are illustrated by the following three tables:

Table 1

AVA Current Authorized (UG 246 Order No. 14-015)			AVA
Component	**Percent of Total**	**Cost**	**Weighted Average**
Long Term Debt	52.00%	5.457%	2.838%
Preferred Stock	0.00%	0.00%	0.000%
Common Stock	48.00%	**9.650%**	4.632%
	100.00%		**7.470%**

Table 2

AVA Proposed (UG 284)			AVA
Component	**Percent of Total**	**Cost**	**Weighted Average**
Long Term Debt	49.00%	**5.560%**	2.724%
Preferred Stock	0.00%	0.00%	0.000%
Common Stock	**51.00%**	**9.900%**	5.049%
	100.00%		**7.773%**
AVA/200 Thies/Page 2 @14-16		AVA/200 Thies/Page 12 @14-21	

Table 3

Staff Recommended – UG 284		Stipulation Jan. 16, 2015		
Component	**Percent of Total**	**Cost**	**Weighted Average**	**ROR vs. Current**
Long Term Debt	**49.00%**	**5.452%**	2.671%	
Preferred Stock	0.00%		0.000%	**0.046%**
Common Stock	**51.00%**	**9.500%**	4.845%	
	100.00%		**7.516%**	

Q. Staff has not filed any testimony in this case as Staff settled prior to that event. Can you describe the analysis you conducted to determine why the settlement reached is well founded?

A. Staff analyzed the Company's responses to 56 multipart standard data requests and an additional eight multi-sectional follow up data requests. Further Staff relied on the same resources to update and rebuild its models using the same three-stage discounted cash flow methodologies as Staff utilized in Avista's last general rate case UG 246.

Q. As a preliminary matter, do Avista's Alaska Energy and Resources Company (AERC) operations affect Staff's Cost of Capital recommendations?

A. No.

Q. Do your recommendations reflect an Avista utility that has combined electric and natural gas operations?

A. No. As is traditional staff practice, Staff's analysis is based on the assumption that Avista is a natural gas utility only given that Avista only provides natural gas service in Oregon. The cost of capital should reflect the business risk of providing service in Oregon which is solely natural gas service.

OVERVIEW of CAPITAL COSTS and STRUCTURE

Q. Do the Stipulated ROE and ROR meet appropriate standards?

A. Yes. The 9.5 percent ROE and 7.516 percent ROR that the parties stipulated meet the *Hope* and *Bluefield* standards, as well as the requirements of Oregon Revised Statue (ORS) 756.040. Party recommendations are consistent with establishing "fair and reasonable rates" that are both "commensurate with the return on investments in other enterprises having corresponding risks" and "sufficient to ensure confidence in the financial integrity of the utility, allowing the utility to maintain its credit and attract capital."[1]

Q. Are these the same standards discussed in Avista's testimony?

A. Yes. Staff and Avista apply the same legal standards. The stipulated ROE and ROR are within the top of the range supported by Staff's modeling.

CAPITAL STRUCTURE

Q. Please explain staff's recommended capital structure.

A. Staff's supports the stipulated 51 percent equity and 49 percent debt capital structure as it takes into account Avista's issuance of common equity followed by two rounds of stock buybacks. The capital structure is reasonable and reflects Avista's current and projected equity ratios for the test period. Staff issued a number of data requests in this regard and most importantly, the reduction in the amount of stock buyback communicated by Avista supports the capital structure as proposed in Avista's filing.

Q. Have there been changes that merit altering repurchase targets.

A. Yes. Over the last year Avista's common stock has risen in price from $28 to $37.37 and closed January 20, 2015, at $36.87 a share.[2] It is reasonable for the Company to repurchase more stock when the price is lower and less as the price rises.

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1 *See* ORS 756.040(1)(a) and (b).

2 Staff accessed stock prices at yahoo.com finance on January 21, 2015.

COST of EQUITY / RETURN on EQUITY (ROE)

Q. Please describe the analysis underlying Staff's ROE recommendation.

A. I rely on two different multistage Discounted Cash Flow (DCF) models,[3] applied using a cohort group of peer utilities, to estimate the expected return on common equity required by Avista investors. This modeling methodology is identical to that described and employed by Staff in Avista's last rate case in Docket No. UG 246. In this docket, I completed my full analysis of estimating Avista's cost of equity as would be the case if this docket had not settled.

Q. Please provide a brief description of the two DCF models that you used.

A. The first model used by Staff is a conventional three-stage Discounted Dividend Model, which Staff denotes as a "30-year Three-stage Discounted Dividend Model with Terminal Valuation based on Growing Perpetuity" (hereinafter referred to as "Model X").

The second is the "30-year Three-stage Discounted Dividend Model with Terminal Valuation Based on P/E Ratio" (referred to as "Model Y").

Q. How do staff's two DCF models differ?

A. Model X uses the calculation of a growing perpetuity as part of the terminal valuation in 2042. This may be the most common approach used in multistage DCF models.

