**Exhibit No. \_\_\_ CT (KHB-1TC)**

**Dockets UE-120436, et al.**

**Witness: Kathryn H. Breda**

**REDACTED VERSION**

**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

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| **WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,**  **Complainant,** **v.****AVISTA CORPORATION, d/b/a AVISTA UTILITIES,**  **Respondent.****WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,** **Complainant,****v.****AVISTA CORPORATION d/b/a AVISTA UTILITIES,** **Respondent.** | **DOCKETS UE-120436/UG-120437** **(*consolidated)*****DOCKETS UE-110876/UG-110877** ***(consolidated)*** |

**TESTIMONY OF**

**Kathryn H. Breda**

**STAFF OF**

**WASHINGTON UTILITIES AND**

**TRANSPORTATION COMMISSION**

***Attrition Study, Overall Electric and Natural Gas Revenue Requirement, Deferred Maintenance, Allocations, and Renewable Energy Credit Revenues***

**September 19, 2012**

**CONFIDENTIAL PER PROTECTIVE ORDER IN DOCKETS UE-120436 ET AL.**

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**I. INTRODUCTION**

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

A. My name is Kathryn H. Breda**.** My business address is The Richard Hemstad Building, 1300 S. Evergreen Park Drive S.W., P.O. Box 47250, Olympia, WA 98504. My email address is kbreda@utc.wa.gov.

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

A. I am employed by the Washington Utilities and Transportation Commission (Commission) as a Regulatory Analyst.

**Q. How long have you been employed by the Commission?**

A. I have been employed by the Commission since 2008.

**Q Would you please state your educational and professional background?**

A. I graduated from the University of Washington in 1980, receiving a Bachelor of Arts in Business Administration with a major in Accounting. I am a licensed Certified Public Accountant in the State of Washington.

 My responsibilities at the Commission generally comprise financial, accounting and other analyses in general rate cases, accounting petitions, other tariff filings, and compliance filings. I testified in Dockets UE-111190, UE-100749 and UE-090704, and participated in Staff’s review of Dockets UE-110876/UG-110877, UE-100467/UG-100468, UE-090134/UG-090134, UE-090205, UE-080220 and UG-080546.

Prior to my employment with the Commission, I held various corporate accounting and regulatory management positions from 1980 through 2000 with Qwest Communication in Seattle and Pacific Gas and Electric Company in San Francisco.

**II. SCOPE AND SUMMARY OF TESTIMONY**

**Q. What is the purpose of your testimony?**

A. The primary purpose of my testimony is to present Staff’s recommendation regarding attrition. I have prepared an attrition study and discuss the results in Section VIII.

 I also address the disposition of Avista Colstrip and Coyote Springs 2 deferred maintenance mechanism (Section V), future considerations for allocations (Section VI), and proper treatment of revenues from sales of renewable energy credits (RECs) (Section VII).

 In Section IV, I present Staff’s recommendation for the following adjustments:

1) Staff Adjustment 1.04, Electric and Natural Gas - Federal Income Tax Correction

2) Adjustment 2.16, Electric - Colstrip and Coyote Springs 2 Maintenance

3) Staff Adjustment 2.18, Electric and Adjustment 2.16, Natural Gas - Booz & Company Contract

4) Adjustment 3.00, Electric - Pro Forma Power Supply

5) Adjustment 3.07, Electric and Adjustment 3.06, Natural Gas - Restating 2011 Capital

6) Adjustment 4.00, Electric and Natural Gas - Planned Capital Additions 2012

7) Adjustment 4.01, Electric and Natural Gas - Planned Capital Additions 2013 AMA

8) Adjustment 4.02, Electric - DSM, Adjustment 4.03, Electric – Other

9) Adjustment 4.06, Electric and Adjustment 4.03, Natural Gas - O&M Offsets

10) Staff Adjustment 3.08, Electric - Noxon Rapids Unit 4 Runner Upgrade

11) Staff Adjustment 3.09, Electric - Pullman Smart Grid Adjustment, and

12) Adjustment 4.04, Electric - Retail Revenue Credit

**Q. Please summarize your recommendations.**

A. I recommend the Commission accept Staff’s case on the above listed twelve adjustments, and:

* Accept Staff’s attrition study and the resulting attrition-adjusted revenue requirement.
* Discontinue Avista’s deferred maintenance mechanism for Colstrip and Coyote Springs 2 after 2012.
* Order Avista in its next general rate case to provide full justification for the allocation methodologies it uses and to fully support those factors the Company deems appropriate.
* Order Avista to track REC revenues separately within the Company’s energy recovery mechanism (ERM), not subject to the ERM sharing bands.

**III. STAFF’S OVERALL ELECTRIC AND NATURAL GAS REVENUE REQUIREMENT ANALYSIS**

**Q. What are the results of Staff’s revenue requirement analysis for Avista?**

A. For electric service, Staff’s analysis shows Avista has a revenue surplus of $1,312,000[[1]](#footnote-2) on an attrition-adjusted basis. Staff’s “base case” shows a revenue surplus for electric of $20,378,000[[2]](#footnote-3). Staff’s attrition allowance is $19,066,000 ($(20,378,000) plus $19,066,000 equals $(1,312,000)).

For natural gas service, Avista has a revenue deficiency of $3,972,000[[3]](#footnote-4) on an attrition-adjusted basis. Staff’s “base case” shows Avista has a revenue deficiency for gas of $1,135,000[[4]](#footnote-5). Staff’s attrition allowance is $2,837,000 ($1,135,000 plus $2,837,000 equals $3,972,000).

**Q. Please explain what you mean by Staff’s “base case” and “attrition-adjusted basis” revenue requirement.**

A. Staff’s “base case” refers to Staff’s restated and pro forma results of operations following the Commission’s generally-accepted historical test year rate making principles and practices. It does not include the impact of an attrition allowance.

 “Attrition–adjusted basis” refers to Staff’s base case adjusted for the effects of attrition. The attrition analysis quantifies the anticipated changes in the relationship between revenue, expense and rate base in the rate year compared to the test period base case. Staff’s attrition-adjusted revenue requirement uses projections to 2013, the rate year. I discuss attrition further in Section VII of my testimony.

**IV. CONTESTED ADJUSTMENTS**

1. **Staff Adjustment 1.04, Electric and Natural Gas -Federal Income Tax Correction**

**Q. Please explain Staff’s Adjustment 1.04, Federal Income Tax Correction.**

A. Adjustment 1.04 for both Electric and Natural Gas Service is a Staff adjustment, which corrects errors to federal income tax expense Avista included in the Washington results of operations. Through discovery, Avista corrected inconsistencies between the actual federal income tax calculation and what was included in the Company’s unadjusted results. The corrections involved an adjustment for the allowance for funds used during construction (AFUDC), a correction to Section 199 Manufacturing Deductions and other adjustments or corrections.

