

**Exh. CSH-1Tr  
Dockets UE-170485/UG-170486  
Witness: Christopher S. Hancock**

**BEFORE THE WASHINGTON  
STATE UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**AVISTA CORPORATION d/b/a AVISTA  
UTILITIES,**

**Respondent.**

**DOCKETS UE-170485 and  
UG-170486 (*Consolidated*)**

**TESTIMONY OF**

**Christopher S. Hancock**

**STAFF OF  
WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION**

***Policy; Multi-year Rate Plan; Electric Adjustment 3.15 and Natural Gas Adjustment 3.14***

**October 27, 2017**

***Revised November 6, 2017***

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- Exh. CSH-5, Development of Regression-based Escalation Rates - Electric
- Exh. CSH-6, Development of Regression-based Escalation Rates – Natural Gas

1 I. INTRODUCTION

2

3 Q. Please state your name and business address.

4 A. My name is Christopher Scott Hancock. My business address is The Richard  
5 Hemstad Building, 1300 S. Evergreen Park Drive S.W., Olympia, WA 98504.

6

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

8 A. I am employed by the Washington Utilities and Transportation Commission  
9 (Commission) as a Regulatory Analyst in the Energy Regulation Section of the  
10 Regulatory Services Division.

11

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

13 A. I have been employed by the Commission since January 2015.

14

15 Q. Would you please state your educational and professional background?

16 A. I graduated from New Mexico State University in 2013 with a Bachelor of Business  
17 Administration degree in Economics. In 2014, I graduated from New Mexico State  
18 University with a Master of Arts degree in Economics, specializing in Public Utility  
19 Policy & Regulation. Prior to my employment with the Commission, I interned at  
20 Southern California Edison's regulatory affairs department, and served six years in  
21 the United States Air Force before being honorably discharged.

22

1 **Q. Have you previously testified before the Commission?**

2 A. Yes. I have most recently testified as Staff's witness on funding mechanisms for the  
3 decommissioning and remediation of Colstrip Units 1 and 2, and on payment  
4 processing cost adjustments, in Dockets UE-170033 and UG-170034. I have also  
5 been Staff's attrition study witness in Dockets UE-160228 and UG-160229. I also  
6 have testified on traditional modified historical test years and pro forma capital  
7 additions in Dockets UE-150204 and UG-150205, and served as Staff's witness on  
8 cost of service, rate spread, rate design, and decoupling in Docket UG-152286, a  
9 settled general rate case for Cascade Natural Gas.

10

11

## II. SCOPE OF TESTIMONY

12

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

14 A. I provide Staff's policy testimony in this case, covering topics that include end-of-  
15 period accounting for the test year, regulatory lag, and multi-year rate plans.

16 I am responsible for Adjustment 3.15 in Staff's electric revenue requirement  
17 model, and Adjustment 3.14 in Staff's natural gas revenue requirement model, for  
18 the first year of rates. I also sponsor Staff's multi-year rate plan revenue requirement  
19 models.

20

21

22

23

1 **Q. Have you prepared any exhibits in support of your testimony?**

2 A. Yes. I prepared Exh. CSH-2 and Exh. CSH-3. These exhibits present the calculation  
3 of revenues for the second and third years of Staff's proposed rate plan, for electric  
4 and natural gas, respectively.

5 Second, I sponsor Exh. CSH-4, which illustrates the composition and  
6 calculation of Staff's composite revenue escalator.

7 Third, I sponsor Exh. CSH-5 and Exh. CSH-6. These exhibits show the  
8 historical growth rate of the four escalation components, using linear regression.

9  
10 **Q. Please summarize Staff's recommendations on a multi-year rate plan.**

11 A. Staff recommends a multi-year rate plan, so as to break the current cycle of almost  
12 continuous rate cases from Avista. The rate plan is constructed in a manner that  
13 recognizes the benefits of regulatory lag. The rate plan defers ruling on the prudence  
14 of capital additions until Avista's next rate case, where Avista will be expected to  
15 fully support the capital additions made during the rate plan.

16  
17 **Q. How is the remainder of your testimony organized?**

18 A. In Section III, I introduce other witnesses testifying on behalf of Staff. In Section IV,  
19 I discuss policy matters relevant to this case. In Section V, I discuss the company's  
20 purported end-of-period rate base adjustment. In Section VI, I provide commentary  
21 on Avista's rate plan. In Section VII, I describe Staff's rate plan and highlight its  
22 merits. Finally, in Section VIII, I briefly review the estimates of select parties from  
23 the 2015 Avista rate case.

1                                   **III. INTRODUCTION OF STAFF WITNESSES**

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**Q. Please introduce Staff’s witnesses.**

A. The following witnesses present testimony and exhibits on behalf of Staff:

- Mr. David Gomez presents Staff’s analysis of power supply expense.
- Ms. Elizabeth O’Connell presents Staff’s recommendations for cost of service, rate spread, and rate design for both electric and natural gas service.
- Ms. Kathi Scanlan presents a review of the Commission’s modified historical test year ratemaking practice, pro forma policy, and Staff’s application of those Commission standards to Avista’s rate base adjustments in this case.
- Ms. Betty Erdahl presents Staff’s calculation of investor-supplied working capital.
- Ms. Joanna Huang presents Staff’s revenue requirement model for the first year of rates, as well as other specific adjustments to that model.
- Mr. Chris McGuire presents Staff’s position on interest rate hedging losses.
- Mr. David Parcell presents Staff’s position on cost of capital.
- Ms. Jennifer Snyder provides Staff’s review of the Line Extension Allowance Program, and its recommendation on Avista’s fuel conversion program.

- 1                   • Ms. Amy White provides Staff’s review of property tax adjustments and  
2                   uncollectibles expense.

3

4                                           **IV.     POLICY DISCUSSION**

5

6     **Q.     What policy matters will you discuss?**

7     A.     I will provide a review of the purpose and rationale for multi-year rate plans, as well  
8           as a description of their mechanics. I will provide commentary on regulatory lag.  
9           Finally, I will provide recommendations on low income and gas conservation issues.

10

11    **Q.     What methodology does the Commission typically use to set rates?**

12    A.     The Commission typically uses a modified historical test year (MHTY), with limited  
13           pro forma adjustments.

14

15    **Q.     Is Avista’s filing consistent with a MHTY with limited pro forma adjustments?**

16    A.     Avista’s filing uses a modified historical test year, although the pro forma  
17           adjustments can hardly be said to be limited. Avista refers to its modified historical  
18           test year filing as an “EOP Rate Base Study,” and uses this study to establish  
19           revenues for the first year of new rates. This matter is further discussed in Section V  
20           of this testimony.

21

1 **Q. Does Avista seek extraordinary ratemaking treatment in this rate case?**

2 A. Yes. Staff identified the following requests from the company as being  
3 extraordinary:

- 4 1. Use of end-of-period (EOP) accounting for the test year;
- 5 2. Indiscriminate use of pro forma rate base additions a for an entire year  
6 beyond the test year;
- 7 3. A hypothetical capital structure; and
- 8 4. A multi-year rate plan using a “K-factor.”

9  
10 **Q. What do you mean by “extraordinary ratemaking treatment?”**

11 A. Staff uses this term to refer to the “tools . . . proposed for use in a given case” that  
12 “must be chosen with specific reference to the needs of the case.”<sup>1</sup> These tools do not  
13 necessarily require a finding of extraordinary circumstances.

14

15 **A. Discussion on regulatory lag, and attrition**

16

17 **Q. What is regulatory lag?**

18 A. Regulatory lag is “the inevitable delay that regulation imposes in the downward  
19 adjustment of rate levels that produce excessive rates of return and in the upwards  
20 adjustments ordinarily called for if profits are too low.”<sup>2</sup> In other words, regulatory  
21 lag is the period of time that occurs between the time in which a cost to a utility

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<sup>1</sup> *Wash. Utils. & Transp. Comm’n v. Avista Corp., d/b/a Avista Utilities*, Dockets UE-160228 and UG-160229, Order 06, Final Order Rejecting Tariff Filing, 49, ¶ 82 (Dec. 15, 2016).

<sup>2</sup> Alfred Kahn, *The Economics of Regulation: Principles and Institutions*, Vol. II, p. 48 (1988).



1 changes, and the time when that change is reflected in customer rates. Costs that the  
2 utility incurs change; costs that the utility charges its customers stay fixed. This  
3 disconnect between the costs the utility faces, and the prices the utility charges its  
4 customers, can prove to be beneficial or harmful to the utility.

5 Regulatory lag exists for administrative reasons; it is an unavoidable business  
6 reality for a regulated utility and its regulator. Nonetheless, its incentivizing effects  
7 have been noted in regulatory literature for decades.

8  
9 **Q. Is regulatory lag good, or bad?**

10 A. Regulatory lag is neither good nor bad. It can work to the benefit of customers, or to  
11 the benefit of the regulated utility. When average costs are increasing, regulatory lag  
12 works to the detriment of the utility. When average costs are decreasing, regulatory  
13 lag works to the benefit of the utility.

14 Regulatory lag serves as an important tool for regulators and the public. It is  
15 only when the costs that a utility incurs increase, *and* when those costs are  
16 unavoidable, *and* when those costs threaten a regulated utility's financial position  
17 that regulatory lag is "bad." At that point, regulatory lag causes attrition.

18  
19 **Q. What is attrition?**

20 A. "Attrition" in the context of utility ratemaking refers to a scenario in which a utility's  
21 costs grow at a faster rate than the utility's revenues, thus eroding the regulated  
22 utility's opportunity to achieve a reasonable rate of return. Attrition is a  
23 phenomenon, or a condition; it is not a treatment.

1 **Q. Does Staff recommend an “attrition adjustment” in this case?**

2 A. No. To be clear, Staff’s multi-year rate plan is not based on an attrition analysis and  
3 does not include any attrition adjustments.

4

5 **Q. How should a regulator strike a balance with regulatory lag?**

6 A. Generally, the more forward-looking a regulator is when setting a company’s rates,  
7 the more the regulator should rely on regulatory lag as a tool to shape efficient  
8 behavior. The less forward-looking a regulator is when setting a company’s rates, the  
9 more conscious the regulator should be of the potential detrimental effects of  
10 regulatory lag.