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3 *See*, in Docket No. UE 115, the Commission's discussion of multistage versus single stage DCF models in Order No. 01-777 at page 27.

Model Y uses the current price-earnings (P/E) ratio[4] multiplied by the estimated earnings per share (EPS) in 2045, which establishes the stock's "selling price" in 2044 for terminal valuation. I estimate the 2045 EPS analogously with methods used to estimate the 2044 dividend in both models; i.e., based on Value Line estimates to which multiple growth rates are sequentially applied.

Q. How did you select comparable companies to estimate Avista's ROE?

A. I used the following criteria to select Avista peer regulated utilities:

1. Covered by Value Line (VL) as a Gas Utility;
2. Forecasted by VL to have Positive Dividend Growth;
3. S&P Long-term Issuer Credit Rating from S&P at least BBB-;
4. No Decline in Annual Dividend in Last Five Years Based on SNL;
5. Has at least 80 percent Regulated Revenue *per* 2012 Form 10-K;
6. LT Debt under 56 percent of VL Capital Structure; and
7. Recent M&A Activity under 10 percent of VL Capitalization.

Q. Please identify Gas and Water Peers Selected by the Company and Staff.

A. Please see Table 5 below:

[4] "Current" in this context means the price obtained, as previously described, divided by Value Line's estimated 2014 earnings per share (EPS); i.e., it is a forward P/E, not an historical P/E.

Table 5

1	2	3	4	5	6	7	8
	Avista	**AVA**					
	Natural Gas		**Utility Continuity Screen**				
			1	**Sensitivity with AWK, MSEX, YORW**			
	UG 284	**UG**			**UG**		
	Abbreviated	**284**	**UG 246**	**UG 201**	**284**	**UG 246**	**UG 201**
#	**Utility**	**AVA**	**AVA**	**AVA**	**Staff**	**Staff**	**Staff**
-	**Avista**	No	No	No	No	No	No
1	AGL	**Yes**	Yes	Yes	No	Sensitivity	No
2	Atmos	**Yes**	Yes	Yes	No	No	No
3	Laclede	**Yes**	Yes	Yes	No	No	No
4	New Jersey	**Yes**	Yes	Yes	No	No	No
5	**Nicor**	**No**	No	Yes	**No**	No	Yes
6	NiSource	**Yes**	Yes	Yes	No	No	No
7	Northwest Natural	**Yes**	Yes	Yes	**Yes**	Yes	Yes
8	Piedmont	**Yes**	Yes	Yes	**Yes**	Yes	Yes
9	South Jersey	**Yes**	Yes	Yes	No	No	No
10	Southwest Gas	**Yes**	Yes	Yes	No	Sensitivity	Yes
11	UGI	**Yes**	No	Yes	No	No	No
12	WGL	**Yes**	Yes	Yes	No	No	No
13	American States	No	No	No	No	No	No
14	American Water	No	No	No	**Sensitivity**	Sensitivity	No
15	Aqua America	No	No	No	No	Sensitivity	No
16	CA Water	No	No	No	No	Sensitivity	No
17	CT Water	No	No	No	No	No	No
18	Consol Water	No	No	No	No	No	No
19	Middlesex Water	No	No	No	**Sensitivity**	No	No
20	SJW	No	No	No	No	No	No
21	York Water	No	No	No	**Sensitivity**	No	No

<u>Sensitivities</u>

Q. Did Staff consider all sensitivities last examined in Docket No. UG 246?

A. Yes. Staff performed robust analysis with sensitivity analysis, including Investor Owned Water Utilities (IOWU). Staff recommends the Commission continue to track IOWUs over a series of gas LDC rates cases, evaluating the potential for future use. Staff also modelled the Company's gas peer group and Avista's proposed electric utility group.

Growth Rates

Q. Did Staff change growth rate methodology in this rate case?

A. No. I relied on Value Line projections for the next five years and estimated growth rates in U.S. Gross Domestic Product (GDP) for the third stage period of 2024 through 2043. I used the same three methods in developing three different long-term growth rates as in the prior Avista rate case.

Q. What was different in growth rate calculation inputs?

A. Staff updated inputs to capture more current data. The key difference is that investor expectation of inflation as measured by Treasury Inflation Protected Securities (TIPS) dropped sharply.

Q. Can you provide a more succinct reference than Staff's synthetic forward curves derived from TIPS break even points with U.S. Treasuries (UST)?

A. Yes. The Wall Street Journal (WSJ) on January 16 showed the 10-year break-even rate implied by inflation-protected Treasury notes at just 1.6 percent and the 30-year implied rate of inflation at just 1.8 percent – markedly below historic inflation rates. Market expected levels of inflation are also below the Fed target of 2 percent for a healthy growing economy.[5]

Q. Do Staff's calculations fully reflect inflation expectations of the WSJ?

5 "U.S. May Soon Join Deflation Club – Market Expectations of Inflation Over Long Periods are Unusually Low" by Spencer Jakab, WSJ, January 16, 2015.