 Adjustment 1.04, Electric increases Washington net operating income by $1,826,000 and decreases the electric revenue requirement by $2,941,000. Adjustment 1.04, Natural Gas increases Washington net operating income by $20,000 and decreases the natural gas revenue requirement by $32,000.[[5]](#footnote-6)

1. **Staff Adjustment 2.16, Electric - Colstrip and Coyote Springs 2 Maintenance**

**Q. Please explain Staff Adjustment 2.16, Colstrip and Coyote Springs 2 Maintenance.**

A. Staff’s Adjustment 2.16 reflects updated information on Colstrip and Coyote Springs 2 maintenance expense for 2012. Avista provided this updated information through discovery. This adjustment decreases electric net operating income $709,000 and increases revenue requirement by $1,142,000.[[6]](#footnote-7)

 These deferrals are the result of the Settlement Stipulation the Commission approved in Avista’s last rate case, Dockets UE-100876 and UG-100877.[[7]](#footnote-8) Overall, Staff recommends the Commission discontinue this deferral after 2012. I discuss the deferral mechanism and Staff’s recommendation more fully in Section V below.

1. **Staff Adjustments 2.18, Electric, and 2.16, Natural Gas - Booz & Company Contract**

**Q. Please explain this Staff adjustment for the Booz and Company Contract.**

A. Booz and Company is a consultant the Company retained to look at efficiencies and implement the “Performance Excellence Initiative”. In total, Avista paid Booz and Company $5,691,521[[8]](#footnote-9) for this contract.

 Work under this contract will be complete in 2012. Therefore, this contract does not represent an on-going expense, and Staff removes it as non-recurring.

**Q. Please identify the effect of this adjustment on revenue requirement.**

A. Staff Adjustment 2.18 increases Washington net operating income for electric operations by $734,000, thereby reducing the revenue requirement by $1,182,000. Staff Adjustment 2.16 increases Washington net operating income for natural gas operations $200,000, with a corresponding decrease in revenue requirement of $322,000.[[9]](#footnote-10)

**Q. Did Avista adjust the test period for the Booz & Company contract?**

A. Not in this rate case. However, in Avista’s direct evidence in its prior rate case, Dockets UE-110876 and UG-110877, Avista removed this contract[[10]](#footnote-11). Staff’s adjustments in this case are consistent with that prior treatment by Avista.

1. **Adjustment 3.00, Electric - Pro Forma Power Supply**

**Q. Please explain Adjustment 3.00, Electric - Pro Forma Power Supply.**

A. This adjustment reflects a revised electric power supply calculation. Staff witness Alan Buckley explains this adjustment.[[11]](#footnote-12) Adjustment 3.00 decreases Washington net operating income by $1,913,000 and increases the electric revenue requirement by $3,081,000.[[12]](#footnote-13)

**E. Adjustment 3.07, Electric and Adjustment 3.06, Natural Gas - Restating 2011 Capital; Adjustment 4.00, Electric and Natural Gas - Planned Capital Additions 2012; Adjustment 4.01, Electric and Natural Gas - Planned Capital Additions 2013 AMA; Adjustment 4.02, Electric - DSM; Adjustment 4.03, Electric – Other, Adjustment 4.06 Electric and 4.03 Natural Gas – O&M Offsets**

**Q. Please explain why you have grouped Adjustments 3.06, 3.07, 4.00, 4.01, 4.02, 4.03, and 4.06.**

A. Each of these adjustments is related to the issue of attrition. Because Staff addresses attrition through a separate attrition study, these adjustments are duplicative and therefore Staff does not separately address them.

 Avista presents Adjustments 4.00 through 4.03 as attrition-related adjustments. However, Avista’s Adjustments 3.06 and 3.07 are also attrition-related because they reflect rate base on an end-of-period basis, rather than an average of the monthly averages basis.

 The Commission has recognized that average of monthly averages rate base “is most favored”, but year-end rate base is a tool the Commission can use to address attrition.[[13]](#footnote-14) Because both Staff’s and the Company’s attrition studies consider plant additions through the rate year, Adjustments 3.06 and 3.07 are duplicative.

 Similarly, Avista’s adjustments 4.06, Electric and 4.03, Natural Gas, O&M Offsets, include projected reductions in operations and maintenance expense related to capital additions through the rate year 2013. Staff removes these adjustments as separate items because, again, I consider operations and maintenance expense growth in my attrition study.

**F. Staff Adjustment 3.08, Electric – Noxon Rapids Unit 4 Runner Upgrade**

**Q. Please explain Staff Adjustment 3.08, Electric - Noxon Rapids Unit 4 Runner Upgrade.**

A. Avista is making upgrades to its hydroelectric facility at Noxon. Mr. Buckley, Staff’s power supply witness, includes the impact of these upgrades on power supply costs. Therefore, it is appropriate to reflect the impact of the upgrades on rate base. Staff’s Adjustment 3.08 includes the plant additions related to the production assets Staff considered in the dispatch of power in the rate year. Staff witness Alan Buckley describes this adjustment in detail.[[14]](#footnote-15)

 Staff Adjustment 3.08 decreases Washington net operating income by $15,000 and increases net rate base $5,173,000, thereby increasing the electric revenue requirement by $625,000.[[15]](#footnote-16)

 **G. Staff Adjustment 3.09, Electric - Pullman Smart Grid Adjustment**

**Q. Please explain Staff Adjustment 3.09, Electric - Pullman Smart Grid Adjustment.**

A. This adjustment relates to Staff’s recommended disallowance of certain smart grid-related investment from rate base. Staff witness Mr. Nightingale explains this adjustment.[[16]](#footnote-17)

 Staff Adjustment 3.09 decreases Washington net operating income by $9,000 and net rate base $827,000, thereby reducing the revenue requirement by $82,000.[[17]](#footnote-18)

**H. Staff Adjustment 4.04, Electric - Retail Revenue Credit**

**Q. Please explain Staff Adjustment 4.04, Electric - Retail Revenue Credit.**

A. As Staff witness Mr. Buckley explains, because Staff has accepted the Company’s proposed change to the way the retail revenue credit is calculated within the Energy Recovery Mechanism (ERM), Adjustment 4.04 is moot.[[18]](#footnote-19) Therefore, I remove it.

**V. DEFERRED MAINTENANCE**

**Q. Please provide the background for Avista’s Adjustment 2.16, Deferred Maintenance for Colstrip and Coyote Springs 2.**

A. Avista’s Adjustment 2.16 applies a deferral mechanism described in the Settlement Stipulation the Commission approved in Avista’s last general rate case[[19]](#footnote-20). Under that mechanism, Avista established a regulatory asset through a deferral of certain Coyote Springs 2 and Colstrip maintenance expenses.

 The amounts to be deferred depend on a moving baseline level of expense. The Settlement Stipulation also specified that the future deferrals or pre-approved regulatory assets would be amortized over a four year period and would not accrue carrying charges or otherwise earn a return. Essentially, this mechanism allows for the automatic deferral of certain maintenance costs over a threshold level.