11

12 **Q. What are some arguments against regulatory lag?**

13 A. Regulatory lag, particularly from a utility’s perspective, can pose a challenge. In  
14 jurisdictions that typically use historical test years (such as Washington), rates are  
15 established primarily on the basis of observed costs, rather than prospective costs.  
16 The premise behind this theory is that the cost relationships of the historical test year,  
17 will remain the same for the near-term future. That is, the relationships between  
18 costs, revenues and rate base will hold through the rate-effective period. Utilities  
19 worry that when new rates are established, those rates will not adequately reflect  
20 even current costs—that regulatory lag is already “baked in” to the new rates  
21 established by the commission. An example of this is when a capital project is added  
22 to rate base during the course of a general rate case, without being reflected in rate  
23 base in the commission’s final order.

1                   Some utilities also worry that the effects of regulatory lag are not countered  
2 by so-called “revenue-generating” capital expenditures, as was often the case in the  
3 past. Relatively flat load growth paired with rising costs for safety, reliability,  
4 environmental, and replacement investments cannot blunt the effects of regulatory  
5 lag, because they do not serve as new sources of revenue; these types of investment  
6 serve existing load, and existing revenue sources.

7

8 **Q. What are arguments in support of regulatory lag?**

9 A. The argument for regulatory lag is voiced less often and less forcefully than the  
10 argument against regulatory lag. However, it is equally deserving of hearing.

11                   Regulatory lag imposes discipline on utility operations and investment  
12 decisions, thus encouraging efficiency. The late Professor Alfred Kahn, a noted  
13 expert on regulation, described regulatory lag as a “positive advantage” rather than a  
14 “deplorable imperfection of regulation.”<sup>3</sup> He explained:

15                   Freezing rates for the period of the lag imposes penalties for  
16 inefficiency, excessive conservatism, and wrong guesses, and offers  
17 rewards for their opposites: companies can for a time keep the higher  
18 profits they reap from a superior performance and have to suffer the  
19 losses from a poor one. A similar function is served by the  
20 Commission’s following the explicit policy of holding permitted  
21 profits not to a fixed percentage, but within a range or ‘zone of  
22 reasonableness,’ with adjustments in rates permitted or imposed only  
23 when returns fall outside that range.<sup>4</sup>

24

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<sup>3</sup> Alfred Kahn, *The Economics of Regulation: Principles and Institutions*, Vol. II, p. 48 (1988).

<sup>4</sup> *Id.*

1 The careful reader will note that this is remarkably similar to a common justification  
2 presented for multi-year rate plans.<sup>5</sup> A multi-year rate plan necessarily involves the  
3 active engineering of regulatory lag.

4 Regulatory lag also serves as a disincentive to overcapitalization, or “gold-  
5 plating.” When a utility believes that it will experience (detrimental) regulatory lag,  
6 it is less likely to make unnecessarily large capital additions, as it will have to bear  
7 the costs of those capital additions for the period of the regulatory lag.

8 Finally, regulatory lag, combined with the threat of prudence disallowances,  
9 prevents utility regulation from devolving into a “cost-plus” approach. “Cost-plus”  
10 refers to a phenomenon where the costs of providing service, plus a return, are  
11 simply passed on to customers. Under such an approach, a utility’s actions are not  
12 only virtually risk-free, but they are also not constrained by a proxy for competitive  
13 market forces. Regulatory lag and the threat of disallowance serve as that proxy.

14 It is worth emphasizing that some companies benefit from regulatory lag; we  
15 can see this even in Washington State itself, in the example of NW Natural. Natural  
16 gas utilities like Puget Sound Energy, Avista, and Cascade Natural Gas have all  
17 individually made several rate case filings since NW Natural last submitted a filing.

18

19 **Q. Why did traditional cost of service regulation work so well in the past?**

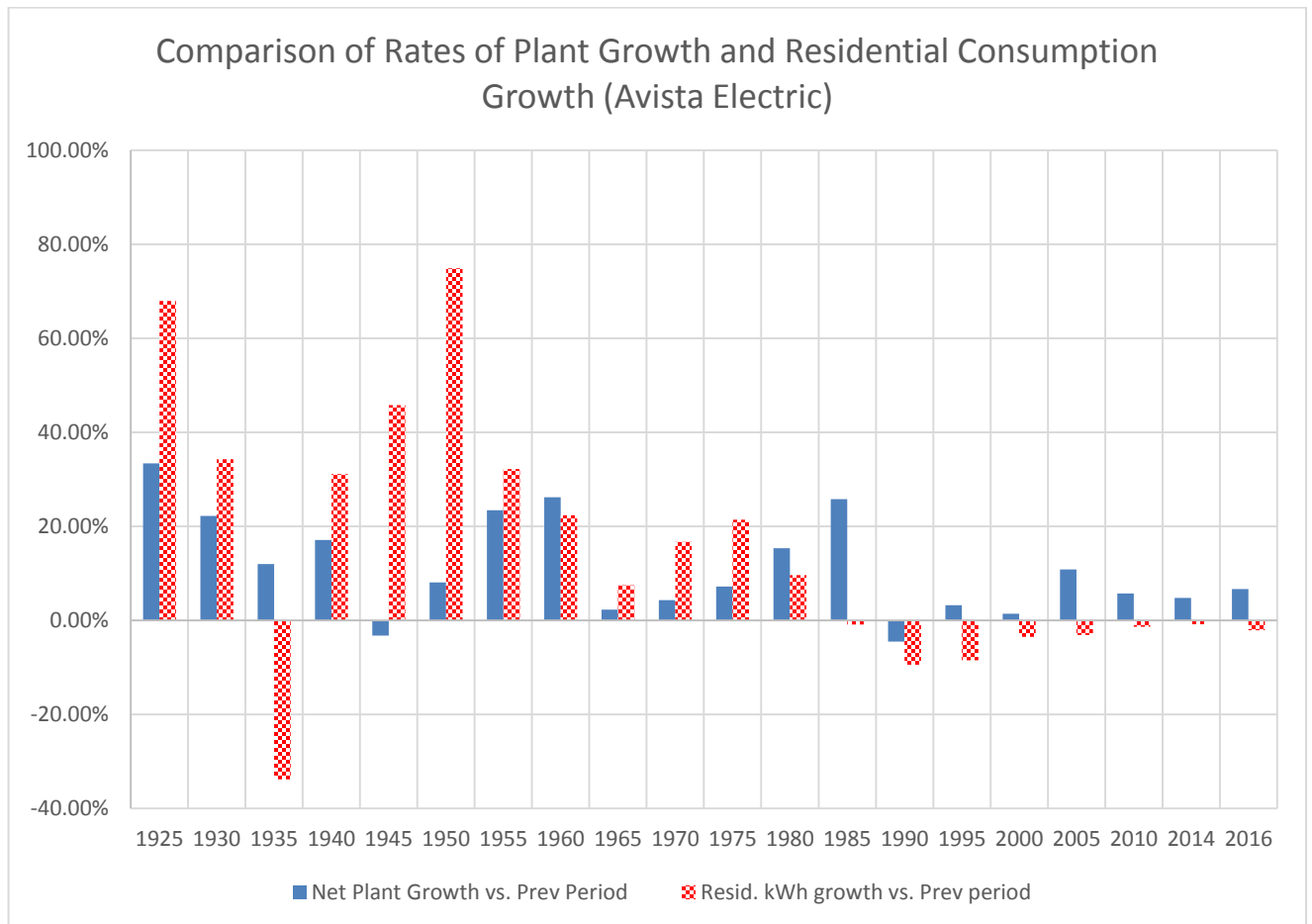
20 A. In the past, rising costs were largely attributable to growth in system capacity. Of  
21 course, growth in system capacity was driven by the expectation that usage would  
22 grow as well. Most utilities operated without decoupling mechanisms during this

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<sup>5</sup> Although Avista does not explicitly make this argument, it is implicit in its support for an “efficiency adjustment.” See Andrews, Exh. EMA-1T at 31:8-14, and Andrews, Exh. EMA-4 at 17:15-17.

1 time; a company's revenues were dependent upon billing determinants like customer  
2 counts and throughput (kWhs or therms). As costs grew, revenues also grew. While  
3 these growth rates were not exactly the same, they were similar enough to one  
4 another to stave off the need for frequent rate cases.

5 This point is illustrated by comparing growth in Avista's net electric plant  
6 and growth in Avista's residential kilowatt-hours sold over time:



7 The data in the above graphic are drawn from the same data set as  
8 Illustrations 4 and 5 in the testimony of Scott Morris. Here we see that for significant  
9 portions of Avista's history (bar the Great Depression), growth in consumption  
10 (using residential kWhs as a proxy) outpaced the growth in plant. Avista is not

1 unusual in this respect. This feature was particularly helpful for the company, as the  
2 price of kWhs included some portion of costs associated with fixed plant. Over the  
3 past 30 years, that has changed.

4

5 **Q. What has changed?**

6 A. Plant growth now outpaces growth in consumption (or load). In fact, residential load  
7 growth is declining.

8 On the plant growth side, this is due to the replacement of old plant with  
9 newer, more expensive plant, as well as new types of plant. On the consumption  
10 side, this is due to conservation measures, more efficient appliances, and changing  
11 customer preferences. There is a clear change, roughly around 1980, in the  
12 relationship between load growth and capital growth; the solid blue bars become  
13 taller than the patterned red and white bars.

14

15 **Q. What are the causes of attrition?**

16 A. There are numerous potential causes of attrition, which vary wildly. Causes of  
17 attrition can be sorted into two types: cost-based attrition and revenue-based attrition.

18 Some types of cost-based attrition are:

- 19 • Inflation of inputs (i.e., labor, fuel, etc.);
- 20 • Large capital expansion periods;
- 21 • Large increases in taxes;
- 22 • Poor management.

23 Some types of revenue-based attrition are:

- 1 • Flat or low load growth;
- 2 • Insufficiently set revenues.

3

4 **Q. Does an MRP combat attrition?**

5 A. Yes. In fact, this is one of the primary purposes of a multi-year rate plan.

6

7 **B. Multi-year Rate Plans**

8

9 **Q. What is a multi-year rate plan (MRP)?**

10 A. A multi-year rate plan is, as the name suggests, a ratemaking tool to provide for  
11 utility rates over the course of several years. It is almost always a plan to provide for  
12 increasing rates over the relevant period.

