BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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(consolidated)

AVISTA CORPORATION

COMPLIANCE FILING

Attachment 6 – Electric Reliability Plan

Avista Utilities

Electric Service Reliability Reporting Plan

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INTRODUCTION

In accordance with WAC 480-100-393, the Electric Service Reliability Reporting Plan ("Plan") of Avista Utilities ("Avista" or "the Company") details Avista's plan for monitoring and reporting electric service reliability[1] information to the Washington Utilities and Transportation Commission ("Commission"). As detailed in WAC 480-100-393(3)(a), Avista's Plan includes:

(a) What reliability statistics and information the utility will report to the commission. The utility must select and define statistics that track full-system reliability, and information, which may include statistics, that tracks localized reliability and identifies areas of greatest reliability concern.
(b) When the utility will establish baseline reliability statistics to report to the commission. Prior to establishing baseline reliability statistics, the utility must report the best information available. The utility must establish baseline reliability statistics within three years of the effective date of this rule.
(c) When the utility will file its annual electric service reliability report to the commission.

This Plan provides the basis for the Company's annual Electric System Service Reliability Report ("Report"), which is filed annually pursuant to WAC 480-100-398. This Report, filed by Avista on or before April 30th of each year,[2] provides the results of the Company's overall electric reliability performance as required by WAC 480-100-398.

ELECTRIC SERVICE RELIABILITY STATISTICS[3] AND INFORMATION

WAC 480-100-393((3)(a) requires Avista to select and define statistics and information that track full-system reliability, localized reliability, and identifies areas of greatest reliability concern. The Company intends to deliver upon this requirement by continuous monitoring—and subsequent annual reporting—of several key reliability indices, statistics, metrics, or measures.

Baseline Reliability Statistics

Since September 2005, company has used the year 2005 as the baseline for Reliability Statistics, pursuant to WAC 480-100-393(3)(b). Effective April 2023, for the 2022 Electric System Service Reliability Report, the baseline used to compare Reliability Statistics will be the five-year rolling average. The Company's baseline Reliability Statistics are included annually in the report and are used for comparison to the current reporting year data as well as any relevant years in between. The Company also calculates a statistical Reliability Target, which is based on the average value for the Reliability Statistic over a specific time period and adding two standard deviations for that mean. Year to year variations in reliability performance typically fall below this target, however, any exceedance of the target does not represent a "failure" in reliability performance or provide a basis for any repercussions, regulatory or otherwise.

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[1] "*Electric Service Reliability*" – The continuity of electric service experienced by retail customers.

[2] The Company has elected to file its Report on or before April 30th each year to allow appropriate time for the Company to finalize its electric reliability results from the prior calendar year and compile a comprehensive Report.

[3] "*Reliability Statistic*" – Standard statistics measures and calculation methods per the IEEE Standard 1366-2003 (or latest version) Titled "IEEE Guide for Electric Power Distribution Reliability Indices". Same as Reliability Indices.

Avista will, in its annual Report, note any changes made in data collection or calculation of reliability information, should any occur after initial baselines are set, and will provide supporting rationale for these changes.

Reliability Indices

The Reliability Statistics to be provided in the Company's Report provide several Reliability Indices for Avista's Washington and Idaho electric service territory ("System") for a given year, or the average for a given range of years. Avista will also provide localized information regarding its Washington-only results for each of these indices. The Company's annual reporting will contain five years of data, along with the baseline Reliability Statistic. The Reliability Target described above is also listed for each index.

The primary Reliability Indices used are industry standard measures developed by the Institute of Electrical and Electronic Engineers (IEEE), which are important in promoting standardized and comparable reporting across the utility industry. These primary Reliability Indices are briefly described below:

1. System Average Interruption Frequency Index (SAIFI)
SAIFI represents the average number of sustained outages, or interruptions, [4] per customer on an annual basis.

2. System Average Interruption Duration Index (SAIDI)
SAIDI represents the average duration (or length) of sustained interruption time per customer on an annual basis.

3. Customer Average Interruption Duration Index (CAIDI)
CAIDI represents the average outage restoration time for customers who experienced a sustained interruption.

4. Customers Experiencing Multiple Interruptions (CEMI)
CEMI represents the number of Avista customers who have had 0,1,2,3…n outages for the year. This is often represented as an aggregate percentage of total Avista customers who have had at least n outages.

5. Customer Average Interruption Frequency Index (CAIFI)
CAIFI represents the average number of sustained outage, or interruptions, for customers who experienced a sustained interruption.

In addition to the IEEE Reliability Indices above, the Company also monitors and uses in its analyses several other reliability measures, all of which are defined below. With the exception of the average number of customers per outage event, these measures are not divided by any number of customers or any other value and are therefore not index values.

6. Average Outage Duration
This measure is used to describe the average duration of outages experienced by a given customer on Avista's System.

[4] "*Sustained Interruption*" – An interruption/outage lasting longer than 5 minutes.

7. Average Number of Customers Per Outage Event
This measure is used to describe the average number of customers that were impacted by all outages on the System during the given year.

8. Number of Outage Events
This measure represents the number of outage events on Avista's System each year that result in a sustained interruption for our customers.

9. Total Customer Outage Hours
This measure represents the total number of customer outage hours that were experienced by the customers on Avista's System for the year.

It is important to note that Avista's electric service reliability results provided by the Company in its Report are adjusted by removing the outages associated with Major Event Days, or "MEDs", which are further detailed below.