 According to the Settlement Stipulation, the deferral will occur annually and amortized beginning January of the following year.[[20]](#footnote-21) Avista witness Elizabeth Andrews confirms this in her direct testimony.[[21]](#footnote-22)

**Q. In approving the Settlement Stipulation, did the Commission express any reservations about this deferral mechanism?**

A. Yes. In its order, the Commission characterized the mechanism as “provisional” and subject to review again in this case:

We approve the deferral mechanism as a part of the overall Settlement package, but only because it appears to reduce immediate costs to ratepayers and it will only operate provisionally. The fact that Avista will not collect a return on the deferred amount, as well as the reasonableness of a smoothing of only maintenance expenses above the baseline, allow us to conclude that approval on a provisional basis is appropriate. The Company has also indicated that we can revisit the mechanism at a future time without undue administrative difficulty.[[22]](#footnote-23) By providing this limited approval of the mechanism, ***we caution the parties and, especially Avista, that we will revisit this issue on an expanded basis and in a future proceeding,*** possibly on an industry-wide basis so that other public utilities affected by the expenses at these units might also participate. ***If this proceeding has not commenced prior to Avista’s next rate filing, we expect the Company to include a proposal for such a tracker in that initial filing so that we can evaluate whether or not to terminate the provisional mechanism***.”[[23]](#footnote-24) (Emphasis added, footnotes included).

**Q. Since the Commission issued that order, has the Commission further clarified its views regarding the deferral and creation of regulatory assets for maintenance expense?**

A. Yes. In its recent order in the Puget Sound Energy rate case, Dockets UE-111048 and UG-111049, the Commission stated:

PSE also fails to establish any reason to allow automatic deferral of new major maintenance expense that it incurs between rate cases. The Company can protect itself from any arguable inability to recover such costs by filing an appropriate accounting petition that, if approved, will relate back to the date of filing in terms of costs allowed for recovery on a prospective basis.[[24]](#footnote-25)

**Q. Is Avista’s deferral mechanism of Colstrip and Coyote Springs 2 maintenance an “automatic” deferral mechanism?**

A. Yes. An automatic deferral mechanism is one that defers costs without prior review or approval by the Commission. Avista’s deferral mechanism meets this definition because Avista defers Colstrip and Coyote Springs 2 maintenance currently, subject to later review.

**Q. What amounts has Avista deferred for maintenance of Coyote Springs 2 and Colstrip?**

A. For 2011, Avista’s expenses were $516,251[[25]](#footnote-26) less than the threshold level. This is deferred a credit balance which will reduce future expenses.

**Q. What deferral amounts does Avista reflect for 2012 in its Adjustment 2.16?**

A. Avista’s adjustment anticipates that the Company will incur $4,880,262[[26]](#footnote-27) more than the 2012 threshold. Avista would amortize this debit balance over the subsequent four years. Avista’s Adjustment 2.16 increases maintenance expense by $1,091,000 for this anticipated amortization.[[27]](#footnote-28)

**Q. Is maintenance expense an unusual expense for an electric utility company?**

A. No. Maintenance expense is an ongoing, substantial portion of an electric utility company’s operating expenses. As with any ongoing expense, maintenance expense may fluctuate over time, and therefore an adjustment may be included in the test period to “normalize” the expense. This would include considering an average expense level over time.

 This is how accounts are commonly treated, such as injuries and damages expense,[[28]](#footnote-29) which, for ratemaking purposes, is based on a six year average of expense.

**Q. Is such a normalization technique always appropriate?**

A. No. Normalization is appropriate only if the utility can prove the test period level of expense is unrepresentative. For example, in its recent order in the PSE rate case, Dockets UE-111048 and UG-111049, the Commission used the current test period expense for maintenance rather than a five-year average.[[29]](#footnote-30)

**Q. What is Avista’s test period 2011 maintenance expense compared to prior periods?**

A. Avista’s 2011 maintenance expense in total is higher than the past two years for both electric and natural gas service, as shown by the following figures:[[30]](#footnote-31)



 It is important to note that this is all maintenance, not just Colstrip and Coyote Springs 2 contract maintenance.

**Q. What has Staff included in the test period for maintenance expense?**

A. Staff includes the 2011 test period maintenance expense plus the anticipated amortization of the deferred maintenance. In my attrition study, I escalate only the 2011 test period amount to determine the rate year level.

**Q. What is Staff’s recommendation for the deferred maintenance mechanism?**

A. Staff recommends the Commission discontinue the mechanism beginning January 1, 2013, but allow Avista to amortize the deferred 2011 and 2012 major maintenance expenses.

 First, Staff recommends the Commission discontinue this deferral mechanism because it is not consistent with the Commission’s recent decision in the PSE rate case, which I discussed earlier.

 Second, Staff believes that deferral mechanisms should only be for truly extraordinary circumstances, and only when a normalization technique or a pro forma analysis is not practical or appropriate for policy reasons. Facility maintenance is not extraordinary, and a reasonable level can be determined for rate making purposes without the necessity of a deferral.

 Nonetheless, to properly “wind down” the mechanism, Staff recommends the Commission allow the mechanism to continue through December 2012, because Avista incurred the majority of this cost through the current period. The Commission should order Avista to true-up the 2012 expenses to actual when implementing the amortization. The Commission should allow Avista to amortize the deferred costs over four years. Staff Adjustment 2.16 reflects this treatment.[[31]](#footnote-32)

**VI. ALLOCATIONS**

**Q. In this case, does Staff take issue with how the Company allocates costs between jurisdictions and between services?**

A. No, with one exception: Staff Witness Ms. Huang adjusts the allocation of certain officer and other employee salaries to non-regulated operations of Avista subsidiaries.

**Q. Does Staff have any concerns about the allocation factors Avista uses?**

A. Yes. Avista’s current allocation methods have been in place since the early 1990s, with only minor modifications over the years. Staff recommends the Commission order Avista in its next general rate case to provide full justification for the allocation methodologies it uses and to fully support those factors the Company deems appropriate.

**VII. RENEWABLE ENERGY CREDITS REVENUE**

**Q. What are RECs and REC revenues?**

A. RECs are intangible assets that represent proof that 1 megawatt-hour of electricity was generated from an eligible renewable energy resource. RECs represent the right to claim the environmental or other non-power attributes of the power produced from renewable energy facilities and can be “unbundled” and bought and sold separately from the underlying physical electricity associated with the generating renewable resource. REC revenues are the revenues a company receives from the sale of RECs.

**Q. Please summarize Commission policy regarding the proper regulatory treatment of REC revenues.**

A. The Commission’s policy is that “all REC revenues should be returned to the ratepayers who pay rates to cover all the costs of the related resource…”.[[32]](#footnote-33) In PacifiCorp Docket UE-100749, the Commission confirmed this fundamental determination[[33]](#footnote-34).

**Q. How does the ERM treat REC revenues?**

A. The ERM tracks REC sales revenues above a baseline level, and deferrals, the difference is subject to the ERM sharing bands.[[34]](#footnote-35) Sharing is not consistent with the Commission’s policy that REC revenues should be returned to the ratepayers in full.

**Q. How should the Commission return REC revenues to ratepayers?**

A. The Commission should apply its policy that Washington ratepayers are entitled to 100 percent of a utility’s Washington-allocated REC revenues. The Commission should order Avista to implement a separate line item within the ERM[[35]](#footnote-36), not subject to the ERM sharing bands in order to return all REC revenues in full to customers.