13 It can be helpful to think of a multi-year rate plan as a deliberate use of  
14 regulatory lag.

15

16 **Q. What are some of the benefits of a multi-year rate plan?**

17 A. Multi-year rate plans are attractive to utilities because they modify the timing and  
18 certainty of capital cost recovery for new investments. They are attractive to  
19 ratepayers because they provide for a gradual, predictable path for rate changes, and  
20 provide a meaningful incentive to utilities to strive towards cost-savings. Customers  
21 can benefit from those cost-saving measures either through an earnings sharing  
22 mechanism, or in subsequent rate case filings that are updated to reflect the  
23 efficiencies gained by the utility during the course of the rate plan.

1 For regulators, MRPs are attractive because they provide utilities with  
2 incentives to control their costs, provide for moderate rate changes, and provide  
3 utilities with flexibility in their operations. They also lower regulatory costs.

4 Finally, multi-year rate plans reduce the likelihood of continuous rate case  
5 filings, as we have seen in recent years with Avista.

6  
7 **Q. What problems are associated with frequent rate case filings?**

8 A. Frequent rate cases impose costs on utility management, regulatory staff, and other  
9 intervening parties.<sup>6</sup> Frequent rate case filings weaken utility performance incentives.  
10 Multi-year rate plans act as an alternative by temporarily denying the company the  
11 ability to time rate case filings.<sup>7</sup>

12 Frequent rate case filings can approximate “cost-plus” ratemaking, a topic  
13 that is explored later in this testimony. So-called back-to-back filings, especially  
14 when paired with similar activity by other regulated utilities, also burden intervening  
15 parties, exhausting their resources and reducing their ability to effectively counter  
16 the asymmetric knowledge and resources of the utility. These parties are denied the  
17 opportunity to fully reflect on rate case outcomes and strategies, and find their ability  
18 to fully investigate other matters compromised. Those other matters are often other  
19 companies’ rate case filings.

20 An example along these lines is in that in recent years, test year figures are  
21 hardly afforded the same degree of attention that pro forma adjustments are given.

---

<sup>6</sup> This was a major reason for approving PSE’s multi-year rate plan in Dockets UE-130137 and UG-130138.

<sup>7</sup> See Ellen M. Pint, *Price-Cap versus Rate-of-Return Regulation in a Stochastic-Cost Model*, 23 RAND J. Econ. 564 (Winter 1992).



1 The reduced scrutiny given to test year figures is an important element in “cost-plus”  
2 regulation.

3

4 **Q. What are the downsides to multi-year rate plans?**

5 A. Rate plans require regulators to accept a small degree of uncertainty over the  
6 ongoing conditions facing the company during the rate-effective period. Because rate  
7 plans consider capital additions, operating expenses, and other matters of the utility  
8 that occur further into the future, there is a greater likelihood of estimation error.  
9 This estimation error can result in either a windfall or a revenue insufficiency for the  
10 company in question.

11 Utilities face risk in multi-year rate plans as well. If the revenues in the  
12 second and third year of a rate plan are calculated in a manner that proves to be  
13 insufficient, the utility faces a greater risk of falling short of its target rate of return.  
14 Or as the Commission recently stated in reference to PSE’s multi-year rate plan in  
15 Dockets UE-130137 and UG-130138: “This approach requires the Company to  
16 accept some risk that rates in a future year will be sufficient, but it also provides  
17 more certainty to customers. It creates an incentive for the Company to control costs  
18 during the years that rates are in effect.”<sup>8</sup>

19

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<sup>8</sup> *Wash. Utils. & Transp. Comm’n v. Avista Corp. d/b/a Avista Utils.*, Dockets UE-150204 and UG-150205, Order 05, Final Order Rejecting Tariff Filing, Accepting Partial Settlement Stipulation, Authorizing Tariff Filings, 48, ¶ 130 (Jan. 6, 2016).

1 **Q. How are multi-year rate plans typically justified?**

2 A. A report by the National Regulatory Research Institute summarizes the justifications  
3 for multi-year rate plans from both the perspective of the utility, and from an interest  
4 in improving utility performance.<sup>9</sup> The six benefits identified from a utility  
5 perspective are:

- 6 1. More predictable revenues for utilities, bolstering their financial health;
- 7 2. Spreading of rate increases over a longer period;
- 8 3. More predictable rates for customers;
- 9 4. Stronger performance incentives;
- 10 5. Timely recovery of costs for new capital projects; and
- 11 6. Fewer general rate cases over time.<sup>10</sup>

12 This report also notes that supporters of MRPs argue that MRPs “avoid ‘earnings’  
13 attrition by preventing the erosion of a utility’s rate of return that could occur under  
14 an historical test year.”<sup>11</sup> Furthermore, it states, “From a utility’s perspective, the  
15 biggest benefit from MRPs probably comes from an improved opportunity to earn its  
16 authorized rate of return. That is, the mitigation of regulatory lag that can jeopardize  
17 a utility’s financial health.”<sup>12</sup>

18

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<sup>9</sup> Ken Costello, National Regulatory Research Institute, *Multiyear Rate Plans and the Public Interest* (October 2016), <http://nrri.org/download/nrri-16-08-multiyear-rate-plans/> (“NRRI report”).

<sup>10</sup> NRRI report at 16.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

1 **Q. So is a multi-year rate plan a form of regulatory lag, or a solution for regulatory**  
2 **lag?**

3 A. Both. A multi-year rate plan is a form of regulatory lag, in that the prices the utility  
4 charges in the near and medium term are fixed. However, it is also a solution to  
5 regulatory lag, in that the prices a utility charges its customers are updated in a  
6 manner consistent with the changes in prices that the utility itself faces.

7  
8 **Q. Why is a multi-year rate plan a good idea?**

9 A. From the list above, Staff is interested in a multi-year rate plan for reasons 1, 3, 4, 5,  
10 and 6. Recent history, and Avista’s stated plans for continued large capital additions  
11 in the coming years, all point toward the likelihood that absent a multi-year rate plan,  
12 Avista will continue to file back-to-back rate cases.

13 A multi-year rate plan will address the Commission’s expressed concerns of  
14 breaking the pattern of annual rate filings. A properly designed rate plan would also  
15 share risks between customers and Avista, and incentivize the company to become  
16 more efficient in its operations, while providing for the opportunity to achieve the  
17 target rate of return.

18  
19 **Q. On page 49 of Exh. SLM-1T, Avista witness Scott Morris states that “the**  
20 **existing one-way earnings test” for Avista’s Washington electric and natural gas**  
21 **operations acts as one of a few “checks and balances” to “ensure that retail**  
22 **rates for the duration of the multi-year rate plan are fair for customers.” Do**  
23 **you agree?**

1 A. Perhaps. Let us revisit what is meant by a “one-way” earnings test. The earnings test  
2 is “one-way” in the sense that it is only relevant when the Company over-earns, and  
3 is not relevant when the Company under-earns. This is how most earnings tests  
4 work. When the earnings test is activated, half of the “over-earned” revenues are  
5 returned to customers, and the company keeps the remaining half.

6 Some sharing of “over-earned” revenues may be appropriate, as an earnings-  
7 sharing mechanism ensures that existing customers will benefit from cost-cutting  
8 measures implemented by the company during the course of its rate plan. Such a  
9 mechanism acts as a hedge against the possibility that revenues were errantly over-  
10 estimated as well. An earnings sharing mechanism maintains an incentive for the  
11 Company to reduce costs and increase productivity.

12 That said, the Commission may want to consider eliminating earnings-  
13 sharing during the course of the rate plan. Staff does not endorse doing so, but  
14 wishes to raise the merits for the Commission’s consideration. The reason for doing  
15 so would be to maximize the incentive to cut costs during the course of the rate plan,  
16 under the expectation that lower operating costs would be captured in the test year of  
17 a future rate case. Alternatively, the Commission may wish to consider an earnings  
18 sharing band, wherein earnings sharing is only triggered at some level above the  
19 authorized rate of return.

20

21 **Q. Can you summarize your policy recommendations regarding multi-year rate**  
22 **plans? Should the Commission approve a multi-year rate plan?**

1 A. The Commission should approve a multi-year rate plan. In particular, it should  
2 approve a three-year rate plan with the electric and natural gas revenue increases for  
3 years two and three detailed in Exh. CSH-2 (electric) and Exh. CSH-3 (natural gas).

4 The Commission should maintain the existing earnings sharing program  
5 through the multi-year rate plan, regardless of the Commission’s future decision on  
6 whether to continue or end decoupling. Staff believes that the existing program  
7 appropriately allocates risk between ratepayers and investors. Maintaining the  
8 current program will also allow customers to more immediately enjoy the benefits of  
9 any efficiency gains the company is able to achieve.

10 The Commission should also adopt Ms. Andrews’s proposal for capital  
11 addition reporting, also known as “attestation.”<sup>13</sup>

12 Staff witness Mr. Gomez recommends that the Commission maintain the  
13 current power cost baseline until a) Avista’s next general rate case or b) the total  
14 credit balance owed to ratepayers of \$21.3 million falls below \$10 million,  
15 whichever occurs sooner.

16 Finally, the Commission should require the company to file a general rate  
17 case within twelve months of the conclusion of the multi-year rate plan. In that case,  
18 the Commission should require that the Company present testimony that describes  
19 the largest capital additions<sup>14</sup> made over the duration of the multi-year rate plan.  
20

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<sup>13</sup> Andrews, Exh. EMA-1T at 28:15-18.

<sup>14</sup> Here “largest capital additions” can be interpreted as any capital project placed in service in which the total expected (or, for complete projects, actual) cost is greater than or equal to 0.5% of the net plant in service in the preceding calendar year. The Commission can exercise its considerable judgment here on what is an appropriate threshold.

1 **Q. On what grounds has the Commission previously established a multi-year rate**  
2 **plan for a regulated utility?**

3 A. Most recently, the Commission adopted a multi-year rate plan for Puget Sound  
4 Energy.<sup>15</sup> One basis for the Commission’s decision was that the rate plan provided  
5 rate predictability.<sup>16</sup> The Commission also noted that the plan was an “innovative  
6 approach” that provided PSE incentives to cut costs in order to earn its authorized  
7 rate of return.<sup>17</sup> Finally, the Commission supported its decision because the reduced  
8 number of rate filings would break the pattern of almost continuous rate case  
9 filings.<sup>18</sup> Since 2012, Avista has filed a general rate case in every year save for 2013.  
10 There was no general rate case in 2013 because the Commission approved a two-  
11 year rate plan in Avista’s 2012 general rate case.<sup>19</sup>

12  
13 **C. The decoupling “soft-cap” and MRPs**

14  
15 **Q. What is the decoupling “soft-cap?”**

16 A. On decoupled schedules, companies maintain a deferral balance to account for  
17 under- or over-collection of revenues for the given schedule. Often, there are bounds  
18 placed on how much rates can change when “trueing up” the rates to account for the  
19 deferral balance. Avista operates under such a mechanism. In the case of an under-

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<sup>15</sup> *Wash. Utils. & Transp. Comm’n v. Puget Sound Energy*, Dockets UE-130137 and UG-130138, Order 07, Final Order Authorizing Rates (June 25, 2013).