A. No. Staff uses aggregate average quarterly data in its modeling. Staff's higher growth rate inputs are from the third quarter of 2014. Staff's methods smooth temporary spikes in markets and expectations, but do not yet capture lower current inflation expectations. However, Staff's timing for data draws is consistent with overall timing of the Company's rate case.

Common Equity Flotation Costs

Q. Did Staff's calculation of ROE contain an upward adjustment to address equity flotation costs?

A. Yes. Staff's calculations included an upward 12.5 vasis points (bps) adjustment for equity flotation costs, which in settlement was rounded to 13 bps.

Q. What ROE do you recommend for Avista?

A. In using Staff models, for natural gas companies combined with the Blue Chip growth rate, the resulting ROE is 9.5 percent inclusive of stock issuance costs of 13 bps upward adjustment for common equity flotation costs. Some of the other Staff models result in lower ROE estimates, but the stipulated 9.5 percent is within the range of Staff estimates.

Q. Isn't Avista conducting stock buybacks rather than issuing stock now, and didn't the last issuance of common equity have lower than benchmark flotation costs in the purchase of AERC?

A. Yes, however, the flotation costs adjustments Staff proposes reflect a uniform fair treatment for the retirement of flotation costs across jurisdictional utilities.

The benchmarking and analysis of this approach is still under development by Staff in a number of state commissions including Oregon and Mississippi.[6]

Q. In the last Avista general rate case, the Commission adopted a ROE of 9.65 percent. What are the reasons as to why a drop in ROE is reasonable?

A. Interest rates in general have fallen since the issuance of the last Commission general rate case order. In addition there has been a global flight to quality which tends to push utility stock prices higher and thereby to reduce the dividend yield. And investor inflation expectations have fallen sharply.

Q. What U.S. Urban Consumer Price Index Change did the Oregon Office of Economic Analysis November 13, 2014, Economic Forecast project between 2014 and 2015?

A. Relying on federal inputs, Appendix A of the report projected the U.S. CPI percent change would drop from 1.8 percent to 1.4 percent in 2015.

COST of LT DEBT

Q. The Company proposed a 5.560 percent Cost of LT Debt. Why is the lower stipulated 5.452 percent Cost of LT Debt reasonable?

A. The Company's filing included two issuances of planned pro forma debt that was projected to be issued at higher interest rates. Given the decline in interest rates, and based on Staff expected spreads from U.S. Treasuries, Staff

6 Please note that Mississippi Public Service Commission equity flotation cost modeling agrees with Staff's findings to date.

projected that Avista would be able to issue its debt at lower interest rates. This reduces Avista’s cost of debt.

1 **Q. How have interest rates changed over the recent past?**

A. Global events and uncertainty dramatically impacted U.S. Treasury (UST) yields in the past year. Instead of smooth healthy GDP growth supporting rising UST yields, the US economy was a roller coaster with a terrible first quarter, a fabulous third quarter, and lackluster rest of the year. The U.S. economy was healthy enough for the U.S. Federal Reserve (Fed) to end its “quantitative easing” (QE) bond-buying program.

However, oil prices dropped by half while insurgencies grew in the Middle East and Ukraine. While generally supportive of the US economy, oil exporter currencies such as the Russian ruble fell precipitously against the dollar.

The strong dollar, expectations of eventual federal action to raise interest rates and relative safety made UST, US Bonds and US Securities, particularly those paying dividends, the target of a wave of foreign investment. In other words, UST are an international market and the conditions in the world need to be taken into account rather than merely looking at the US in isolation.

2 **Q. How did that impact UST?**

A. UST yields fell rather than rose over the last 12 months. The 10-year benchmark UST note fell as low as 1.777 percent on January 15, 2015. The 30-year UST Bond fell to a record low of 2.413 percent on the same date.

3 **Q. How did that impact utility bond spreads over UST?**

A. Spreads widened but Avista was able to issue 30-year bonds at a coupon rate of 4.110 percent settled December 15, 2014. In addition, the Company's planned bond issuance for September of this year now faces more favorable market rates.

Q. Did the Company enter into any financial hedges that were not reflected in the Company's filing?

A. Yes.

Q. How did the Company's financial hedges fare given these surprises?

A. Despite a sharp reversal from economist expectations of a near term rising interest rate environment, Avista was able to settle the hedges associated with issuances in the test year time frame with a mix of wins and losses. These gains and losses are structured into the all-in issuance costs addressed in settlement.

Q. What was the impact on the Company's debt maturity profile?

A. Because Avista has staggered debt maturities, the Company faces only routine challenges in its overall debt maturity profile.