 The Commission should further direct Avista to include a rebate of these REC revenues each time an ERM-related rate adjustment is triggered. The Commission can exercise its discretion at that time whether to rebate the REC revenues in full, in part, or to hold the amounts for future rate treatment. During the ERM annual review, the Commission could determine whether a separate trigger for the REC revenues independent of the ERM rate trigger is warranted.

**Q. Please summarize your recommendations.**

A. I recommend the Commission order Avista to create a separate line item within the Company’s Energy Recovery Mechanism (ERM) to track separately REC revenues to be available for a credit to customers. Consequently, these REC revenues would not be subject to the ERM sharing bands and would accrue interest at the rate authorized in the ERM. The Commission should review this deferral and its disposition during the annual ERM review.

**VIII. ATTRITION ANALYSIS**

 **A. Background**

**Q. What is attrition?**

A. Attrition refers to the change in the relationship of test period revenues, expenses, rate base and cost of capital that results in an impact on rate year earnings. As the Commission has observed:

 Attrition is the change in relationships among revenues, expenses, and rate base over time, in which growth in expenses exceeds growth in revenues from factors beyond the company’s control.[[36]](#footnote-37)

An attrition allowance may be warranted to provide a utility a reasonable opportunity to earn a fair return. The Commission used attrition allowances during periods of high inflation, high capital costs, and high construction costs to serve growing demand.[[37]](#footnote-38) Only one of these factors exists today: high construction costs, though with low growth in demand. Inflation and capital costs are low and should not be causes of attrition currently.

**Q. According to Avista, what are the current circumstances facing the Company?**

A. According to Mr. Morris, Avista’s Chairman of the Board, President and Chief Executive Officer:

A large part of our need for a rate increase is driven by the costs associated with continuing to expand and replace the facilities we use every day to serve our customers. When we remove the old equipment and replace it with new, it results in higher overall costs to serve customers. This was the primary reason for the proposed increase in our last rate increase request and it is expected to continue to cause a need for increased rates in the future.[[38]](#footnote-39)

 He also refers to increases in expenses of:

…approximately $72 million over the six-year period from 2005 to 2011…. In recent years there has been a significant increase in costly, mandatory requirements on utilities related to, among others things, reliability, environmental compliance, safety, and security. These mandates, together with litigation and other claims related to the ownership and operation of hydroelectric resources, have added, and continue to add, significant costs to run the utility.[[39]](#footnote-40)

**Q. In the testimony you quoted, Avista focused on the 2005-2011 time period. Did Avista omit any significant information relevant to that the period?**

A. Yes. Avista failed to mention it has increased rates to cover the expense and capital costs described by the Company. While Avista’s current claims may be valid, it is misleading to discuss the increases in expenditures without identifying the increases in revenues, or the rate increases the Company received.[[40]](#footnote-41) Staff witness Mr. Elgin identifies Avista’s recent rate increase history.[[41]](#footnote-42)

 **B. Scenarios Explaining How Attrition Works**

**Q. Do varying growth patterns in revenues, expenses, rate base and cost of capital always result in attrition or earnings erosion?**

A. No. Table 1 below explains this, by showing different changes in relationships of revenue, expenses and rate base between any test and rate year, assuming a constant utility cost of capital of 8.00 percent.

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Table 1



Scenario 1 reflects a rate year during which revenue, expenses and rate base all grew at a rate of two percent. The result is that the utility earned the 8.00 percent rate of return (ROR). The relationships between revenues, expenses and rate base were maintained and no earnings erosion (attrition) resulted.

Under Scenario 2, the utility did not maintain the rate case relationships between revenues, expenses and rate base, yet still earned an 8.00 percent ROR. In this scenario, rate year revenues grew three percent, expenses grew two percent and rate base grew six percent. This demonstrates that even with rate base increasing more rapidly than other elements, there is no negative impact to earnings due to attrition. It also shows that growth in rate base does not require proportional growth in revenue to avoid attrition.

In Scenario 3, rate year revenues grew two percent, expenses increased two percent and rate base increased six percent. The result is a 7.70 percent ROR, which reflects erosion in earnings due to attrition.

 Scenario 4 reflects a two percent growth in rate year revenues, a four percent growth in expenses, and a six percent growth in rate base. The resulting 7.27 percent ROR reflects the largest earnings erosion, or attrition, in these examples.

Scenario 5 is an example of attrition working in the utility’s favor. Rate year revenue grew 2 percent, expenses grew one percent and rate base grew three percent. The result is a ROR of 8.15 percent. This is an example of negative attrition.

**Q. What critical element of attrition does this table confirm?**

A. This table confirms that the Commission must consider all components of revenue requirements: revenues, expenses and rate base. Each scenario illustrates the potential for each of these elements of the rate making equation to have an impact on the utility’s opportunity to earn a fair return.

**Q. You just mentioned revenues, expenses and rate base. You also noted at the outset of your discussion of these scenarios assume an 8.00 percent ROR remained constant. Please explain the importance of that assumption.**

A. The assumption of a constant 8.00 percent ROR was a simplifying assumption. The table clearly shows that if the utility’s cost of capital decreased to 7.70 percent or 7.27 percent, it would offset any attrition the utility might otherwise experience. This demonstrates that cost of capital is also a critical element for the Commission to consider. This is an important element of Staff’s presentation in this case and it is a material element influencing the result of my attrition analysis. As Mr. Elgin testifies, the cost of capital is lower today than before.[[42]](#footnote-43) My attrition analysis captures this effect in order to provide Avista a reasonable opportunity to earn a fair rate of return.

1. **How an Attrition Analysis is Performed; Complicating Factors**

**Q. Briefly describe how an attrition analysis is performed.**

A.An attrition study starts with the base case historical test period results of operations, with restating and certain pro forma adjustments. The attrition study then estimates how the relationship between expenses, revenues and rate base are likely to change in the rate year from the base case level.

 If the analysis shows that there is a high probability of changing relationships between revenues, expenses and rate base, then an attrition allowance providing additional revenue may be necessary so the utility will have a reasonable opportunity to earn a fair return.

**Q. Is an attrition study consistent with the matching principle of ratemaking?**

A. Yes. An attrition study honors the matching principle because it evaluates all ratemaking elements for the rate year: revenues, expenses, rate base and rate of return. Moreover, because an attrition study begins with the historical results of operations, including restating and certain pro forma adjustments, an attrition study complements the Commission’s longstanding policy of using historical, restated and pro formed results of operations for rate setting purposes.

**Q. Is an attrition analysis simple to undertake?**

A. No. Properly measuring attrition is a very complex undertaking. First, an attrition study measures the likelihood the utility will earn a fair return, which means the attrition study must be consistent with standard rate making principles and practice.

Second, attrition analyses use forecasts, trends and/or budgets to estimate growth and are unavoidably subject to uncertainty. Estimates of load and revenue are particularly challenging due to the effects of weather, fuel costs, the economy and other factors. As a result of this uncertainty inherent in forecasts, the attrition study results can vary widely, depending upon assumptions used to estimate the future period.

In the end, an attrition analysis should be transparent, and the Commission should be confident that the attrition analysis reasonably reflects the future relationships between costs and revenues.