<sup>16</sup> *Id.* at 66, ¶ 150.

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Wash. Utils. & Transp. Comm’n v. Avista Corp. d/b/a Avista Utils.*, Dockets UE-120436 and UG-120437, Order 09, Final Order Rejecting Tariff Filing, Accepting with Conditions Multi-Party Settlement Agreement, Authorizing Tariff Filing, and Requiring Compliance Filing (Dec. 26, 2012).

1 collection, Avista can increase rates by no more than 3% in order to collect those  
2 deferred revenues. If a 3% rate increase is insufficient to clear the deferral balance,  
3 those funds are rolled forward.

4

5 **Q. What is the relevance of the decoupling soft-cap with a multi-year rate plan?**

6 A. A multi-year rate plan will often require an increase in rates in the second and third  
7 years of the rate plan. Suppose, for the sake of discussion, that a hypothetical rate  
8 plan calls for an increase of 2%, and that the utility in question operates under a  
9 decoupling soft-cap of 3%. If improperly structured, the rate increase from the multi-  
10 year rate plan can complicate the decoupling soft-cap. In this instance, a 2% increase  
11 from the MRP could leave only 1% of room left for a rate increase to correct prior  
12 under-collection of decoupled revenues. This was a matter relevant in the recent  
13 Puget Sound Energy general rate case.

14

15 **Q. What recommendation would you make?**

16 A. The decoupling soft-cap should use a 3% threshold that is independent of any rate  
17 increases from the multi-year rate plan. The revenue increase authorized by the  
18 decoupling mechanism should first be determined. Then, the revenue increase called  
19 for by the rate plan should be applied, followed by the application of the increase in  
20 revenues called for by the decoupling mechanism.

21

1           **D.     Other policy matters**

2

3   **Q.     Are there any other matters that you would like to bring to the Commission’s**  
4           **attention?**

5   A.     Staff would like to remind the Commission that Avista’s decoupling mechanism, as  
6           agreed in settlement and approved by the Commission, is effective for five years,  
7           ending December 31, 2019,<sup>20</sup> approximately one and a half years prior to the end of  
8           Staff’s proposed rate plan. An evaluation of the decoupling mechanism’s first three  
9           years, from 2015 through 2017, is expected in 2018. Staff understands the  
10          settlement, and the Commission’s order approving it, to have contemplated the  
11          continuation of the Company’s decoupling mechanism through the end of 2019,  
12          without requiring reapproval in any intervening rate case, so that the mechanism can  
13          be properly evaluated.

14

15   **Q.     Are there any other requirements the Commission should consider in**  
16           **establishing the Company’s rates?**

17   A.     Yes. Staff draws the Commission’s attention to two ongoing programmatic  
18           requirements it may wish to adjust in this rate case. First, Avista’s third-party  
19           evaluation of its existing decoupling mechanisms is expected in 2018.<sup>21</sup> This  
20           evaluation should explicitly include a comparison of low-income conservation  
21           program participation with general conservation program participation to inform the

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<sup>20</sup> See *Wash. Utils. & Transp. Comm’n v. Avista Corp. d/b/a Avista Utils.*, Dockets UE-140188 and UG-140189, Order 05, 11-14, ¶¶ 22-28 (Nov. 25, 2014); *Wash. Utils. & Transp. Comm’n v. Avista Corp.*, Dockets UE-140188 and UG-140189, Settlement Stipulation, 6-7, ¶ 13 (Nov. 25, 2014).

<sup>21</sup> *Id.*



1 level of spending on low-income conservation programs. Staff also urges the  
2 Commission to require the company to include a natural gas conservation target,  
3 complete with penalties for failure and incentives for achievement in any future  
4 decoupling proposals.

5 Second, Staff has continued to monitor Avista’s implementation of its Low-  
6 Income Rate Assistance Program.<sup>22</sup> Staff believes the company is in compliance with  
7 the requirements of the Commission’s order. However, Staff is disappointed that the  
8 Company’s testimony makes no mention of the goals adopted by the Commission  
9 and fails to connect the programs delivered by the Company with the goals approved  
10 by the Commission. Staff urges the Commission to direct the Company to address  
11 how it plans to implement these goals in its compliance filing in this rate case. Staff  
12 also recommends that the Commission extend the LIRAP plan one additional year,  
13 through 2020, with the same percentage increases established in 2014.<sup>23</sup>

14  
15 **V. END OF PERIOD RATE BASE**

16  
17 **Q. What is the purpose of electric adjustment 3.15 in Exh. EMA-3 and natural gas**  
18 **adjustment 3.14 in Exh. EMA-7 in the Company’s “EOP Rate Base Study”**  
19 **presentation?**

---

<sup>22</sup> See *Wash. Utils. & Transp. Comm’n v. Avista Corp. d/b/a Avista Utils.*, Dockets UE-150204 and UG-150205, Final Order Rejecting Tariff Filing , Accepting Partial Settlement Stipulation, Authorizing Tariff Filings, Order 05, 77-80, ¶¶ 223-34 (Jan. 6, 2016).

<sup>23</sup> *Id.* at 80, ¶ 234. The extension would mean that by Aug. 15, 2020, Avista should file revisions to Schedules 92 and 192 to increase LIRAP funding by 7% for the program year beginning Oct. 1, 2020.

1 A. The purpose of these two adjustments is to advance the effective rate base figures  
2 from the restated test year all the way up to Avista’s expectations of rate base  
3 balances as of December 31, 2017. These two adjustments are given the flawed title  
4 “EOP 2017 Capital Net Rate Base.” They are conceptually identical to Adjustment  
5 18.01 in Exh. EMA-5, and Adjustment 18.01 in Exh. EMA-9.

6 Avista witness Ms. Andrews justifies these adjustments on the grounds that  
7 they “best reflect a recognition of plant that will be actually in-service during the  
8 period the new rates are in effect.”<sup>24</sup> There is, however, no similar adjustment for  
9 rate base additions between December 31, 2017, and the expected rate-effective date  
10 of May 1, 2018.

11  
12 **Q. Do you object to the characterization of these adjustments as “EOP rate  
13 base?”**<sup>25</sup>

14 A. Yes. While the company may defend this presentation on the grounds that this  
15 adjustment aims to arrive at a rate base figure expected at the end of a period, this is  
16 a distortion of the concept of end-of-period (“EOP”) rate base.<sup>26</sup>

17 The phrase “EOP rate base” and its variants are generally reserved for  
18 reference to test year balances. Avista’s adjustments include adjustments well  
19 beyond the test year.

20 These adjustments are more accurately described as indiscriminate pro forma  
21 rate base additions, regardless of the size of the individual capital additions contained

---

<sup>24</sup> Andrews, Exh. EMA-1T at 12:14-15.

<sup>25</sup> *Id.* at 12:9.

<sup>26</sup> *Id.* at 11:8-32 (particularly line 29).

1 in the adjustment. This latter characteristic becomes clear when comparing the  
2 adjustments to Adjustment 3.10 in Exh. EMA-3 and Adjustment 3.10 in Exh. EMA-  
3 7, which do consider the magnitude of the capital additions contained in the  
4 adjustments. Put more simply, Adjustment 3.15 in Exh. EMA-3 and Adjustment 3.14  
5 in Exh. EMA-7 contain rate base additions expected to occur by December 31, 2017,  
6 that the company does not believe fit the threshold that Staff has used for  
7 consideration of pro forma adjustments involving capital additions. These  
8 adjustments represent very aggressive pro forma capital addition adjustments—far  
9 beyond an adjustment to the method of calculating test year rate base figures.

10  
11 **Q. Why are these capital additions typically not accounted for?**

12 A. The primary reason is that these capital additions are not “major,” in Staff’s  
13 analytical framework.<sup>27</sup> Other intervening parties typically have their own ways of  
14 determining which capital additions are “major,” but the nature of the effect is the  
15 same—some capital additions after the test year go unconsidered for rate-making  
16 purposes, due to their relatively small magnitude.

17  
18  
19 **Q. Why has Staff typically distinguished between major and “non-major” capital**  
20 **projects?**

21 A. Staff makes this distinction to focus its limited resources on the most significant  
22 capital additions made after the conclusion of the test year. Companies can and often

---

<sup>27</sup> See the testimony of Staff witness Ms. Scanlan for further discussion on major pro forma plant additions.

1 do produce hundreds of potential capital additions that are not captured in the test  
2 year, that they expect to be in service during the rate-effective period. However,  
3 Staff, intervening parties, and the Commission prefer not to rely on expectations  
4 alone. The scope of projects considered for pro forma treatment must be narrowed in  
5 order to dedicate a sufficient amount of scrutiny and attention to the merits of  
6 individual projects.

7 Additionally, Staff can only testify to those capital additions it has found  
8 appropriate for ratemaking consideration, and can only testify to the amounts  
9 demonstrated to be in-service prior to the date in which testimony is made.

10 Finally, pro forma plant adjustments should be limited in number and scale  
11 because it is simply not feasible for a company to demonstrate, or for intervening  
12 parties to verify, with certainty and specificity, every single capital transfer to plant,  
13 and then to demonstrate, capture, and verify offsetting benefits for every single  
14 capital transfer to plant in separate pro forma adjustments.

15 The side-effect is that rate base figures run the risk of being under-stated  
16 relative to what is in service during the rate-effective period. This is a classic  
17 example of regulatory lag.

18

19 **Q. What is one measure that the Commission often exercises in order to counter**  
20 **this known cause of regulatory lag?**

21 A. One measure that the Commission exercises is the use of end-of-period rate base  
22 accounting *for the test year*.<sup>28</sup> This adjustment transforms test year rate base balances

---

<sup>28</sup> This is what is referred to in bullet point 5 in paragraph 82 of Order 06, in *Wash. Utils. & Transp. Comm'n v. Avista Corp. d/b/a Avista Utils.*, Dockets UE-160228 and UG-160229 (Dec. 15, 2016).