Q. Does this conclude your testimony?

A. Yes.

Q. Ms. Gardner, could you please provide a general summary of the remaining adjustments, S-1 through S-19.

A. Yes. Adjustments S-4, State Taxes, S-7.3, Property Tax and S-7.4, Insurance all reflect Company updates to the Forecasted 2015 test year based on actual 2013 and 2014 calendar results. Adjustments S-1.1, Uncollectible Rate, S-1

Uncollectible Expense, S-3, Interest Synchronization, S-5, Escalation, S-6, Advertising and Marketing, S-7.1, D&O, S-7.2, Various A7G, S-9, Distribution O&M, S-12, Memberships and Dues, S-15, Incentives, S-16, Wages and Salaries, and S-17, Medical Benefits are based on Staff's view of existing Commission policy. Adjustments S-2, Working Cash, S-4.1, State Effective Tax Rate, S-8, Capital Additions, S-10, Other Gas Supply, S-13, Regulatory Commission Expense, S-14, Allocation Factors, S-18, Pensions, and S-19, Load Forecast, are agreed upon adjustments for settlement purposes. Staff believes these adjustments result in a settled revenue requirement that is reasonable. A further discussion of these adjustments is provided in the following testimony.

Q. What areas of Avista's filing were you primarily responsible for reviewing?

A. I verified Avista's proposed revenue requirement utilizing Staff's revenue requirement model. This model was also used to calculate Staff's modified revenue requirement incorporating Staff's proposed adjustments to Avista's test year.

Additionally, I reviewed the portions of the filing related to Uncollectible expense, Amortization expense, Prepaid expense, State Income Tax (SIT) and Federal Income Tax (FIT), Working Capital allowance, Escalation, Cost Allocation Factors, and assisted in the review of Material and Supplies Inventory. In order to gain additional insight, I reviewed the Company's responses to related Standard Data Requests (SDR), issued approximately 30 data requests, reviewed the Company's responses to my data requests, as well as multiple data requests in these areas submitted by other Staff and Parties.

Q. What is the change to the Company's filed Revenue Requirement related to Uncollectible expense?

A. The Stipulation reduces the Uncollectible expense rate (S-1.1) which in turn results in a decrease in Uncollectible expense (S.1). This is a decrease in revenue requirement of $3,000 and $39,000 respectively. This is consistent with a long-standing Commission policy of using a 3-year average of net write-offs to calculate the uncollectible rate. The Company's filed Uncollectible rate was based on a slightly different calculation in that it averaged the yearly rate. The Parties have agreed to Staff's revenue requirement adjustment for settlement purposes.

Q. Is there a change to the Company's general rate filing SIT expense related to the 2015 test year?

A. Yes. For adjustment S-4.1 relating to the effective SIT rate, Staff and the Company both utilized an apportionment method to calculate the effective SIT rate. However, the Company and Staff rates varied primarily due to each Party's forecasted level of Oregon business tax credits. Additionally, the Company's forecasted SIT expense was adjusted in S-4, State Income Tax expense. The Company's filed revenue requirement included an estimate of their 2013 Oregon SIT expense which was overstated according to the Company's 2013 Oregon Corporate Tax return filed in September

2014. Parties agreed for settlement purposes to lower the effective SIT rate and SIT expense which results in a revenue requirement decrease of $150,000 and $317,000 respectively.

Q. What adjustment to Avista's proposed Working Capital addition is reflected in the Stipulation?

A. The Stipulation excludes Avista's proposed addition of $4.641 million to rate base for Working Capital on an Oregon-allocated basis. In the Company's filing, Avista employed the Investor Supplied Working Capital Method (ISWC), a balance sheet approach, to calculate Working Capital on a Company-wide basis rather than a regulated gas operations basis. Staff considers the natural gas and electric industries to be sufficiently different which, compromises the accuracy of the Working Capital allocation to Oregon.

Prior to the last rate case, UG 246, the Commission had not granted Working Cash to Avista. UG 201 was the first rate case that Avista requested Working Capital be included in rate base. In UG 201, Staff recommended the requested amount be removed in its entirety from rate base and, for settlement purposes, Stipulating Parties agreed to this treatment. However, for settlement purposes in UG 246, Staff offered to include FERC Account 154 (Plant Materials and Supplies) on an Oregon-allocated basis in rate base. For settlement purposes in UG 284, Staff offered the same treatment as in UG 246.

For the Stipulation, Parties have agreed to decrease rate base by $4,641 million and to leave intact Avista's inclusion of FERC Account 154 (Plant

Material and Supplies) Oregon-allocated balance of $2.087 million in rate base.

Staff issued 13 data requests pertaining to Account 154 and reviewed the base year inventory transactions. No anomalies were noted. In addition, Staff's historical trend analysis revealed a relatively smooth level of Materials and Supplies Inventory. Therefore, the forecasted 2015 amount for Account 154 set forth in the Stipulation appears reasonable. Including Account 154 in rate base will allow Avista to earn a rate of return on Net Plant, Gas Inventories, and on Plant Material and Supplies. The net outcome of this adjustment (S-2) is a decrease to revenue requirement of $481,000.

Q. Did the Parties make an adjustment to synchronize Interest expense?

A. Yes. According to standard practice, Interest expense has been adjusted based on the stipulated Capital Structure and Cost of Equity. This adjustment (S-3) adds $61,000 to revenue requirement. The Parties have agreed to this revenue requirement increase.