**Q. Please provide a specific example of the uncertainties surrounding forecasts.**

A.The load forecasts the Company provided for use in the attrition study show a singular result with a 95 percent confidence that actual results may vary by 2.5 percent, plus or minus.[[43]](#footnote-44) This is a swing of five percent.

 A positive 2.5 percent change in electric revenues is $11,357,000,[[44]](#footnote-45) which is enough to support a 14 percent increase in net plant ($157,299,000) in one year, or about $60 million more net plant than Avista is requesting in this case for two years[[45]](#footnote-46). This shows the uncertainty at play when using forecasts.

**D. Staff’s Attrition Study**

1. **Summary**

**Q. Please state the amount you recommend that the Commission provide Avista for an attrition allowance, and how that relates to the overall Staff case.**

A. Staff recommends the Commission provide an attrition allowance for electric service of $19,066,000. The net impact of including that amount of additional revenue to Staff’s base case is an attrition-adjusted revenue surplus of $1,312,000.

 For gas service, Staff recommends the Commission provide an attrition allowance of $2,837,000. The net impact of including that amount of additional revenue to Staff’s base case is an attrition-adjusted revenue deficiency of $3,972,000.

 **2. Staff’s General Approach to Estimating Attrition**

**Q. Please summarize the approach you used to conduct your attrition study.**

A. My approach is similar to that used by Avista witnesses Mr. Lowry and Ms. Andrews. In general, I developed growth rates for revenues, expenses and rate base. I considered past growth in revenue, expenses and rate base as well as forecasts and budgets for these items. I then applied my estimate of the growth to Staff’s test period restated results. I also adjusted the restated test period results for the effect of the Company’s depreciation study and other ongoing changes.

 I explain my attrition analysis in more detail below, where I discuss each cost category and how I applied growth to determine revenues, expenses and rate base for the projected rate year.

 **3. Evaluating Changes in Revenues – Electric Operations**

**Q. Please explain how you developed growth in electric revenue for the rate year 2013.**

A. My starting point for evaluating revenue growth is the normalized and restated test year of Staff’s base case. I separately categorized and analyzed electric service revenue, general business revenue and power supply revenue, which includes sales for resale.

 For power supply revenues, I used the secondary purchases from Staff’s power cost adjustment already modeled to the rate year, consistent with Avista.

For general business revenue, I trended the revenue data from Company load forecasts to determine a reasonable level of revenue growth. For other revenue, I used the 0.8 percent escalation based on trended increase from 2000 to 2011, again consistent with Avista.

**Q. What problems did you encounter in your estimation of load growth?**

A. Avista supplied two load forecasts in this case. Its original forecast estimated load growth. Staff received the second load forecast on July 27, 2012.[[46]](#footnote-47) In this second load forecast, Avista estimated a decline in load for the rate year that is materially different from its first load forecast.

**Q. Please compare the results of these two load forecasts.[[47]](#footnote-48)**

A. The second load forecast results in lower growth in revenue for the rate year 2013 compared to 2012. For 2012, the Company’s first load forecast included a weather normalized increase in electric load of XX percent. In July, the Company revised its load forecast to a decrease in electric load of XX percent. This reflects a change in load of XX percent for electric service.

 Overall, this changed the load forecast for the two year period from the test period to the rate year, 2011 to 2013, from an increase of 3.6 percent to a decrease of 0.1 percent. This equates to the change in revenue of $12,600,000, or 2.8 percent between forecasts. As I mentioned above in my example of the range of load forecast outcomes, this is a very significant change when considering the effect on an attrition study.

**Q. Do the Company’s electric load forecasts show loads declining after 2013?**

A. No. Both of the Company’s electric load forecasts reflect an overall upward trend in load growth after 2013.

**Q. What do the forecasts show for changes in numbers of customers?**

A. Both of the Company’s electric load forecasts include an average annual growth in number of customers. The Company’s first forecast includes average annual customer growth of xx percent and the July forecast includes customer growth of XX percent. Both forecasts include 2012 customer growth of XX percent. For the year 2013, the first forecast includes an increase of XX percent. The July forecast includes an increase of XX percent, although it averages XX percent for the period 2011 to 2016. The customer growth for the period 2011 to 2013 is XX percent in the first forecast and XX percent in the July forecast.

**Q. How did you incorporate these two different load forecasts in your electric attrition study?**

A. Given the inherent uncertainty of load forecasting, the dramatic changes Avista made to its forecast, and the fact that Avista is predicting steady growth over the longer term, I did not use either forecast. I based my forecast on the average growth of the July forecast by smoothing the growth over the 2012-2016 period. This resulted in a growth rate of XX percent per year or 1.24 percent for that 2011 to 2013. Using Avista’s allocation method to determine revenue, this equates to a 0.93 percent increase in revenue for that two year period.[[48]](#footnote-49)

**Q. Please summarize your electric revenue forecast for the purposes of your attrition analysis for electric operations.**

A. My rate year forecast includes a revenue increase of $4,392,000[[49]](#footnote-50) compared to Staff’s base case, for a total attrition revenue forecast of $527,475,000.

 **4. Evaluating Changes in Revenues – Gas Operations**

**Q. How did you evaluate changes in revenues for gas operations in your attrition study?**

A. As with electric service, I separately categorize and analyze general business revenue and transportation revenue. Again, I trended the results in the Company’s two load forecasts to determine a reasonable level of revenue growth for the purposes of this attrition analysis.

**Q. Please discuss the Company’s load forecasts for gas revenues for the rate year 2013.[[50]](#footnote-51)**

A. The Company’s natural gas load forecasts reflect similar characteristics as the Company’s electric load forecasts. Like its electric load forecast, the Company forecasts an overall increase in gas revenues over the 2011-2016 time frame, although unlike the electric forecast, the Company’s natural gas service forecast does not show an overall load decrease in 2012. Instead, the Company forecasts a General Service volume increase of XX percent in 2012, and this is consistent between the two forecasts.

 Avista forecasts decreases in General Service volumes for the year 2013 in both forecasts; the first forecast includes a decrease of XX percent and the July forecast includes a decrease of XX percent. The percentage volume growth forecast for the two-year period 2011 to 2013 is 1.7 percent in the first forecast and 0.7 percent in the July forecast.

Transportation volumes for 2012 decrease X percent in the first forecast and only decrease XX percent in the July forecast. For the year 2013, transportation volumes increase XX percent in the first forecast and X percent in the July forecast. For the two year period 2011 to 2013, transportation volumes decrease 2.9 percent in the first forecast and increase 4.0 percent in the July forecast.

**Q. What do the forecasts include for changes in numbers of gas customers?**

A. Both load forecasts include an average annual growth in customers of XX percent over the period 2011 to 2016. The first forecast includes an increase of XX percent for 2012 and XX percent for 2013. The July forecast provides a customer growth of XX percent in 2012 and XX percent in 2013 although it averages XX percent for the period 2011 to 2016. For the two year period 2011 to 2013, the first forecast reflects customer growth of X percent and the July forecast includes customer growth of XX percent. As with electric service, the changes between the two natural gas load forecasts again demonstrate how unstable load forecasts can be, even in the near term.