1 from average-of-monthly-average accounting, which best matches the effective rate  
2 base balances throughout a year, to end-of-period accounting, which reflects rate  
3 base balances at the end of a test year, when those balances are almost always their  
4 largest. This transformation in accounting goes some way towards compensating for  
5 the unrecognized rate base additions that were too small, too numerous, or too late in  
6 the rate case schedule to account for during a rate proceeding.

7 Note that this is distinct from what is proposed in Adjustment 3.15 in Exh.  
8 EMA-3, and Adjustment 3.14 in Exh. EMA-7, which are much further conceptual  
9 leaps.

10

11 **Q. Why is end-of-period accounting not the standard method of calculating test**  
12 **year levels of rate base?**

13 A. The primary reason that average-of-monthly-averages (AMA) accounting is favored  
14 over end-of-period accounting is that AMA more closely follows the matching  
15 principle.

16

17 **Q. Is Staff supporting end-of-period rate base accounting for the test year?**

18 A. Yes. The transformation of test year rate base balances from AMA to EOP is  
19 captured in Staff's electric adjustment 2.19 and natural gas adjustment 2.16.

20 For electric service, converting from AMA to EOP accounting inflates rate  
21 base by \$69.7 million, yielding a \$7.00 million increase in revenue requirement. For  
22 natural gas service, this treatment increases rate base by \$14.2 million, yielding a  
23 \$1.42 million increase in revenue requirement.

1 **Q. Why is Staff supporting this adjustment?**

2 A. As stated previously, EOP has been found to be appropriate to counter the effects of  
3 regulatory lag. Staff recognizes that an AMA accounting, with limited pro forma  
4 adjustments, will likely understate the level of rate base in service during the first  
5 year of the rate plan. This understatement is an example of regulatory lag.

6 An EOP adjustment is also justified for Avista given the low load growth  
7 expectations Staff has for Avista. In times of more accelerated load growth, such  
8 load growth was more forgiving of the understatement of rate base that typically  
9 occurs when using AMA accounting.

10 In the context of a multi-year rate plan, this adjustment is of particular  
11 importance. Revenue requirements for Year One are developed from an estimate of  
12 rate base in the modified historical test year. In the second and third year of Staff's  
13 multi-year rate plan, those revenues are escalated forward. Or, in other words, Year 2  
14 and Year 3 revenues are a function of Year 1 revenues, and Year 1 revenues are a  
15 function of the rate base levels established in the modified historical test year. Thus,  
16 the effects of the choice between AMA and EOP for the test year carry forward  
17 throughout the entire rate plan.

18

19 **Q. What is the effect of Staff's electric adjustment 3.15, and natural gas  
20 adjustment 3.14?**

21 A. For the reasons described above, these adjustments add zero dollars to rate base and  
22 expenses.

23

1                                   **VI. COMMENTARY ON AVISTA’S RATE PLAN**

2

3   **Q. How is Avista’s rate plan structured?**

4   A. Avista’s rate plan contains two components. The first component is a purported  
5       modified historical test year with limited pro forma adjustments, which corresponds  
6       to year one of the rate plan. Staff witness Kathi Scanlan provides Staff’s commentary  
7       on Avista’s modified historical test year.

8                   The second component is a so-called “K-factor” model that is used to  
9       develop revenue requirements for years two and three of the rate plan. This model  
10      creates escalation rates that are applied to the escalation base in Year One in order to  
11      develop revenue requirements for Year Two. Similarly, the Year Two escalation  
12      base is escalated to develop Year Three revenue requirements.

13

14   **Q. Please discuss Avista’s “K-Factor” model.**

15   A. Avista develops a rate plan structure in which revenues are escalated by a factor that  
16      it terms “the K-Factor.” I wish to steer the Commission and the record away from  
17      this terminology, as it violates how that term is traditionally used in multi-year rate  
18      plans and conflates several rate plan concepts into one term.

19

20   **Q. Please elaborate on the “K-factor” terminology.**

21   A. A “K-factor” is typically meant to refer to a growth factor for capital, hence the use  
22      of “K”, the common economic abbreviation for “capital.” Other factors are also often

1 discussed in rate plan literature: X-factor (for productivity growth; also known as a  
2 “productivity offset”) and Q-factor (service quality) also see use.<sup>29</sup>

3 Avista’s use of the term “K-factor” refers to a composite revenue growth  
4 factor, rather than specifically to the growth in capital. As a result, Staff will not  
5 refer to Avista’s model as a “K-factor” model, and discourages other parties and the  
6 Commission from doing so.

7  
8 **Q. Jargon aside, how is Avista’s revenue growth factor constructed?**

9 A. Avista’s revenue growth factor is developed from four individual growth factors.  
10 Those factors are: (1) the depreciation growth factor; (2) the O&M expense growth  
11 factor; (3) the Taxes Other Than Income growth factor; and (4) the Net Plant After  
12 Accumulated Depreciation and Federal Income Tax (Net Plant ADFIT) growth  
13 factor.

14 The O&M expense growth factor in Avista’s model is in actuality only 90%  
15 of the historical growth rate, an adjustment made by Avista in order to reflect a 10%  
16 efficiency adjustment.<sup>30</sup> This efficiency adjustment is often also referred to as a  
17 “productivity offset.” Finally, the Net Plant ADFIT growth factor reflects Avista’s  
18 expected reduction in growth in net plant in 2019 and 2020.<sup>31</sup>

19  

---

<sup>29</sup> See Lesser and Giacchino, *Fundamentals of Energy Regulation*, Chapter 8, Section 4 (2007).

<sup>30</sup> Andrews, Exh. EMA-1T at 31:8-11.

<sup>31</sup> *Id.*



1 **Q. What percentages of revenues do these cost-drivers represent?**

2 A. After removing power supply revenues, these four types of costs subject to escalation  
3 represent the following shares of electric revenues: O&M expense (~ 35%);  
4 depreciation expense (~ 20%); taxes other than income (9.8%); and Net Plant ADFIT  
5 (34.4%).

6 Similarly for natural gas, the four types of costs subject to escalation  
7 represent the following shares of natural gas revenues: O&M expense (41.4%);  
8 depreciation expense (20.13%); taxes other than income (7.33%); and Net Plant  
9 ADFIT (31.15%). These shares are with natural gas commodity revenues removed.

10 Each of these cost-causers is given a growth factor. The growth factor is  
11 multiplied by the share of revenues found above, and four figures are produced. The  
12 sum of these four figures—a weighted average of the component escalation rates—  
13 represents what Avista calls a “K-factor,” and what Staff calls a composite escalator.

14

15 **Q. Please discuss Avista’s depreciation growth factor.**

16 A. Avista calculates its depreciation growth factor as the compound growth rate of the  
17 total depreciation and amortization expense from 2013 to 2016, according to  
18 Avista’s respective Commission Basis Reports.

19

20 **Q. Please discuss Avista’s O&M expense growth factor.**

21 A. Avista calculates its O&M expense growth factor by first finding the compound  
22 growth rate of Adjusted Operating Expenses from its 2013 to 2016 Commission  
23 Basis Reports. Then, Avista applies a 10% “efficiency adjustment,” which produces

1 a value that is 90% of the above historical compound growth rate. This is not an  
2 unusual step to take in the development of a multi-year rate plan.<sup>32</sup>

3

4 **Q. Please discuss Avista’s Taxes Other Than Income growth factor.**

5 A. Avista calculates its Taxes OTI growth factor by finding the compound growth rate  
6 of Adjusted Taxes OTI from its 2013 to 2016 Commission Basis Reports.

7

8 **Q. Please discuss Avista’s Net Plant ADFIT growth factor.**

9 A. Unlike the other growth factors, this component factor is *not* developed from  
10 historical data. Instead, it is developed from prospective data. Avista finds the  
11 compound growth rate of the 2018 through 2020 expected Net Plant ADFIT figures  
12 from Avista’s “Rate Year Study.”

13

14 **Q. Is it unusual for a multi-year rate plan to be based on planned investment?**

15 A. No. In fact, under PSE’s recently concluded multi-year rate plan, plant growth was  
16 found by evaluating a one-page schedule of projected growth in Net Plant in  
17 Service.<sup>33</sup>

18

19 **Q. Three of Avista’s four growth factors use the period 2013-2016. How does**

20 **Avista justify the use of this period?**

---

<sup>32</sup> NRRI report at 31; *see also* U.S. Department of Energy, GRID Modernization Laboratory Consortium, *State Performance-Based Regulation Using Multiyear Rate Plans for U.S. Electric Utilities*, p. 4.3 (July 2017).

<sup>33</sup> *Wash. Utils. & Transp. Comm’n v. Puget Sound Energy*, Dockets UE-121697 and UG-121705, Brief of Public Counsel, 15, ¶ 32 (May 30, 2013).

1 A. Ms. Andrews states that this period is chosen because this period is “more current”  
2 and that these years “already included the effects of reductions in O&M after  
3 2012.”<sup>34</sup>

4  
5 **Q. Do you have any concerns using this particular period of time for three of the**  
6 **four component factors?**

7 A. Yes. The reductions in O&M after 2012 are relevant to the escalation of O&M  
8 expense. It is much less obvious why reduced O&M expenses after 2012 should  
9 result in using the 2013-16 period to find historical growth in Taxes OTI and  
10 Depreciation expenses. Staff, as we will explore later, finds it more appropriate to  
11 use a longer period of time to evaluate the historical growth in these particular  
12 expenses.

13  
14 **Q. What observations do you have about how Avista models productivity**  
15 **growth/growth in operating expenses?**

16 A. Productivity growth factors usually adopt one of two approaches: an approach based  
17 on the company’s past performance or expected future performance, or, a broader  
18 price index. Avista argues against the use of indices (specifically the Consumer Price  
19 Index, or “CPI”), and argues for a method that reflects the company’s historical  
20 performance.

21 I have a few concerns with Avista’s preferred approach. First, this approach  
22 can penalize a company for its past high efficiency, or reward it for poor productivity

---

<sup>34</sup> Andrews, Exh. EMA-1T at 33:6-12.

1 in the past. This is, admittedly, somewhat mitigated by Avista's voluntary use of a  
2 stretch factor or efficiency adjustment.

