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August 21, 2017

Steven King, Executive Director and Secretary
Washington Utilities & Transportation Commission
1300 S. Evergreen Park Drive S.W.
P.O. Box 47250
Olympia, Washington 98504-7250

Re: U-151958 – Comments of Avista Utilities

Dear Mr. King,

Avista Corporation, dba Avista Utilities (Avista or Company), submits the following comments in accordance with the Washington Utilities and Transportation Commission's (Commission) Notice of Opportunity to Submit Written Comments (Notice) issued in Docket U-151958 on July 7, 2017.

The Commission established Docket U-151958 to gather information concerning econometric approaches to reliability benchmarking. As part of that process, the Commission contracted with Power System Engineering, Inc., of Madison, Wisconsin, to perform an econometric benchmarking study for the three investor-owned electric utilities subject to the Commission's jurisdiction. The Commission now seeks the perspective of investor-owned utilities and interested persons, and in particular solicits feedback on the final report produced by Power System Engineering, Inc., and concerning econometric reliability benchmarking more generally.

Avista appreciates the opportunity to provide comments in response to the Notice. First, the Company would like to recognize the continuing efforts of Commission Staff to develop approaches for better understanding and evaluating utility reliability performance and investments,

and for including the Company in their work, specifically this most-recent effort exploring the applicability and usefulness of econometric reliability benchmarking with Power System Engineering, Inc. We also appreciate the invitation to provide our perspectives on how the Commission might evaluate a utility's reliability performance as well as our commentary on whether or how to use the results of the Power System Engineering study.

Understanding and Responding to Staff's Interests

Avista would like to begin its comments by stating the questions we understand Commission Staff is hoping to answer¹ through the consideration of reliability benchmarks and targets:

1. Acceptable Reliability Performance – is there an objective means for evaluating whether the utilities are providing reasonable service reliability to their customers?
2. Support for Reliability Objectives – can the utilities support their overall reliability objectives and related investments?
3. Cost-Effective and Efficient Reliability Investments – how do we evaluate whether the utility's reliability investments are cost-effective and efficient?
4. Overall Investments in Electric Distribution – is the overall level of investment in electric distribution justified?

Following is a brief summary of how the Company believes these questions can be effectively answered, which we refer to in responding to the questions posed by Staff regarding the econometric benchmarking study.

Acceptable Reliability Performance

Essentially, every utility has to define what “acceptable service reliability” is for its customers, striking a balance between customer's expectations, the investments that are needed to meet them, and the balance they find acceptable. Ideally, it would be the highest level of reliability performance that its customers in the aggregate are willing to pay for in their rates. Because the

¹ This understanding is based on extensive prior discussions with Staff in other proceedings as well as this current docket.

characteristics of electric systems, their underlying costs, historic reliability performance, and the expectations of customers can vary substantially from utility to utility, there is likewise a range of reliability levels that customers deem to be acceptable. Even within a utility's service territory, the reliability performance that is acceptable to customers can vary substantially by region. In Avista's experience, our customers are accustomed to the level of service reliability they have experienced in the area in which they live, and generally believe that to be reasonable for their locale.

What information does the utility rely upon to determine acceptable reliability performance? For Avista, we monitor our customers' satisfaction with the overall service they receive from the Company, which historically and currently is quite high (94% in 2016). We know from the electric customer satisfaction surveys conducted by JD Power that on average approximately 28% of this overall rating is related to their satisfaction with power quality and reliability. We also monitor the number of customer complaints we receive each year that are related to issues of electric reliability, which are consistently quite low; in 2016 the Company received 10 complaints directly from our Washington customers and one complaint that was filed with the Commission.² We also note that our reliability performance is in a midrange of the results reported across the industry. Because we believe our current level of system reliability is generally acceptable to our customers, we view our relatively conservative reliability investments as a cost-effective value for them.

Support for Reliability Objectives

Whether the utility is planning to maintain its current reliability posture, or more importantly, if it is aiming to change its service reliability from a status quo (e.g. to improve reliability performance), it should be supported by reasonable information, such as customers' satisfaction with the utility's service, data that highlights specific reliability needs and the investments needed to meet them, and any other data that helps demonstrate the need to meet its service reliability objectives.

² Docket UE-170338, Avista 2016 Service Quality & Electric Reliability Report.