**Q. How did you use the information from the two load forecasts to determine gas revenues for your attrition study?**

A. As I did for electric service revenues, I did not accept either Company forecast. Instead, I assumed growth based on the average through 2016.[[51]](#footnote-52) The effect is to smooth forecasted growth for the period and eliminates the anomaly in the data Avista asserts for 2013.

**Q. Please summarize your natural gas revenue forecast for the purposes of your attrition analysis.**

A. My rate year forecast reflects an increase of $3,076,000[[52]](#footnote-53) compared to Staff’s base case, for a total attrition revenue forecast of $148,794,000.

**5. Evaluating Changes in Expenses**

**Q. How did you evaluate changes in expenses in your attrition study?**

A. To evaluate growth in expenses, as my starting point I used the expenses from Staff’s restated test period results[[53]](#footnote-54) plus certain pro forma adjustments.

First, I reflect the impact of the Depreciation Study and its updated depreciation rates. Second, I reflect Staff witness Ms. Huang’s executive compensation adjustment. Third, I remove operations and maintenance expenses the Company states will not exist in the rate year.[[54]](#footnote-55) Next, I remove the regulatory amortization of the Deferred Colstrip and Coyote Springs 2 maintenance in electric service.[[55]](#footnote-56)

After reflecting each of these adjustments, I have my starting point for evaluating growth in expenses other than power supply.[[56]](#footnote-57)

 I evaluated growth in expenses in a similar fashion to Avista. I accepted Avista’s use of aggregated categories. In addition, I accepted the Company’s growth rates for aggregated non-energy operations and maintenance expense, and taxes other than income tax as reasonable for the purposes of my attrition study for both electric and natural gas service.[[57]](#footnote-58)

**Q. Please explain in more detail how you evaluated depreciation expense in your attrition study.**

A. As I stated earlier, my starting point includes the effect of the Depreciation Study presented by Avista in this case. I then developed growth factors based on depreciation expense growth from 2008 through 2011. I limit the years for trending because depreciation rates are updated on a periodic basis, so the more recent past should be most indicative of the future.[[58]](#footnote-59)

**Q. How did you address regulatory amortizations?**

A. I did not adjust regulatory amortizations. I used amortization amounts from Staff’s base case. Amortizations of regulatory assets or liabilities are typically straight-line fixed amounts that do not change over time.[[59]](#footnote-60)

**Q. Please discuss the growth in electric power expense and natural gas purchases.**

A. I adjusted the electric 2013 modeled power supply from Staff’s base case only for load growth. For natural gas, I priced the change in load for natural gas purchases using the weighted average cost of gas for the test year. My approach is consistent with Avista’s approach for these items.

**Q. What is the overall effect of your analysis of growth in expenses for both electric and natural gas service, compared to Staff’s base case?**

A. Rate year electric expenses are $14,682,000 greater than Staff’s base case, for a total projected rate year expense of $414,450,000.[[60]](#footnote-61)

 For natural gas service, rate year expenses show an increase of $4,368,000 over Staff’s base case, for a total rate year expense of $132,181,000.[[61]](#footnote-62)

**6. Evaluating Changes in Rate Base**

**Q. Please discuss your approach to estimating growth in rate base.**

A. I use Avista’s estimated level of net rate base for 2013, calculated on an average of the monthly averages basis. In its revenue requirement model, Avista calculated Washington rate base additions for 2012 and 2013. I used these figures in my study as a reasonable approximation of net rate base for purposes of attrition.[[62]](#footnote-63) An attrition study that uses estimates of rate base does not imply Commission pre-approval of any project.

 **Q. Please explain how you address working capital, and other debits and credits.**

A. I included these items at the level presented in Staff’s base case. The Company does not book amounts of working capital, so I cannot compare historical trends. In any event, trending is not appropriate because working capital does not automatically grow year to year. Working capital depends on the relationship between assets and liabilities on the balance sheet, and it does not necessarily grow over time.

 For similar reasons, I did not grow other debits and credits over the Staff’s base case level. This line includes regulatory assets and liabilities that are already adjusted to the rate year.

**Q. Did you make another adjustment to your projected rate base?**

A. Yes. I included the Staff disallowance for the Pullman smart grid project through 2013. This adjustment reduced attrition year net rate base by $3,685,000.[[63]](#footnote-64)

**Q. Please summarize your electric and natural gas rate base values for attrition.**

A. The electric rate base for the attrition rate year increases by $83,722,000, to $1,208,995,000.[[64]](#footnote-65)

 The natural gas rate base for the attrition year increases by $13,061,000 to $202,150,000.[[65]](#footnote-66)

**7. Results of Staff’s Attrition Study**

**Q. Please explain the results of your attrition study.**

A. For electric service, the study shows an attrition-adjusted revenue surplus of $1,312,000. The calculation is shown in my Exhibit No. \_\_\_ (KHB-9C), at 1. Lines 1 through 6, column (c), show the projected rate year revenue, expenses, resulting net operating income and rate base. Line 7 indicates a return on rate base of 7.29 percent. The final result is 0.07 percent above Staff’s recommended 7.22 percent return on rate base. Therefore, the result is an attrition-adjusted revenue surplus of $1,312,000, shown on line 14.

For natural gas service, Staff’s attrition-adjusted revenue requirement is $3,972,000. My Exhibit No. \_\_\_ (KHB-10C) provides the calculation of the revenue deficiency in the same fashion I just explained for electric service. Line 7, column (c) shows the projected rate year return on equity for natural gas service is 5.97 percent. Comparing this to Staff’s rate of return of 7.22 percent produces an attrition-adjusted revenue deficiency of $3,972,000, shown on line 14.

**Q. What other recommendations do you have regarding attrition allowances?**

A. Staff recommends the Commission require that Avista include with future attrition study, testimony, exhibits and work papers supporting each forecast relied upon.

The testimony should explain the methodology and assumptions used and discuss any changes from prior cases. The Company must explain each assumption and any changes in assumptions and their impact. This data must be segregated by rate schedule, and should include the impact to projected revenue, expense or investment level.

In particular, the supporting documentation for testimony needs to include very specific information about the assumptions made in the forecasting process.[[66]](#footnote-67) The information should include a working model with linked workbooks where Staff can input a different numerical assumption and test the input’s impact on the final forecasted load.[[67]](#footnote-68)

**Q. Do you consider your attrition study in this case to be a framework for future attrition analyses?**

A. Not necessarily. An attrition study develops a forecast of the future relationship between revenues, expenses and rate base. By their nature, any forecast is uncertain and the assumptions underlying a forecast can vary. A good attrition study requires the analyst to consider current facts and circumstances and this may justify a different approach in the future. The framework could also change as Staff gains experience with attrition adjustments.