3 Secondly, and perhaps more importantly, the use of company-specific data  
4 over measures of productivity from the utility industry is counter to the goal of  
5 providing a proxy for market competition that lies at the heart of the use of a multi-  
6 year rate plan. A key desire of regulators adopting a multi-year rate plan is to  
7 encourage utilities to operate more efficiently. Providing for rates that reflect the  
8 underlying productivity growth in the utility industry best meets that goal. An index-  
9 based approach better reflects external cost drivers to the company and encourages a  
10 utility to match (or with a stretch factor, exceed) industry norms.

11 Finally, because a multi-year rate plan is a prospective exercise (especially in  
12 comparison with traditional rate-making), as well as an extraordinary method of rate-  
13 making, a conservative approach is wise. An index-based approach is best on this  
14 criterion.

## 16 VII. STAFF'S RATE PLAN MODELS

### 18 Q. How is Staff's rate plan structured?

19 A. Staff's rate plan structure is similar to that of the company, although with meaningful  
20 distinctions. Year One revenues are developed through the principled use of a  
21 modified historical test year, with limited pro forma adjustments. From ~~this base~~the  
22 Year One revenue requirement, Staff removed all ERM-related power costs and then

1 ~~applied escalators are applied~~ to develop revenues for Years Two and Three. Those  
2 escalation rates are developed in Staff's composite escalation factor model.

3 As with Avista's proposal, the revenue requirements formulated in Staff's  
4 modified historical test year form the base from which subsequent years' revenues  
5 are developed. As a result, the practices used in the development of Year One  
6 revenue requirements will echo into the Year Two and Year Three revenue  
7 requirement figures.

8  
9 **A. Escalating O&M Expenses**

10  
11 **Q. What methods did Staff consider for escalating O&M expenses?**

12 A. Staff considered both the Company's proposal, as well as an index-based approach.  
13 Staff chose the latter option.

14  
15 **Q. Please describe Staff's perspective on appropriate indices.**

16 A. The merits of an index-based approach depends in large part on the index or indices  
17 chosen. Care must be taken to ensure that the chosen indices are relevant to the  
18 industry in question. Ms. Andrews does a fine job explaining why a Consumer Price  
19 Index is an inappropriate index for our purposes here.

1 **Q. What indices does Staff use?**

2 A. Staff uses two indices: the Employment Cost Index for Utilities<sup>35</sup>, or ECI-U, and the  
3 Producer's Price Index for Utilities<sup>36</sup>, or PPI-U. The Producer's Price Index for  
4 Utilities has several "sub-indices" that Staff makes use of as well.

5  
6 **Q. Please describe the Employment Cost Index.**

7 A. The Employment Cost Index measures costs of employees to employers. It is  
8 designated a Principal Federal Economic Indicator by the Bureau of Labor Statistics.  
9 It measures not only wages, but benefits the company provides to employees, such as  
10 health insurance, retirement plans, and paid time off. Staff uses a form of the  
11 Employment Cost Index that is specific to utilities.

12  
13 **Q. Please describe the Producer Price Index.**

14 A. The Producer Price Index measures costs to producers. As with the Employer Cost  
15 Index, Staff used the utility-specific subset of the Producer Price Index.

16  
17 **Q. How does Staff develop its escalation factor for electric O&M expenses?**

18 A. For electric operations, Staff develops an escalator that gives one-half weight to the  
19 Employment Cost Index for utilities, and one-half weight to a composite of the  
20 transmission, distribution, and generation indices; Staff calls this composite "PPI-

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<sup>35</sup> U.S. Bureau of Labor Statistics, Employment Cost Index: Total compensation for Private industry workers in Utilities [CIS201440000000I] (September 22, 2017), retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/CIS201440000000I>.

<sup>36</sup> U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Utilities [PCU221221] (September 22, 2017), retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/PCU221221>.

1 Custom.” Linear regression is used to find the linear growth rate of costs in all of  
2 these indices over the period 2007 to 2016. The Employment Cost Index for utilities  
3 suggests a growth rate of 2.48%.

4 PPI-Custom is formed from using the following indices: the index for  
5 Electric Power Generation<sup>37</sup>; the index for Electric Bulk Power Transmission<sup>38</sup> and  
6 Control; and, the industry index for Electric Power Distribution.<sup>39</sup> These indices are  
7 given weight in PPI-Custom based on the Avista’s 2016 proportion of generation,  
8 transmission, and distribution plant. PPI-Custom suggests a growth rate of 2.24%.

9 Giving the Employment Cost Index for utilities one-half weight, and PPI-  
10 Custom one-half weight, produces an electric O&M escalator of 2.36%.

11

12 **Q. Can you provide tables that illustrate what is described above?**

13 A. The table below illustrates the composition of the PPI-Custom measure, which is  
14 used only for electric service:

---

<sup>37</sup> U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electric Power Generation [PCU22110221110] (September 22, 2017), retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PCU22110221110>.

<sup>38</sup> U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electric Bulk Power Transmission and Control [PCU221121221121] (September 22, 2017), retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PCU221121221121>.

<sup>39</sup> U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electric Power Distribution [PCU221122221122] (September 22, 2017), retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PCU221122221122>.

	<b>Relative Share of Net Plant, 2016 CBR</b>	<b>2004-16 PPI Rate of Growth</b>	<b>Contribution to PPI- Custom</b>
	<b>[A]</b>	<b>[B]</b>	<b>[C] = [A]*[B]</b>
Production	40.98%	1.70%	0.70%
Transmission	18.15%	3.15%	0.57%
Distribution	40.86%	2.38%	0.97%
<b>TOTAL</b>	<b>100%</b>		<b>2.24%</b>

1                   The table below illustrates the composition of the O&M escalator for electric  
2                   service:

<b>ECI</b>	<b>PPI- Custom</b>	<b>Electric O&amp;M Escalator</b>
[A]	[B]	$[C] = ( [A] + [B] ) \div 2$
2.48%	2.24%	2.36%

3   **Q.   How does Staff develop its escalation factor for natural gas O&M expenses?**

4   A.   For natural gas operations, Staff's escalator is the average of the Producer Price  
5       Index for Utilities and the Employment Cost Index for Utilities. This produces a  
6       natural gas O&M escalator of 2.03%. This is illustrated in the table below:

<b>ECI</b>	<b>PPI-Util</b>	<b>Natural Gas O&amp;M Escalator</b>
[A]	[B]	$[C] = ( [A] + [B] ) \div 2$
2.48%	1.58%	2.03%



1 **Q. Why doesn't Staff use the Producer Price Index by Industry: Natural Gas**  
2 **Distribution?**<sup>40</sup>

3 A. Staff did not use this index because it appears to give excessive weight to natural gas  
4 commodity costs, biasing the index downwards.

5  
6 **Q. How do you address Ms. Andrews's critiques of the use of cost indices?**

7 A. Ms. Andrews presents two critiques of the use of cost indices in a multi-year rate  
8 plan: a thorough critique of the use of CPI, and a critique of cost indices generally.

9 I strongly agree with Ms. Andrews's critique of the Consumer Price Index, or  
10 CPI, in that the CPI does not accurately capture costs facing the utility industry.<sup>41</sup>

11 However, the use of utility industry indices addresses Ms. Andrews's best  
12 critique of CPI: "...CPI does not track costs typically implicit in the operations of a  
13 utility."<sup>42</sup> Utility-specific indices have this exact feature, and are therefore  
14 appropriate for consideration. The use of an index accomplishes another important  
15 goal as well. Because Avista can profit by keeping changes in its costs below the  
16 industry average, reliance on the index encourages efficiency.

17

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<sup>40</sup> U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Natural Gas Distribution [PCU221210221210] (September 22, 2017), retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PCU221210221210>.

<sup>41</sup> Andrews, EMA-1T at 35:1-36:28.

<sup>42</sup> *Id.* at 33:1-2.

1           **B. Escalating Net Plant**

2

3           **Q. What methods did Staff consider for escalating plant?**

4           A. Staff considered the use of escalators based on the following methods:

5                     1. A historical trend in net plant growth;

6                     2. Avista’s projected net plant additions through the course of the rate plan (“the  
7                     Avista approach”);

8                     3. Plant additions deemed outside of the company’s control;

9                     4. An escalator adjusted by a “stretch factor”;

10                    5. No escalation of plant at all.

11

12           **Q. Please describe each of these methods.**

13           A. Under the first method, the analyst must determine the historical rate of plant growth  
14           using either a compound growth rate (see Avista’s method for Taxes OTI and  
15           Depreciation expense) or a linear growth rate. The analyst must also determine the  
16           most appropriate period of time over which to assess an historical rate of growth.

17                     The second method uses Avista’s projected net plant additions over the  
18           course of the rate plan. This is in fact the approach that Avista uses, forgoing any  
19           consideration of historical rates of plant addition. Notably, Avista’s approach in this  
20           case produces a smaller escalator for electric plant additions than using a historical  
21           compound growth rate, or a historical linear growth rate.

1           The third method has an analyst review all three years' worth of Avista's  
2 planned plant additions, and then requires the analyst to make an assessment of how  
3 much discretion Avista has for each planned plant addition.

4           The fourth method is similar to the logic used in Avista's escalation of O&M  
5 expenses. A rate of growth is developed and then adjusted downwards by a "stretch  
6 factor." In the case of Avista's O&M escalator, this stretch factor is known as an  
7 "efficiency adjustment."

8           Finally, the fifth method simply does not escalate plant over the course of the  
9 rate plan.

10  
11 **Q.    What approach does Staff adopt in this case?**

12 A.    Staff adopts a form of the second approach identified above, otherwise known as  
13 "the Avista approach."  
14

15 **Q.    Before explaining why Staff adopted Avista's approach, please explain why  
16 Staff declined to use the other five options it considered?**

17 A.    The first option—escalating plant based on historical levels of plant additions—was  
18 rejected because the *rate* of plant additions throughout the multi-year rate plan is  
19 better represented by the second option. An escalation rate based on historical levels  
20 of plant additions would also produce a higher escalation rate than the second option.

21           The third option—identifying plant additions that are caused by matters  
22 outside of the control of the company—was rejected because it skirts too close to  
23 weighing in on the prudence of plant additions that have yet occurred. Sorting

1 through even a subset of each and every plant addition scheduled to occur through  
2 the period of the rate year, and determining the degree to which each project is  
3 outside of the control of the company, would also be a troublesome task.