Q. Does the Stipulation reflect any adjustments made for Escalation or Allocation Factors?

A. Yes. Avista's percentages used to escalate non-labor O&M and A&G expenses differed from the All-Urban (US) CPI published by the Oregon Department of Administrative Service, Office of Economic Analysis, which Staff has historically used to compute escalation. Staff based its estimate of the 2015 (test year) expense by escalating Avista's 2013 actual adjusted expenses using the All-Urban (US) CPI. To avoid double counting, Staff first removed other Staff adjustments from the 2013 adjusted expenses. The Parties agreed to Staff's CPI values for the purpose of settlement. As a result the revenue requirement was decreased by $97,000 (S-5).

Also, Parties agreed to a reduction in revenue requirement of $100,000 (S-14) to reflect a change in Oregon's Allocation Factor percentages due to a correction to Avista's 2013 base year Atmospheric Testing expense

Q. Please provide a discussion of the issues or areas that additional Staff persons reviewed.

A. I have summarized the issues by assigned Staff along with a discussion of their reviews and recommendations prepared for me, which I am incorporating in this testimony.

<u>Assigned Staff: Deborah Garcia</u>

<u>Issue: Advertising and Marketing (S-6)</u>

The stipulated adjustment represents a reasonable resolution between the amount proposed by the Company to be included in rates and the amount proposed by Staff. For these particular accounts, there is no Commission precedent related to Staff's initial adjustment other than a general approach of applying All Urban/US CPI to an actual historical account balance to reflect a reasonable amount for a forecast test year. Because of the fluctuation in annual account balances, the outcome of Staff's adjustment calculation would vary depending on the historical year that is chosen to be escalated to a future test year amount. Staff chose to use 2012 as the base year and the Company used 2013. The stipulated compromise adjustment reflects approximately 53 percent of Staff's initial proposed adjustment.

For the accounts that are subject to the limitations of OAR 860-026-0022(3), the Company's proposed test year account balances met the requirements of the rule.

Staff utilized the responses to Standard Data Request Nos. 57, 58, 107 a.-f., and Data Request No. 180. Staff also relied on Andrews workpapers filed in the case.

Assigned Staff: Linnea Wittekind

Issue: Taxes Other Than Income (S-7.3)

For this issue, Staff primarily analyzed the Company's proposed property tax expense of $2.3 million, using the responses from the Company to 18 data requests. After further inquiry from Staff, the Company determined there was additional property tax expense based on the actual tax assessments for July 2014 through June 2015 fiscal year. Staff was able to verify this additional property tax expense amount and the dollar amount in the Stipulation includes it.

Issue: Administrative and General Expenses (S-7.1, S-7.2 and S-7.4)

In reviewing A&G costs, Staff analyzed three general issues:

1) Meals and entertainment;
2) Insurance; and
3) Miscellaneous.

Regarding these issues, Staff issued 23 data requests to the Company. Staff analyzed the Company's insurance, and found the escalations from 2013 to the test year to be reasonable and supported by documentation. Additionally, Avista proposed an update to insurance expense, which Staff supports. Staff followed Commission precedent in recommending equal sharing of excess layers of director and officer insurance.

In reviewing the Company's non-labor expenses, Staff identified all or a portion of miscellaneous expenses relating to meals for removal, to which the Parties have stipulated.

Issue: FERC 928 (S-13)

Upon review of FERC Account 928-Regulatory Expense, Staff noticed a significant increase in 2013 as compared to years 2010 through 2012. Staff filed seven data requests in regards to the increase in this expense. After analysis of the increase, Staff proposed a three-year average to the labor and non-labor (excluding regulatory fees) portion of this expense. In Staff's opinion the three-year average will smooth the increase and create a more appropriate base for forecasting. In settlement the Company, agrees with this approach and it is reflected in the Stipulation.

Assigned Staff: Jorge Ordonez and Judy Johnson

Issue: Capital Additions to Rate Base (S-8)

Staff reviewed the Company-proposed Capital additions to be added into its rate base. In the discovery stage of the general rate case, Staff issued 11 data requests to which the Company responded in multiple initial and supplemental responses. Generally, Staff reviewed the in-service dates of all Capital additions to make sure that any capital addition put into rate base complies with the used and useful approach. In particular, Staff reviewed the prudency of major investments including the Customer Information System (CIS) project (Expenditure Requisition (ER) 5138). Staff reviewed the CIS project during 2014. The Company states that the in-service date for the CIS is early February 2015. Avista will provide an attestation from an officer of the Company when the CIS is completed and functioning. From Staff's perspective, the Company's decision to pursue this project was prudent and should be allowed into rate base per the Stipulation terms. In addition, Staff discovered that Avista had one truck that was assigned to Oregon that should have been assigned instead to Washington, so a small adjustment was made. The Company accepted this adjustment.