**Q, Does that complete your direct testimony?**

1. Yes.
1. Breda, Exhibit No. \_\_\_ (KHB-2), line 9 and Breda, Exhibit No. \_\_\_ (KHB-9C), at 1, line 14, column c. [↑](#footnote-ref-2)
2. Breda, Exhibit No. \_\_\_ (KHB-2), line 7 and Huang, Exhibit No. \_\_\_ (JH-2), at 1, line 3, column g. [↑](#footnote-ref-3)
3. Breda, Exhibit No. \_\_\_ (KHB-2), line 18 and Breda, Exhibit No. \_\_\_ (KHB-10C), at 1, line 14, column c. [↑](#footnote-ref-4)
4. Breda, Exhibit No. \_\_\_ (KHB-2), line 16 and Keating, Exhibit No. \_\_\_ (EJK-2), at 1, line 3, column g. [↑](#footnote-ref-5)
5. Breda, Exhibit No. \_\_\_ (KHB-3) details this adjustment. [↑](#footnote-ref-6)
6. Breda, Exhibit No. \_\_\_ (KHB-4) details this adjustment. [↑](#footnote-ref-7)
7. *Utilities and Transp. Comm’n v. Avista Corp.*, Dockets UE-110876 and Docket UG-110877, Settlement Stipulation (September 30, 2011), at 7-8. [↑](#footnote-ref-8)
8. Avista response to Public Counsel Data Request 305, Attachment A. [↑](#footnote-ref-9)
9. Breda, Exhibit No.\_\_\_ (KHB-5) details this adjustment. [↑](#footnote-ref-10)
10. Avista response to Public Counsel Data Request 305. [↑](#footnote-ref-11)
11. Buckley, Exhibit No. \_\_ (APB-1CT), at 5, line 1 to 9, line 17. [↑](#footnote-ref-12)
12. Breda, Exhibit No. \_\_\_ (KHB-6) details this adjustment. [↑](#footnote-ref-13)
13. *Utilities and Transp. Comm’n v. Wash. Natural Gas Co.,* Cause U-80-111, Third Supplemental Order (September 24, 1981), at 6. The Commission listed four conditions under which year-end rate based could be used: “a) Abnormal growth in plant; b) Inflation and/or attrition c) As a means to mitigate regulatory lag d) Failure of utility to earn its authorized rate of return over a historical period.” Staff considers each of these conditions as indications of attrition. [↑](#footnote-ref-14)
14. Buckley, Exhibit No. \_\_\_ (APB-1CT) at 9, line19 to 13, line 2. [↑](#footnote-ref-15)
15. Breda, Exhibit No. \_\_\_ (KHB-7) details this adjustment. [↑](#footnote-ref-16)
16. Nightingale, Exhibit No. \_\_\_ (DN-1CT), at 31, line 12 to 55, line 11. [↑](#footnote-ref-17)
17. Breda, Exhibit No. \_\_\_ (KHB-8) details this adjustment. [↑](#footnote-ref-18)
18. Buckley, Exhibit No.\_\_\_ (APB-1CT), at 24, line 17 to 25, line 7. [↑](#footnote-ref-19)
19. *Utilities and Transp. Comm’n v. Avista Corp.*, Dockets UE-110876 and Docket UG-110877, Settlement Stipulation (September 30, 2011), at 7-8. [↑](#footnote-ref-20)
20. Id. at 8. [↑](#footnote-ref-21)
21. Andrews, Exhibit No. \_\_\_ (EMA-1T), at 70, lines 24-25. [↑](#footnote-ref-22)
22. COMMISSIONER JONES: If the Commission were to approve this on a pilot basis, a year or so, and then we – since you’re filing about every 18 months, we have a chance to review these things frequently. And in the next case we were to reject it, say it’s really not working the way it is, wouldn’t that create an issue on for – the company on a[n] earnings perspective?

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MR. NORWOOD: If the Commission were to choose to not approve it at some point in the future, it would be important that the opportunity would be there to recover the dollars that are already deferred. And so if there’s an understanding that what’s already been deferred would be amortized, then that would not create an accounting issue.