4 The fourth option—developing an escalator adjusted by a “stretch factor—  
5 was rejected because the regulatory lag inherent in escalating from Staff’s modified  
6 historical test year accomplishes the same ends.

7 Finally, Staff rejected the fifth method—not escalating plant at all—because  
8 it is counter to the rationale for a multi-year rate plan. Based on Avista’s  
9 representations about its capital spending program, Staff anticipates that the rate of  
10 plant growth over the next few years will exceed the expected growth in revenues. If  
11 there is no escalation in plant, the company’s rate base will likely be undervalued  
12 during the rate plan to a degree that will not provide the company with a reasonable  
13 opportunity to achieve its authorized rate of return.

14  
15 **Q. Having rejected these four approaches, Staff adopts an approach similar to**  
16 **Avista’s. Why?**

17 A. Adoption of this method is done keeping in mind that the escalation rate proposed by  
18 Avista is lower than what would be suggested by looking at historical rates of plant  
19 growth. Adoption of this method is tantamount to authorizing interim recovery of  
20 capital costs, while deferring a permanent decision on the prudence of specific  
21 capital additions until a later rate case. This approach provides for recognition of  
22 continuing growth in rate base, while preserving the known benefits of regulatory  
23 lag.

1 **Q. What distinguishes Staff’s method from Avista’s?**

2 A. Staff applies its plant escalator to a principled modified historical test year, with  
3 limited pro forma adjustments, whereas Avista applies its plant escalator to a Year  
4 One base that, in Staff’s view, is inflated due to Avista’s unprincipled use of “EOP”  
5 accounting. Functionally, Staff’s lower base preserves regulatory lag that benefits  
6 customers, acts as a disincentive towards over-capitalization, and provides only for  
7 interim relief. It does this while recognizing that the company will almost certainly  
8 continue to make rate base additions during the course of the rate plan.

9 Staff is not setting revenue requirements based on the projected *level* of rate  
10 base and net plant in future years, as is effectively the case with Avista’s proposal.  
11 Staff is merely developing an escalation *rate*, which is applied to a base established  
12 in Staff’s modified historical test year. That rate is developed by finding the percent  
13 growth in rate base that Avista expects over the course of the rate plan, and it is  
14 applied to a rate base figure that Staff’s witness for year one can attest to.

15 The only way that Staff’s approach would provide for Avista’s projected  
16 plant balances is if Staff used the same base to escalate from that Avista used. That is  
17 simply not the case here.

18

19 **Q. Are there any other options the Commission could consider?**

20 A. The Commission could entertain the idea of allowing Avista to recover Construction  
21 Work in Progress (CWIP) in rate base during the rate plan, rather than escalating net  
22 plant. The Commission alluded to this possibility in its most recent Avista GRC

1 order.<sup>43</sup> If the Commission were to adopt this approach for net plant, adopting an  
2 escalator that does not consider plant growth would be appropriate.

3

4 **Q. If the Commission were to allow CWIP in rate base during the rate plan, what**  
5 **composite revenue escalators would Staff recommend?**

6 A. Using Staff's approach, an escalation rate of 1.27% for electric service, and 1.63%  
7 for natural gas service would be appropriate in these circumstances.

8

9 **Q. Please summarize the composite revenue escalators used by Staff and Avista.**

10 A. A summary of these escalation rates can be found in the table below.

	<b>Staff</b>	<b>Avista</b>
<b>Electric</b>	2.32%	3.21%
<b>Natural Gas</b>	3.20%	4.65%

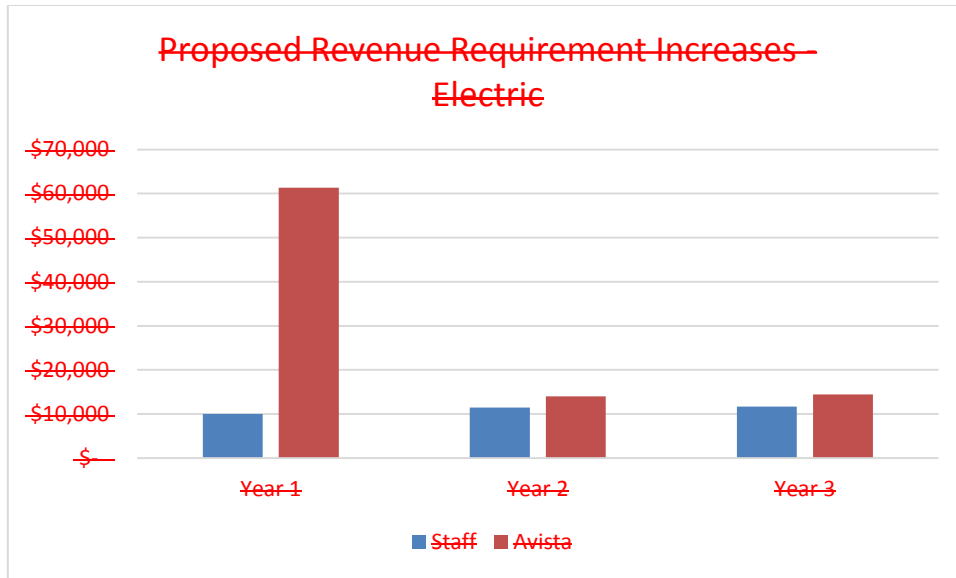
11 **Q. Please summarize the revenue increases called for by Avista and Staff for**  
12 **electric service.**

13 A. The proposed revenue increases in each year of the rate plan are presented in the  
14 charts and tables below:

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Staff</b>	<del>— \$ 10,034</del>	<del>— \$ 11,450</del>	<del>— \$ 11,716</del>
<b>Avista</b>	<del>— \$ 61,356</del>	<del>— \$ 13,983</del>	<del>— \$ 14,432</del>

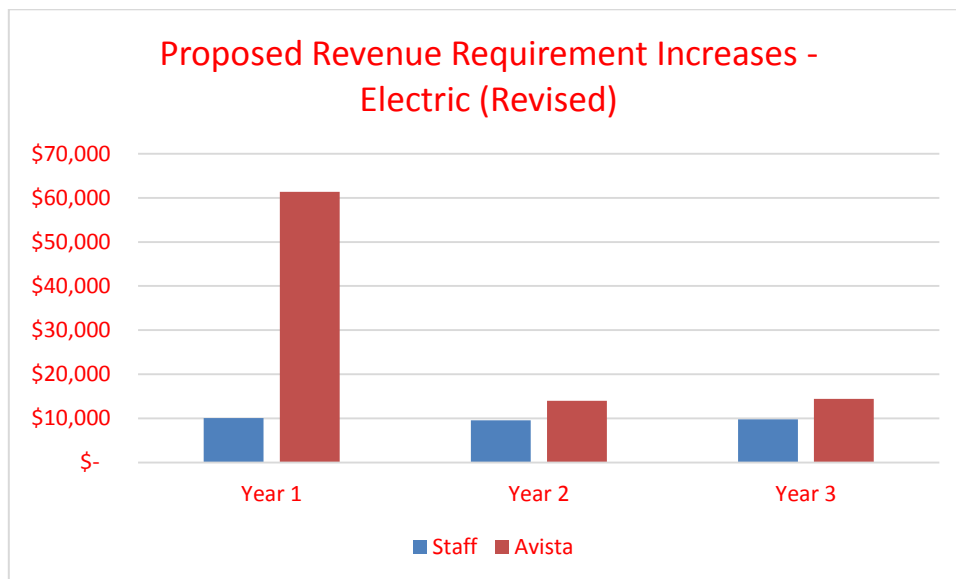
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<sup>43</sup> See *Wash. Utils. & Transp. Comm'n v. Avista Corp. d/b/a Avista Utils.*, Dockets UE-160228 and UG-160229, Order 06, Final Order Rejecting Tariff Filing, 49, ¶ 82 (Dec. 15, 2016).



### Proposed Rev. Reqmt. Increases - Electric

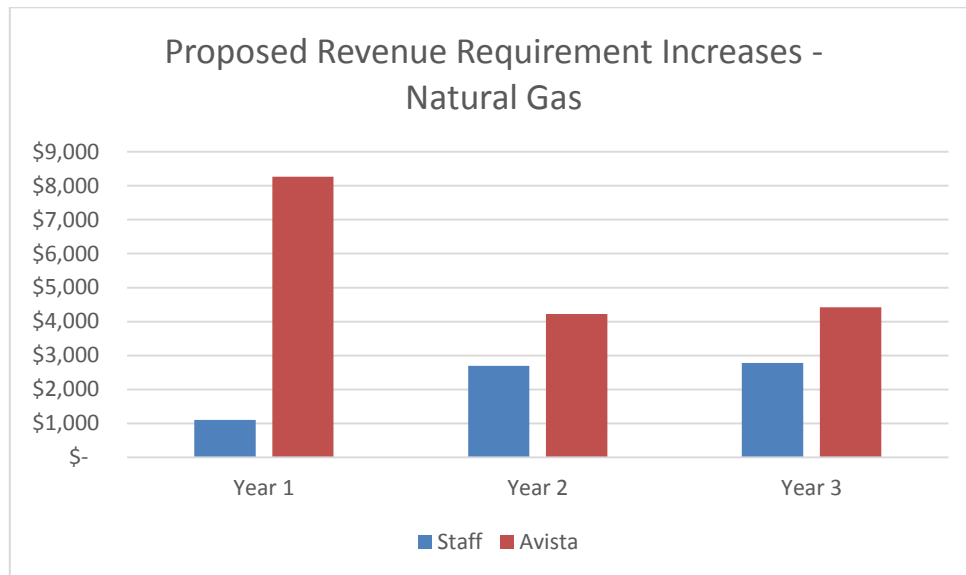
	Year 1	Year 2	Year 3
<b>Staff</b>	\$ 10,034	\$ 9,520	\$ 9,740
<b>Avista</b>	\$ 61,356	\$ 13,983	\$ 14,432



1 **Q. Please summarize the revenue increases called for by Avista and Staff in**  
2 **natural gas service.**

3 A. The recommended revenue increases for natural gas service can be seen in table and  
4 chart format below.

<b>Proposed Rev. Reqmt. Increase - Natural Gas</b>			
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Staff</b>	\$ 1,215	\$ 2,701	\$ 2,788
<b>Avista</b>	\$ 8,269	\$ 4,220	\$ 4,417