Assigned Staff: Jorge Ordonez

Issue: Distribution O&M (S-9)

In its initial filing, the Company proposed increasing its Distribution O&M Expenses by approximately $0.24 million (≈2.9 percent; ≈1.4 percent on an annual basis), from $8.06 million (2013 historical year) to approximately $8.30 million (2015 test year). The $0.24 million comprises several minor adjustments such as allocation factor adjustment, consumer price index, and labor and benefit adjustment.

The 2013 historical year expenses of $8.06 million included expenses related to the Atmospheric Corrosion Testing Program, which is a federally mandated program that requires the Company to inspect all above-ground steel pipelines at a frequency not to exceed once every three years.

Staff issued Staff Data Request (DR) 128 for a complete breakdown of the approximately $8.06 million in 2013 historical year Distribution O&M Expenses. The Company provided a transaction detail of the amounts comprising the $8.06 million. The Company also represented that two major programs (i.e., Atmospheric Corrosion Testing Program and Leak Survey Program) were represented in the $8.06 million amount, without mentioning how much of the $8.06 million amount was comprised of these programs. Staff requested that the Company supplement Staff DR 128 with the expenses associated with the Atmospheric Corrosion Testing Program and Leak Survey Program.

In Avista's Supplemental Revised Response to Staff DR 128, the Company provided the information requested and reduced its Distribution O&M Expenses by $567,043 from approximately $8.30 million for the 2015 Test Year to approximately $7.73 million. This reduction is mainly because the $8.06 million in 2013 historical year incorrectly included the entire amount of the survey portion of the Atmospheric Corrosion Testing Program. Only one third of such expenses should be included because the Company completes this program on a three-year rotation between its three jurisdictions (Oregon, Idaho, and Washington).

Assigned Staff: Erik Colville

Issue: Other Gas Supply Expense (S-10)

For the 4-year period of 2011 through 2014, there appears to be a downward trend developing for the Other Gas Supply Expense. Staff DR 140 requested historical data. A response and two revised responses to DR 140 were received from Avista. The revised responses corrected the 2011 and 2014 historical data provided initially. DR 299 requested an explanation from Avista of what condition changes cause the 2011 data inflection point and change in an earlier multi-year trend. Avista's response to Staff DR 299 discussed costs in 2011 that are non-recurring and would reduce the 2011 trend starting point. The response did not address the conditions that caused the 2011 data inflection point or the continuing decrease in expenses for 2012, 2013 and 2014. Without a reason to discount the downward trend, Staff's analysis approach is to set the Other Gas Supply Expense for 2015 so that it lies on the 4-year trend line which begins in 2011. The resulting Staff proposed Other Gas Supply Expense for 2015 is $514,000, reduced $60,000 from Avista's proposed expense.

Issue: Purchased Gas Expense (S-11)

The actual cost of gas is reconciled with customers each year in the PGA. Therefore, Parties agree no revenue requirement adjustment is necessary in UG 284.

Assigned Staff: Paul Rossow

Issue: Membership and Dues (S-12)

Staff reviewed the Company's proposed memberships and dues. During the discovery stage of the case, Staff issued 16 data requests pertaining to Avista's Memberships and Dues. Based on existing Commission policy, Staff removed an additional $3,131, which is reflected in the amount set forth in the Stipulation.

<u>Assigned Staff: Brian Bahr</u>

<u>Issue: Incentive Compensation (S-15)</u>

Staff reviewed the Company-proposed incentive compensation. In the discovery stage of the general rate case, Staff issued 19 data requests in addition to the standard data requests. Staff proposed removal of 50 percent of all capitalized incentives included in rate base (the Company began capitalizing incentives only in 2013) as well as following Commission precedent of removal of 100 percent of executive bonuses, 75 percent of performance-based incentives, and 50 percent of merit-based incentives. These adjustments are reflected in the Stipulation.

<u>Issue: Wages and Salaries (S-16)</u>

Staff reviewed the Company-proposed labor, wages, and salary. In the discovery stage of the general rate case, Staff issued 9 data requests in addition to the standard data requests. Staff proposed reducing the Company's FTE to account for a historical trend indicating a reduction in union employees and followed the wage and salary model employed by Staff for over 30 years in adjusting the Company's wage and salary levels for regular time and overtime. These adjustments are reflected in the Stipulation.

<u>Issue: Medical Benefits (S-17)</u>

Staff reviewed the Company-proposed medical benefits. In the discovery stage of the general rate case, Staff issued 11 data requests in addition to the standard data requests. Staff proposed removal of 10 percent of the Company's forecasted test year costs based on historical trends of actual costs versus forecasted. Staff also proposed reducing the premium sharing for non-union employees from 90/10 to 82/18 in accordance with industry averages reported in a survey performed by the Kaiser Family Foundation. These adjustments are reflected in the Stipulation.

<u>Issue: Pensions (S-18)</u>

Staff reviewed the Company-proposed pension costs. In the discovery stage of the general rate case, Staff issued 6 data requests in addition to the standard data requests. Staff proposed removal from rate base the Company's prepaid pension asset (net of associated accumulated deferred tax credit) and the associated debt interest expense. Staff also proposed maintaining the "status quo" for pension cost recovery until the resolution of Docket No. UM 1633 as was agreed to in Avista's most recent rate case, UG 246, as well. These adjustments are reflected in the Stipulation.