TR 190:20-191:1; 191:12-18 in Dockets UE-110876 and UG-110877. [↑](#footnote-ref-23)
23. *Utilities and Transp. Comm’n v. Avista Corp.*, Dockets UE-110876 and UG-110877, Order 06 ((December 16, 2011), at 15-16, ¶¶ 35-37. [↑](#footnote-ref-24)
24. *Utilities and Transp. Comm’n v. Puget Sound Energy, Inc.* Dockets UE-1111048 and UG-111049, Order 08 (May 7, 2012), at 112, ¶ 321 (see full discussion at 110-13, ¶¶ 315-21. [↑](#footnote-ref-25)
25. Avista response to Public Counsel Data Request 93. [↑](#footnote-ref-26)
26. Id*.* [↑](#footnote-ref-27)
27. Breda, Exhibit No. \_\_\_ (KHB-4) details this adjustment. [↑](#footnote-ref-28)
28. Andrews, Exhibit No. \_\_\_ (EMA-1T), at 20, lines 12-18, and 50, lines 3-8. Electric Adjustment 2.04 and Gas Adjustment 2.05. [↑](#footnote-ref-29)
29. *Utilities and Transp. Comm’n v. Puget Sound Energy, Inc.* Dockets UE-1111048 and UG-111049, Order 08 (May 7, 2012), at 74-77, ¶¶ 209-18. Especially ¶ 217: “*Commission Determination:* In PSE’s most recently completed general rate case, the Commission rejected the proposed use of a five-year average for this category of expenses stating: “O&M is an ongoing expense and there is no evidence that the more recent historic data upon which PSE would have us rely requires any normalizing adjustments.” We find on the basis of the record here that the same is true today. Considering PSE’s changing use of its fleet of thermal production facilities, as described by Mr. Gould, we are not surprised that maintenance costs are trending upward. As PSE’s use of intermittent renewable resources such as wind farms continues to increase in response to state-mandated RPS, the pattern of more frequent start-ups, shorter run times, and total run times at thermal facilities that facilitate wind integration may lead to a continuing trend of increasing O&M costs. Absent evidence of a change in this regard, it is reasonable to continue our reliance on the more recent test year data rather than averages of historic data.” [↑](#footnote-ref-30)
30. This chart summarizes information provided in Avista’s response to Public Counsel Data Request 131. [↑](#footnote-ref-31)
31. Breda, Exhibit No. \_\_\_ (KHB-4). [↑](#footnote-ref-32)
32. *Utilities and Transp. Comm’n v. Puget Sound Energy Co.,* Docket UE-070725, Order 03 (May 20, 2010), at 28, ¶ 68. [↑](#footnote-ref-33)
33. *Utilities and Transp. Comm’n v. PacifiCorp d/b/a Pacific Power & Light Co.,* Docket UE-100749, Order 06 (March 25, 2011), at 71, ¶ 200. [↑](#footnote-ref-34)
34. A rate adjustment is triggered when the total variation in power supply expense exceeds 10 percent of total revenues. [↑](#footnote-ref-35)
35. This line item would have a unique deferral account to track REC revenues separately from other ERM deferrals and be subject to the same interest accrual as the ERM deferrals. [↑](#footnote-ref-36)
36. *Utilities and Transp. Comm’n v. Wash. Natural Gas Co.,* Docket UG-920840, Fourth Supplemental Order (September 27, 1993), at 29. [↑](#footnote-ref-37)
37. *Utilities and Transp. Comm’n v. Wash. Water Power Co.,* CausesU-82-10 and U-82-11, Second Supplemental Order (December 30, 1982), at 31-33; *Utilities and Transp. Comm’n v. Pacific Power and Light Co.,* Cause U-82-12, Fourth Supplemental Order (February 13, 1983), at 30-31; *Utilities and Transp. Comm’n v. Puget Sound Power and Light Co.,* Cause U-82-38, Third Supplemental Order (July 25, 1983), at 29; *Utilities and Transp. Comm’n v. Wash. Water Power Co.,* Cause U-83-26, Fifth Supplemental Order (January 19, 1984), at 29-30; *Utilities and Transp. Comm’n v. Pacific Power and Light Co.,* Cause 83-33, Second Supplemental Order (February 9, 1984), at 29-30; *Utilities and Transp. Comm’n v. Pacific Power and Light Co.,* Cause 84-65, Fourth Supplemental Order (August 2, 1985), at 34-37; *Utilities and Transp. Comm’n v. Puget Sound Power and Light Co.,* Cause U-85-53, Second Supplemental Order (May 16, 1986), at 56-57; and *Utilities and Transp. Comm’n v. Pacific Power and Light Co.,* Cause 86-02, Second Supplemental Order (September 19, 1986), at 32-33. [↑](#footnote-ref-38)
38. Morris, Exhibit No. \_\_\_ (SLM-1T), at 2, lines 5-10. [↑](#footnote-ref-39)
39. Morris, Exhibit No. \_\_\_ (SLM-1T), at 10, line11 to 11, line39. [↑](#footnote-ref-40)
40. This discussion is referring to Mr. Morris’s direct testimony, Exhibit No. \_\_\_ (SLM-1T), at 9, line 3 to 11, line 39, particularly Illustration 3, and Mr. Norwood’s direct testimony, Exhibit No. \_\_\_ (KON-1T), at 3, line 6 to 4, line 11. [↑](#footnote-ref-41)
41. Elgin, Exhibit No. \_\_\_ (KLE-5). [↑](#footnote-ref-42)
42. Id. 6, lines 1-2. [↑](#footnote-ref-43)
43. Avista’s supplemental response to Staff Data Request 395 states that the Company’s load forecast model approximates a 5% confidence level or a 95% confidence interval. This means plus or minus 2.5 percent. [↑](#footnote-ref-44)
44. This figure is based on Staff’s ROR of 7.22 percent, Staff’s base case electric general business revenue of $454,285,000 and Staff’s net rate base of $1,121,292,000. [↑](#footnote-ref-45)
45. Avista is requesting an increase of $98,714,000 in net rate base for two years. Andrews, Exhibit No. \_\_\_ (EMA-2), at 1, line 48, column f, less line 48, column b. [↑](#footnote-ref-46)
46. Avista supplemental response to Staff Data Request 178C. [↑](#footnote-ref-47)
47. My Exhibit No.\_\_\_(KHB-9C), at 5, provides the results of the two load forecasts. [↑](#footnote-ref-48)
48. Breda, Exhibit No. \_\_\_ (KHB-9C), at 5 provides the results of the two forecasts and my trended approach. [↑](#footnote-ref-49)
49. Id. at 2, line 1, column h. [↑](#footnote-ref-50)
50. Breda, Exhibit No. \_\_\_ (KHB-10C), at 5, provides the results of the two load forecasts. [↑](#footnote-ref-51)
51. Breda, Exhibit No.\_\_\_ (KHB-10C), at 5 provides the results of the two forecasts and my trended approach. [↑](#footnote-ref-52)
52. Breda, Exhibit No.\_\_\_ (KHB-10C), at 2, line 4, column f. [↑](#footnote-ref-53)
53. Huang, Exhibit No.\_\_\_ (JH-2), at 1, column d. [↑](#footnote-ref-54)
54. This was originally provided in Adjustment 4.06, Electric and Adjustment 4.03, Natural Gas. I use Avista’s revised figures provided in Avista’s response to Staff Data Request 30. [↑](#footnote-ref-55)
55. Breda, Exhibit No. \_\_\_ (KHB-3). [↑](#footnote-ref-56)
56. Breda, Exhibit No. \_\_\_ (KHB-9C), Electric, at 2, column a, and Exhibit No. \_\_\_ (KHB-10C), Natural Gas, at 2, column c. [↑](#footnote-ref-57)
57. Breda, Exhibit No. \_\_\_ (KHB-9C), Electric, at 2, lines 7,11,13,15, 17 to 20 and 23, column d, and Exhibit No. \_\_\_(KHB-10C), Natural Gas, at 2, lines 9, 11, 13,15 17 to 20 and 23, column e. [↑](#footnote-ref-58)
58. See Breda, Exhibit No. \_\_\_ (KHB-9C), Electric, at 2 lines 9, 14 and 21, column d, and Exhibit No. \_\_\_ (KHB-10C), Natural Gas, at 2, lines 10, 14 and 21, column e. [↑](#footnote-ref-59)
59. See Breda, Exhibit No. \_\_\_ (KHB-9C), Electric, at 2 lines 10, column d, and Exhibit No. \_\_\_ (KHB-10C), Natural Gas, at 2, lines 22, column e. [↑](#footnote-ref-60)
60. This is presented on my Exhibit No. \_\_\_ (KHB-9C), at 1, line 2. [↑](#footnote-ref-61)
61. This is shown on my Exhibit No. \_\_\_ (KHB-10C), at 1, line 2. [↑](#footnote-ref-62)
62. Breda, Exhibit No.\_\_\_(KHB-9C), Electric, at 3, lines 31-45, column j equals Exhibit No.\_\_\_(EMA-2) at 10, lines 31- 45. Exhibit No. \_\_\_ (KHB-10C), Natural Gas, at 3, lines 32-42, column g equals Exhibit No. \_\_\_ (EMA-3), at 9, lines 32-42. [↑](#footnote-ref-63)
63. Breda, Exhibit No. \_\_\_ (KHB-8), at 2. [↑](#footnote-ref-64)
64. Breda, Exhibit No. \_\_\_ (KHB-9C) Electric, at 1, line 6. [↑](#footnote-ref-65)
65. Breda, Exhibit No. \_\_\_ (KHB-10C) Natural Gas, at 1, line 6. [↑](#footnote-ref-66)
66. Documentation should include a comprehensive list of assumptions, including both the numerical value of inputs, such as GDP, housing starts, etc., and the assumed relations of such inputs on the load forecast model. The assumed relationships should be further supported by economic/econometric research which supports the relationship. Such research may include income elasticity and price elasticity studies. [↑](#footnote-ref-67)
67. The workbook should be in its native format with each assumption assigned a numerical value, and each value flowing through the entire workbook. Work papers should also be a written explanation which supports that each assumption is reasonable, including information on why each assumption is based on credible sources, highly probable, and will have a material impact on the load. When the forecaster relies on data or information produced by other entities, the Company should name each entity and provide documentation which supports the inclusion of such data and information. This is meant to include data and information provided by other forecasters and information provided to by the company directly from customers. [↑](#footnote-ref-68)