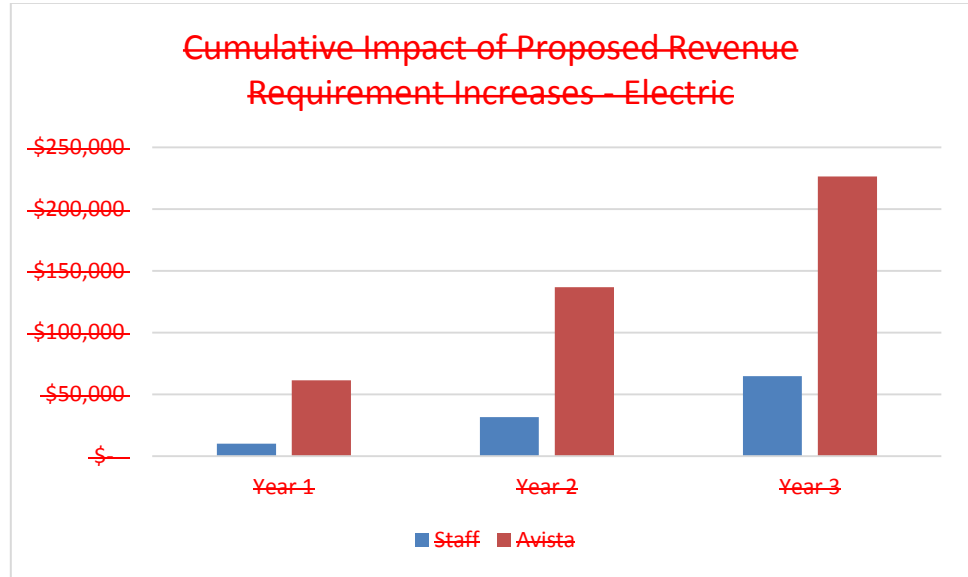
5 **Q. Please summarize the cumulative effective of the electric revenue increases**  
6 **proposed by Avista and Staff in this case.**

7 A. The cumulative effect of the proposed electric revenue increases are displayed  
8 below, in table and graph format. A useful way to interpret these figures is that these  
9 are the total additional revenues customers would pay above existing rates, due to the  
10 proposed rate plans.



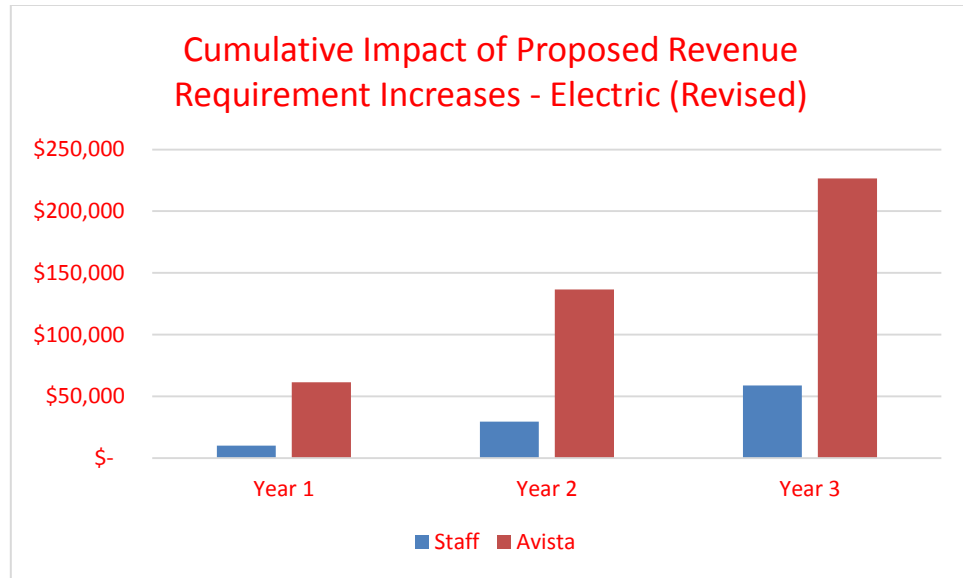
**Cumulative Electric Revenue Increases**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Staff</b>	<del>-\$ 10,034</del>	<del>-\$ 31,519</del>	<del>-\$ 64,718</del>
<b>Avista</b>	<del>-\$ 61,356</del>	<del>-\$ 136,695</del>	<del>-\$ 226,466</del>



**Cumulative Electric Revenue Increases**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Staff</b>	\$ 10,034	\$ 29,588	\$ 58,883
<b>Avista</b>	\$ 61,356	\$ 136,695	\$ 226,466



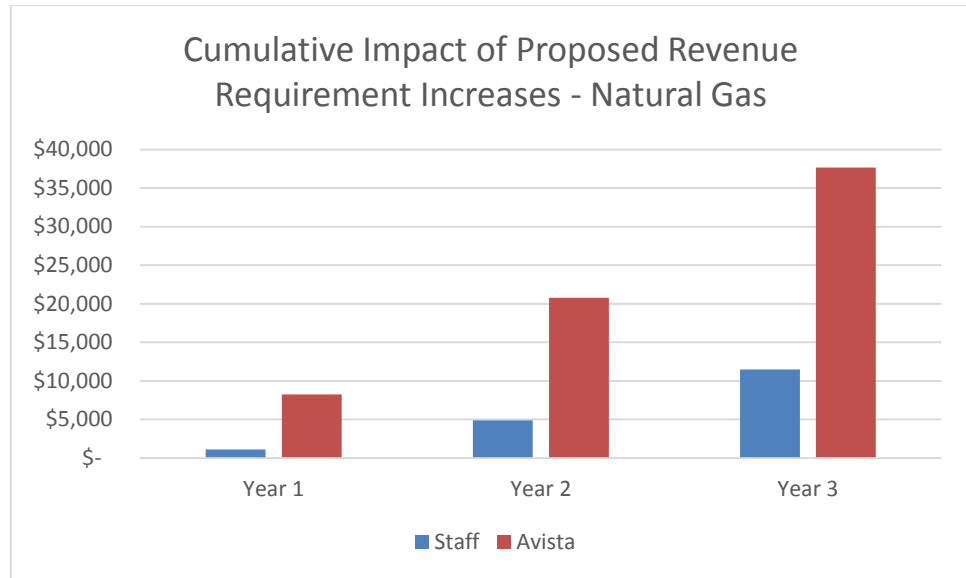
1 **Q. Please summarize the cumulative effective of the natural gas revenue increases**  
 2 **proposed by Avista and Staff in this case.**

3 A. The cumulative effect of the proposed natural gas revenue increases are displayed  
 4 below, in table and graph format.

5

**Cumulative Natural Gas Revenue Increases**

	Year 1	Year 2	Year 3
<b>Staff</b>	\$ 1,107	\$ 4,911	\$ 11,500
<b>Avista</b>	\$ 8,269	\$ 20,758	\$ 37,664



1 **VIII. REVIEW OF PARTIES’ ESTIMATES IN DOCKETS UE-150204/UG-150205**

2

3 **Q. Has Staff reviewed rate base and expense estimates from Avista’s 2015 general**  
 4 **rate case?**

5 A. Yes. I gathered estimates of rate base and expenses from the direct testimonies of  
 6 Avista, Staff, and Public Counsel witnesses that produced revenue requirement  
 7 figures. Review of these estimates may provide useful context when evaluating the  
 8 issues in the present case.

9

10 **Q. In percentage terms, how did the various estimates of rate base perform relative**  
 11 **to what the 2016 Commission Basis Report stated?**

12 A. Avista’s electric attrition (“AVA Attr RB”) study most closely estimated the rate  
 13 base figures reported in the 2016 Commission Basis Report, as shown in the table  
 14 below:

Estimates of Elec Rate Base, as % of CBR Actuals (2015 GRC/2016 Rate Yr)					
AVA Attr RB	AVA MHTY RB	Staff Attr RB	Staff MHTY RB	PC MHTY RB	CBR RB
101.50%	101.88%	95.66%	91.60%	90.20%	100.00%

1 Avista’s natural gas attrition study also most closely estimated the rate base figures  
2 reported in the 2016 Commission Basis Report:

Estimates of Nat Gas Rate Base, as % of CBR Actuals (2015 GRC/2016 Rate Yr)					
AVA Attr RB	AVA MHTY RB	Staff Attr RB	Staff MHTY RB	PC MHTY RB	CBR RB
99.82%	97.06%	104.33%	90.81%	88.06%	100.00%

3 **Q. In percentage terms, how did the various estimates of expenses perform relative**  
4 **to what the 2016 Commission Basis Report stated?**

5 A. Staff’s electric attrition study most closely estimated the total expense figures  
6 reported in the 2016 Commission Basis Report, and Staff’s modified historical test  
7 year came in a close second. Public Counsel did not produce an explicit estimate of  
8 expenses:

Estimates of Elec Expenses, as % of CBR Actuals (2015 GRC/2016 Rate Yr)					
AVA Attr Exp	AVA MHTY Exp	Staff Attr Exp	Staff MHTY Exp	PC MHTY Exp	CBR Exp
105.34%	104.57%	100.81%	98.52%	0.00%	100.00%

9 No party produced reasonably accurate estimates of natural gas expenses when  
10 compared to the results reported in the 2016 Commission Basis Report:

Estimates of Nat Gas Expenses, as % of CBR Actuals (2015 GRC/2016 Rate Yr)					
AVA Attr Exp	AVA MHTY Exp	Staff Attr Exp	Staff MHTY Exp	PC MHTY Exp	CBR Exp
120.85%	121.27%	120.05%	118.06%	0.00%	100.00%

1 **Q. What may explain the inaccurate estimates for natural gas expenses in the 2015**  
2 **GRC?**

3 A. For the attrition-study related estimates, the inaccuracy could be the result of using a  
4 quadratic formula to estimate expenses, rather than a linear formula. However, that  
5 does not explain the similarly inaccurate results produced by the parties' modified  
6 historical test year estimates. Another plausible answer may be that a shift in the P/T  
7 ratio (a ratio used to allocate costs between natural gas and electric service) may  
8 have shifted some costs away from natural gas service and towards electric service.  
9 If this occurred, it would have resulted in lower-than-expected costs allocated  
10 towards natural gas service, thus making it more likely that estimates would end up  
11 on the high end.

12  
13 **Q. Does this conclude your testimony?**

14 A. Yes.