<u>Assigned Staff: Suparna Bhattacharya and Robert Fonner</u>

<u>Issue: Load Forecast (S-19)</u>

The Avista natural gas sales forecast is the sum of total sales across all rate classes/schedules. Avista developed natural gas sales forecast for each rate schedule (class). For a given rate class (r), total sales is measured as the product of Use per Customer (UPC) and the number of customers. In the equation format, sales forecast at a given point in time (t) can be expressed as:

$$\boldsymbol{Sales_t = \sum_r (UPC_{r,t} \; X \; Customers_{r,t})}$$

For each rate class (r), the Company developed ARIMA based time series model for UPC and ARIMA-based time series model or simple regression model for the number of customers.

i. UPC: The Company's UPC model primarily considered seasonal dummies (SDs), heating degree days (HDDS), gas price, trend function, dummies for outliers (OLs), and autoregressive errors as explanatory variables.

ii. Number of customers: The Company's time series customer count model considered SDs, OLs, and autoregressive errors as explanatory variables. Based on the Company's response to Staff's Data Request 145 as well as further discussions through conference calls, Staff understands that the Company performed post-estimation adjustment so that the Company's baseline residential customer forecast model is in line with the Company's population growth forecast model. These adjustments are done so that the final annual growth rate of forecasted residential customers matches the population growth rate.[7]

While reviewing the Company's forecast models, Staff submitted 7 initial and 11 follow up data requests related to sales forecast. Staff focused on both components of the sales forecast - number of customers and UPC and identified the following issues:

i. *Restricted Sample Size*
The entire time-period (i.e., from January 2005 to April 2014 for which data is available) has not been used for some customer and use per customer models. Based on the Company's response to Staff's Data Request 291 and conference calls, Staff understands that the explanation for selecting a subset of the sample is not based on any statistical tests, and thus is inconsistent with the standard econometric model building practices.

ii. *Omitted Variable Bias*

[7] The Company considered U.S. and CA employment growth as explanatory variables and forecast five year population growth for the Jackson county, OR (Medford MSA) using Ordinary Least square regression (OLS). The Company's population forecast and Global Insight's (GI) population forecast is averaged and residential customer forecasts for Medford schedule 410 is escalated to match with the average population growth rate. For the other three regions – Klamath Falls, Roseburg, and LaGrande, GI's population growth forecast is used to match with the Company's baseline schedule 410 residential customer forecasts. The customer forecast for residential schedule 410 is used as a variable to forecast commercial customers.

As mentioned above, the Company forecasts population and residential customers separately and escalates the forecasted residential customer counts by the population growth where necessary. The current residential customer count model is essentially subject to omitted variable bias i.e., the coefficients of the variables in the model are capturing the effects of key economic drivers (such as population and/or housing starts) that are missing in the model.

iii. *Model Assumptions*
Staff replicated the Company's forecast models and found that some of the models fail to reject autocorrelation of errors. One of the important assumptions for time-series models is that errors be uncorrelated. Appropriate statistical tests are performed to check for autocorrelation and ARIMA error correction terms are included in the model, otherwise parameter estimates derived from regression models could be inefficient.

Staff considered the above given issues while developing customer and use per customer models. Here are the following steps:

i. The entire available data (i.e., from Jan 2005 to Apr 2014) is considered to forecast number of customers and use per customer from the time period May 2014 to Dec 2019.

ii. Various model specifications are evaluated and the decision to include economic forecast drivers in the final model is rooted in economic theory, as well as testing with data. Specifically:

a) An integrated ARIMA-based number of customers model is developed for residential and commercial sectors with population and housing starts as key economic drivers. Staff has no post-estimation adjustments to the residential and commercial customers' models. The economic drivers in all the models are significant and have positive association with the response variable.

b) An ARIMA-based use per customer model is estimated with additional economic drivers such as real personal income, total non-farm employment, and gross metropolitan product as explanatory variables, along with weather and seasonal variables. The economic drivers in all the models are significant and have positive association with the response variable.

c) In order to capture the pre- and post- recession effects, recession dummy variables are included.

d) For model performance, Staff examined the model's fit with the historical data on which it was developed, significance and association of the explanatory variables, model assumptions such as error autocorrelation and normality, statistical fit criterions such as AICs and SBCs (indicators of time series model performance), as well as overall credibility of the results.

iii. Revenue calculation: Staff incorporated the inputs (i.e., total number of customers and total therms) generated from Staff's models into the Company's revenue requirement model to calculate the increase or decrease in revenue for all schedules for the test year 2015. Staff used the excel file that the Company provided to Staff's supplemental data request 243, in order to adjust the inputs for the revenue model.

iv. Table 1 below presents Staff's revenue adjustment and the Company's filed revenue for all schedules rounded to thousands of dollars. The total revenue increase based on Staff's adjustments is approximately $530,000 (rounded). The increase in Staff's revenue is primarily due to higher customer forecasts generated by Staff's models and to a considerable extent due to higher use per customer forecasts from Staff's models.