Cost Effective and Efficient Reliability Investments

As an industry practice, the foundation for evaluating the cost-effectiveness of individual investments is an estimate of the costs customers incur during a range of types of service interruptions. These customer costs, which are derived through utility Value of Service Studies, represent the benefits that are captured by outages that are “avoided” due to a given investment in the electric system. The calculation of the value of the customer benefits is performed by a sophisticated model that integrates data for all of the outage events on the utility’s system with the customer costs that are incurred during those types of outage events.³

The efficiency of reliability investments can be determined by evaluating the portfolio of the types of reliability investments that are planned to ensure the right combination of cost-effective investments has been selected for implementation. An optimized reliability portfolio should identify the least cost options given the reliability and other important values that are associated with each type of investment.

Overall Investments in Electric Distribution

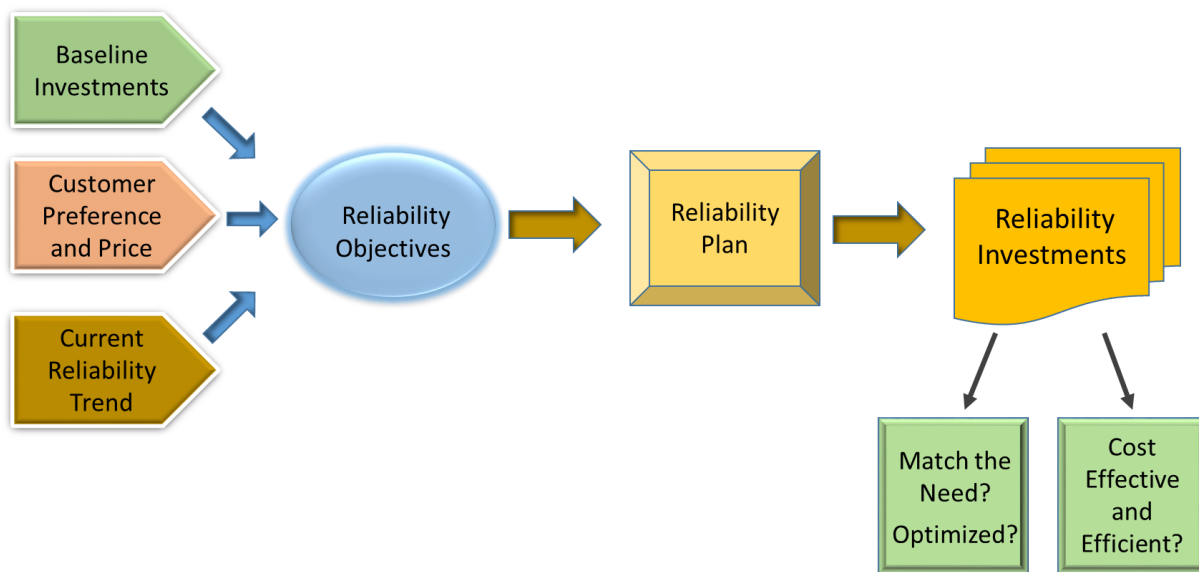
Assessing the need for investments in the utility’s electric distribution system begins with detailed information on the characteristics of the key assets in the system, such as average age, age profile, and condition. This data coupled with the utility’s asset strategy for how it manages these assets, is used to derive a “baseline” forecast of the need for current and future investments. Baseline refers to the investments that are required to just maintain the current level of system performance and reliability. The total planned investments in the electric distribution system are the sum of the baseline need based on asset condition, any increment needed to achieve greater reliability or other key objectives, and the expected investments needed to meet other system needs, which for Avista are to satisfy mandatory requirements; remedy performance and capacity issues, and to replace failed plant and support ongoing operations.

³ For these calculations Avista uses the Interruption Cost Estimator model developed by the Lawrence Berkeley National Laboratory for the U.S. Department of Energy.

Avista's Suggested Model for Evaluating Reliability Investments

The brief descriptions above outlining the Company's suggested approach for evaluating the utility's reliability objectives and investments have been summarized in the illustration below. We refer to this model in our response to Staff's questions regarding the usefulness of the econometric benchmarking study for evaluating the utility's reliability investments and establishing reliability targets.

Illustration No. 1 - Suggested Electric System Reliability Model



Avista's Response to the Questions Posed by Commission Staff:

1. Does an econometric approach, in general, provide a sound basis for establishing targets for SAIDI and SAIFI?

Response: Avista advocates that if the Commission determines it should establish targets ("reliability goals") for the average number of outages (SAIFI) and outage duration (SAIDI) for each utility, that the goals be based on the utility's experience, the actual characteristics of its system, the reliability satisfaction of its customers, and the cost-effectiveness and efficiency of the needed investments. It's also important to note that the utility and its customers may have important reliability preferences that are not captured by SAIFI and SAIDI alone.