Major Event Day (MED)

A major event day is a day in which the daily System SAIDI exceeds a threshold value. Its purpose is to allow major events to be studied separately from daily operation, and in the process, to better reveal trends in daily operation that would be hidden by the large statistical effect of major events. Due to Avista's multi-state jurisdiction and the shared resources between Washington and Idaho specifically, MEDs are accounted for and reported System-wide, not by state.

Outage events that are significant enough to exceed the threshold defined for "Major Events" are excluded from Avista's standard reporting. These major events are tracked by "Major Event Day" as defined in the IEEE Guide for Electric Power Distribution Reliability Indices, IEEE P1366-2012. The Company uses the process defined in IEEE P1366 to calculate the threshold value used to determine MEDs. Avista's comparison of current-year and average service reliability with baseline statistics is performed on index values determined without MEDs.

ANNUAL ELECTRIC SERVICE RELIABILITY REPORT

As noted, Avista will file its Report on or before April 30th of each year, the general layout of which will be:

Results for Avista's Electric Service Reliability

a. Electric Service Reliability Results – includes for each of the primary Reliability Indices (SAIFI, SAIDI, CAIDI, CEMI, CAIFI) the current year's results as well as prior year, the five-year average.
b. Major Event Days – includes a list of MEDs that occurred during the year. Again, MEDs will only be provided on a System basis.
c. Electric Reliability Results Listed by Reliability Statistics – For each of the nine (9) Reliability Statistics listed above, Avista will report data for the current year five-year period, as well as details that contributed to the current year's results or any trend noted. The Company may also present tabular data for each reliability index in the form of tables or charts.

Analysis of Reliability by Feeder Classification

a. Classification of Feeders by Customer Density – Includes an explanation of Avista's electric feeder classifications (urban, suburban, and rural) as well as summary statistics for each feeder type such as percentages for customer distribution, energy consumption, and contributions to customer outage hours and events.
b. Reliability Statistics by Feeder Type – For each of the 9 Reliability Statistics listed above, Avista will report data for the current year five-year period, as well as details that contributed to the current year's results or any trend noted. The Company may also present tabular data for each reliability index in the form of tables or charts.

Named Communities – Highly Impacted and Vulnerable Communities

The Clean Energy Transformation Act (CETA) of 2019, codified as RCW 19.405, brought with it the definitions of "Highly impacted community" and "Vulnerable population",[5] collectively referred to as "Named Communities". As part of its work in tracking and reporting on its electric service reliability, Avista plans to incorporate information regarding the electric service reliability for these "Named Communities", as defined by the Department of Health (DOH), for Washington State only. This data will be reported from the 2021 year to current. Once a five-year rolling average can be established, this value will be reported as well and the five-year rolling average replace the 2021 year as the baseline for Named Community service reliability metrics.

The reliability indices that most accurately reflect the experience of the customers in these communities are CAIDI, CEMI, and CAIFI. Historically, Avista determines system reliability statistics based on system connectivity and does not aggregate reliability data spatially, which is needed to analyze the DOH Named Community census tracts. While comparison between historical connectivity-based reliability and this new spatially aggregated reliability is not supported by IEEE reliability standards, scalable and customer focused indices, such as CAIDI, CEMI, and CAIFI seem most appropriate for analysis by census tract.

Areas of Greatest Electric Service Reliability Challenges

In accordance with WAC 480-100-398(3), Avista will include in its Report an explanation of the Company's geographic areas of greatest reliability concern, explain their causes, and explain how the Company plans to address them. A summary of the area or areas within Avista's System—and further, Washington service territory—where customers experience the greatest preponderance of reliability issues for the year will be provided, along with the identified predominant reasons for the observed reliability performance, what measures can be reasonably and cost-effectively taken to mitigate these issues, and actions taken or plans made intended to improve the reliability in these areas of greatest concern. This may include an analysis of specified feeder types, if there is a specific classification/type identified as having the greatest reliability challenges; for example, if rural feeders are experiencing an increase in outage hours overall, the focus of this section of the Report may be to assess the causes of such outages and identify the trends in this metric over time (outage hours and outage causes), then provide details regarding the improvements made or planned in this area.

Further analysis will also be completed to identify specific feeders that have faced the greatest reliability challenges in the current reporting year as well as the five-year period, in addition to the associated causes of those outages. Investments made to improve these challenging areas will be detailed.

[5] RCW 19.405.020(23) and (40).

Additional Information and Appendices

In its Report, Avista provides several appendices to detail relevant content and context such as definitions, index calculations, interruption cause codes, and historical data for SAIFI, SAIDI, and MEDs. As noted previously for any changes made in data collection or calculation of reliability information, it may also become pertinent for the Company to report any considerations being made regarding reliability measures or targets from time to time, if there are new components being discussed for integration into Avista's overall reliability strategy. The Company may also discuss the relevance and importance of specified measures, as well as the relevance and impact that other programs may be having on customers' service reliability (e.g., Wildfire Resiliency).

Customer and Commission Complaints

In any given year, Avista tracks all Customer[6] and Commission Complaints[7] received by both the Company and the Commission. Since categories for such complaints can range from customer service to power quality,[8] electric service reliability, or major events, the Company will provide in its Report any complaints received within the reporting year that pertained to relevant issues (outages, etc.).

[6] "*Customer Complaint*" – When a customer is not satisfied with the Company as it relates to Electric Reliability and makes a complaint directly to a Company representative.
[7] "*Commission Complaint*" – When a customer is not satisfied with the Company as it relates to Electric Reliability and files a complaint directly with the Commission.
[8] "*Power Quality*" – Characteristics of electricity, primarily voltage and frequency, that must meet certain specifications for safe, adequate and efficient operations.