Table 1. Summary of Revenue Requirement for the Test Year 2015 ($ 000)

	RESID. SCH.D. 410	GEN SVC SCH. 420	LG GEN SVC SCH.. 424	INTERR. SCH.. 440	SEASONAL SCH.. 444	TRANSP. SCH.. 456	SP CONTR. SCH.. 447	Total
Staff Rev.	61,690	28,316	3,148	1,930	191	3,142	327	98,744
Company Filed Rev.	61,342	27,875	3,376	2,030	198	3,075	320	98,216
Difference	348	441	(228)	(100)	(7)	67	7	528

Avista and Staff did not agree on which forecast is best. While Staff and the Company were relatively close in use-per-customer estimates, the key difference was on the forecast of number of customers. A creative resolution was developed that essentially allowed for the issue to be settled without requiring the Commission to make a finding on whose forecast is best. The Stipulation incorporates this resolution whereby the number of customers, by rate class, will be tracked on a monthly basis. Beginning on March 1, 2015, Avista will compare, on a monthly basis, the actual number of its Oregon customers at the end of each month, by rate schedule, to the number of customers included in the Company's general rate case (i.e., "base" number of customers). If the actual number of customers in the month is higher than the base level, the margin associated with the number of customers above the base level of customers will be deferred, by rate schedule, and returned on an equal percent margin basis across all customers. If the actual number of customers in the month is less than the base number of customers, there will be no deferral recorded for that month. The maximum amount that can be deferred is $530,000 in any consecutive twelve-month period. This resolution has the benefit of incorporating Staff's forecast, and resulting margins being credited to customers with interest, if in fact that occurs in reality; and if the actual number of customers turns out to be less than the Company's forecast, then no adjustment takes place. This ensures that any downside economic risk is not shifted onto customers. This mechanism will remain in place until new rates go into effect in compliance with a Commission order pursuant to an Avista general rate filing.

Assigned Staff: George Compton

Other Issue: Long Run Incremental Cost Study (LRIC), Rate Spread and Rate Design

Staff submitted several data requests relating to Long Run Incremental Cost (LRIC) issues, as well as preparing summary proposals relating to LRIC, rate spread and rate design to take into account Staff's analysis. The three primary LRIC recommendations by Staff are described in the next three paragraphs.

After analyzing cost study issues and Staff LRIC analysis, Staff supports this Stipulation and the Parties' resolution of Rate Design and Rate Spread Issues. The rate spread incorporated in the Stipulation is justified on a cost basis using the Company's LRIC study as well as Staff's alternative that it developed in preparing its review of the filing.

a. Natural Gas Planning

While the allocation of Natural Gas Planning is on a volumetric basis rather than on a customer-count basis, in Staff's view, much more is required in the commodity-source/portfolio planning for large retail customers than for small customers. This adjustment though has little or no effect on the final outcome in this docket. Future rate cases can be simplified by reducing the number of contested elements.

b. Core Main Costs

Core main costs were allocated on the basis of a combination of annual consumption (safety-related) and peak-day consumption (demand-related). The distinction with the Company's approach is that the latter also pulled out recent core main construction investments, more of which were classified as safety-related (and allocated on the basis on energy or annual volumes) than as demand-related (and allocated on the basis on peak day volumes). It was Staff's contention that, if indeed the entire system were to be valued as if brand new, then additional construction/retrofits would not be needed. This is not to argue that core main costs should be allocated entirely on the basis of peak-day demand. The proper mix of demand- and energy-related cost attribution is largely a judgment call that will be left open for the next and likely future general rate cases.

c. Storage Investment

Storage investment is allocated on the basis of January sales rather than annual sales. Summertime commodity purchases reduce January costs in two ways: system average costs are brought down due to the ability to average-in what are typically the year's lowest commodity costs; the utility is able to reduce its peak-period purchase contract costs (driven be mid-winter season loads) by being able rely in part on storage draw-downs rather the contract expansions.

Q. Do any or *even* all combined of the adjustments that have just been described above affect the numerical results contained in the Rate Spread table that was adopted in the Settlement?

A. No. On a qualitative basis, as stated above, the stipulated-to amounts would be justified by both the Company's filed cost of service study and Staff's alternative. While the bottom-line numbers were not affected in *this* case, they very well may be affected in *future* cases. As the Stipulation reads (*see* page 8), "The Parties agree that in future rate cases filed by the Company, it will make the following adjustments to its Long Run Incremental Cost study:" -- referring to the items contained in the previous three paragraphs. (While that might limit the Company's filings, other Parties are always free to take contrary positions.)

Q. Ms. Gardner and Mr. Muldoon, does this conclude your testimony?

A. Yes.

CERTIFICATE OF SERVICE

UG 284

I certify that I have, this day, served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 29th day of January, 2015 at Salem, Oregon

Kay KBarnes

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