The econometric benchmarking approach does not provide a reliable basis for establishing targets or goals that are meaningful for the utility and its customers, and may in fact do harm to customers in the event that benchmark targets⁴ drive utility investments that might not address the highest priority infrastructure needs over the long term, and may not address what is acceptable to customers and their willingness to pay for them.

In the event, however, that a utility cannot objectively demonstrate that it is providing a reasonable level of service reliability for its customers, at the right cost, then the econometric approach, depending on the quality of the modeling, might be used to establish targets or long-term goals for outage frequency and duration. Regarding the quality of the modeling, Staff and the utilities would need to be confident that the relevant explanatory variables for each utility are adequately represented in the model. Since over 60% of Avista's outage frequency and duration are caused by random events that include wind, fire or pole fires, snow/ice, lightning, animals, and public caused outages (car hit pole, car hit pad, dig in, etc.), these and other explanatory variables must be accurately represented. Unfortunately, this is difficult due to inconsistent methods of data capture and reporting among utilities across the industry. And, again, even the best econometric model will at best show how each utility compares with its peers, but will not represent the utility's baseline investment needs, the interests of its customers, or the efficacy of the utility's reliability investments.

2. In the absence of an econometric benchmarking study, how should the commission evaluate whether a utility is providing an economically efficient level of reliability?

Response: As noted above, we don't believe the econometric study can answer the question of what is an economically efficient level of reliability for Avista or the other utilities. As explained in our model above, we suggest the Commission can address this question by evaluating the support for the utility's reliability objectives; assessing the identified need for reliability investments; evaluating the sufficiency of the investments for

⁴ This is particularly the case where reliability targets are coupled with financial and other penalties for the failure to achieve the target reliability performance.

achieving the goal, and the cost effectiveness of the planned investments. This review would likely encompass an examination of the following types of information:

- Annual Service Quality and Electric Reliability Report required by WAC 480-100-398;
- Utility's stated reliability goal and supporting information;
- Overall planned investments in electric transmission and distribution infrastructure;
- Review of the utility's individual and collective reliability investments;
- Evaluation of the cost effectiveness of the investments;
- Relevant Asset Management plans and/or reports;
- Available customer survey data, and,
- Physical audits of a utility's operations to understand the nature of investments related to reliability.

3. Does an econometric approach, in general, provide a sound basis for evaluating the need for reliability investments?

Response: An econometric approach cannot reasonably assess the need for reliability investments, which is composed of the condition of the utility's infrastructure, its customers' expectations, the utility's reliability objectives, and the efficacy of its investments.

But the econometric approach can provide a useful perspective on the utility's performance because it may highlight reliability attributes where the utility differs from its peer group. For instance, Avista's outage duration scores (SAIDI) were generally within its benchmarking range, but typically at the high end of the range. This information suggests the Company might further examine the factors driving its outage duration results to see if anything stands out as meriting further investigation. Alternatively, if a utility's performance is better than the benchmarking results, it could prompt the utility to reexamine its customers' reliability preferences, etc., to ensure their reliability objectives are on the mark.

4. In the absence of an econometric benchmarking study, how should the commission evaluate whether a utility’s reliability performance is appropriate given its unique service territory characteristics?

Response: Referring above to Avista’s suggested approach for determining “Acceptable Reliability Performance,” each utility’s reliability objectives should naturally reflect the diversity and characteristics of its system, its customers’ expectations, and its costs. These provide the basis for determining what is appropriate reliability performance for each utility.

5. What other statistically measurable and valid approaches should the commission consider in evaluating SAIDI and SAIFI targets?

Response: As for statistically valid measures of the utility’s reliability objectives and investments, Avista suggests the Commission rely on each utility’s stated reliability objective, its quantitative support for the objective, documentation of the reliability investments intended to achieve the objective, and statistically-valid assessments of the cost-effectiveness of those measures, as outlined in Avista’s proposed model, represented in Illustration No. 1 above.

From Avista’s perspective, as well as that of others like the California Commission, establishing “targets” for outage duration and frequency provides limited value for establishing a Company’s reliability objectives and its prudent plan of action for achieving them over the long term. This is especially the case when the utility is expected to achieve or “hit” its targets each year, and particularly when the failure to do so exposes the utility to financial penalties. This is because reliability performance can vary substantially from year to year, driven mainly by factors that are randomly occurring and largely beyond the utility’s immediate control. With the assignment of reliability targets and penalties for the failure to achieve them, the utility’s focus shifts from the long-term infrastructure investments needed to cost-effectively achieve reliability goals, to those investments that will help the Company avoid a penalty in the coming years.

Reliability targets could be useful, however, if they were implemented as a shared goal that reflected the utility's actual experience and the "long-term average reliability performance" the utility is intending to achieve. In other words, is the utility's performance "trending" toward its reliability objective over time.

6. Should the econometric benchmarking study performed by Power System Engineering be used to establish utility-specific targets for SAIDI and/or SAIFI? Why or why not?

Response: Avista believes its suggested model, briefly described above, provides a sound approach for quantitatively evaluating the appropriateness of each utility's reliability objectives and investments. As explained in Avista's comments in number 1 above, and elsewhere, the econometric benchmarking study does not provide a sound basis for establishing reliability targets, goals or objectives that are meaningful for each utility and its customers, and as noted above may do more harm than good.

7. Should the econometric benchmarking study performed by Power System Engineering be used to evaluate the need for investments in reliability? Why or why not?

Response: No it should not, for the reasons stated in our response to number 2 above, and elsewhere. Results of the benchmarking study do not reflect the condition of a utility's distribution assets, its particular reliability objectives, its assessment of the investments needed to meet those objectives, or an evaluation of the cost effectiveness of the investments.

8. Do you believe that additional policy guidance from the commission on the issue of reliability performance benchmarking is necessary?

Response: At this time we believe a specific need for additional policy guidance from the Commission on the issue of reliability performance benchmarking has not been identified. Avista believes this question could be answered with greater clarity following discussions at the September workshop scheduled in this docket. This could begin with a clear

understanding of the Commission’s interests in assessing reliability performance, and the sharing of ideas among all stakeholders for how to most-effectively meet the Commission’s needs and to ensure utility customers get the right level of cost effective service reliability.

- 9. (For utility representatives) Please comment on the reasonableness of the benchmarks produced by the study, specific to your utility. Please describe your perspective on both a) the point estimate reliability target, and b) the target range produced by the 90 percent confidence interval.**

Response: “Reasonableness” depends on how the Commission would intend to use the benchmark information developed in the study as noted in our response to number 8 above. As we have stated earlier, the benchmarks provide a perspective on how Avista’s reliability performance compares with similarly-situated peers.⁵ As such, it sheds light on one facet of the complex understanding of the utility’s overall reliability objectives and its plan of action. Use of the confidence interval is useful because it helps illustrate the fact that reliability performance is variable and somewhat random from year to year, rendering comparison with a point estimate alone as having limited value.

If the benchmarks were to be used for other than this purpose, then Avista has concerns that the current model may be missing key explanatory variables and/or the current variables may not be sufficiently capturing the challenges facing individual utilities. Even if the model is correctly specified, however, it will not represent the condition of Avista’s distribution system and the baseline need for investment, the level of reliability that is acceptable to our customers, or our reliability objectives and investment needs.

- 10. Please provide any additional commentary you believe the commission should consider when determining whether or how, to use the study from Power System Engineering to establish reliability benchmarks or to evaluate investments in reliability.**

⁵ While the benchmarking results may not accurately capture necessary detail about the important variables that distinguish Avista from other ‘similar utilities,’ we do believe the results represent a much-more meaningful comparison than do broader measures such as “industry or regional averages.”

Response: As discussed above in our suggested model and elsewhere in our comments, this study provides a look at Avista’s reliability performance compared with similarly situated utility peers. The results suggest the Company’s frequency of outages (SAIFI) is somewhat close to that of its peers, and that our outage duration, while in a range with our peers (at the confidence interval selected), is on the higher end. This perspective will be of value to the Company as one piece of information we consider in assessing our overall reliability objectives. The benchmarks, however, do not reveal whether our overall reliability is acceptable to our customers, whether our reliability plans are reasonable, whether our investments are efficient, or whether our investments are too high, too low, or about right.

Please direct any questions regarding the Company’s comments to Larry La Bolle at 509-495-4710 or larry.labolle@avistacorp.com or Shawn Bonfield at 509-495-2782 or shawn.bonfield@avistacorp.com.

Sincerely,

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