BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

AVISTA Corporation dba Avista Utilities)) In the Matter of Avista's Energy and) Emissions Intensity Report in) Compliance with WAC 480-109-300))	DOCKET NO. UE-19_____ COMPLIANCE REPORT OF AVISTA CORPORATION

In compliance with WAC 480-109-300, Avista Corporation (hereinafter Avista or Company) respectfully submits its 2018 Energy and Emissions Intensity (EEI) report.

I. EXECUTIVE SUMMARY

Table No. 1 below summarizes the data collected and calculated for the Energy and Emissions Intensity Report ("Report") for the Washington share of Avista's customers in 2018. The following sections show the prior 10-year annual metrics for all generating resources serving Washington customers, the trend analysis narrative and graphics, and a list of the appendices included in this filing.

Table No. 1: 2018 Summary Energy and Emissions Intensity Report

Utility :	Avista	
Reporting for year :	2018	**MWh per Capita**
Population Served :	553,661	**10.17**

Energy Intensity Metrics

	MWh at Meter	MWh Proportion	Customer Count	**MWH per Customer**
Residential Customers	2,466,246	43.8%	226,305	**10.9**
Commercial Customers	2,172,293	38.6%	24,995	**86.9**
Industrial Customers	992,287	17.6%		
Total Load Served	5,630,826			

Emissions Intensity Metrics

	Busbar MWh	Percent of Total Load	**Short Tons CO_2**	
Known Resources Serving WA	7,060,256	115.7%	1,940,690	
Unknown Resources Serving WA	**(955,929)**	**-15.7%**	**(250,971)**	**% of 1990 CO_2**
	2018 Tons CO_2		**1,689,719**	**149.3%**

1990 Short Tons CO_2	1,131,957

Table No. 1 reports the amount of load served to residential, commercial and industrial customers in the Energy Intensity Metrics section. The Busbar MWh of the Emissions Intensity Metrics section shows the MWh measured at the generator, losses from the generators to the eventual load are not included in this report. Also, irrigation and street lighting loads are not included in the load measurements.

II. PRIOR 10-YEAR ANNUAL METRICS

WAC 480-109-300 requires reporting of ten years of annual metrics for all generating resources serving Washington customers as part of the annual Report. Required data includes:

- Average MWh per residential customer;
- Average MWh per commercial customer;
- MWh per capita;
- Annual CO_2 emissions in short tons;
- Ratios of annual CO_2 emissions to CO_2 emissions in 1990
- Subtotal metrics – Energy and emissions from unknown generation sources
    - Annual CO_2 emissions in short tons from unknown generation sources
    - Annual MWh delivered to retail customers from unknown generation sources
    - Percentage of load served by unknown generation source

The first and second annual metrics cover the average MWh per residential and commercial customer over the past 10 years. The results are shown in Table No. 2 below. The annual values for both residential and commercial customers remain reasonably consistent from year-to-year, with a slightly downward trend in commercial use-per-customer. The trends are discussed in section III of this report.

Table No. 2: Average MWh per Residential and Commercial Customer 2008 – 2017

	Average MWh per Residential Customer	Average MWh per Commercial Customer
2009	12.2	94.3
2010	11.7	92.6
2011	12.0	92.6
2012	11.6	92.8
2013	12.0	92.0
2014	11.6	92.3
2015	11.3	91.9
2016	10.7	88.2
2017	11.7	89.0
2018	10.9	86.9

The third annual metric covers the MWh per capita over the past 10 years. The population of the Avista service territory was estimated by applying the Spokane County household size to all Washington residential customers. Additional details about the population calculation can be found in Appendix B. The results are shown in Table No. 3, and the results are discussed in Section III and shown in Chart No. 2. The trend shows relatively stable to slightly decreasing MWh per capita.

Table No. 3: MWh per Capita 2008 – 2018

Year	MWh per Capita
2009	10.71
2010	10.75
2011	10.93
2012	10.68
2013	10.95
2014	10.84
2015	10.85
2016	10.26
2017	10.64
2018	10.17

The last two annual metrics show the amount of Avista's annual CO_2 emissions from 2008 through 2017 compared to Avista's 1990 CO_2 emissions, and as a percentage of the 1990 CO_2 emissions. Table No. 4 shows the annual emissions results and comparisons to 1990 levels.

Table No. 4: Annual CO_2 Emissions in Short Tons 1990 and 2009 – 2018

	Annual Emissions	1990 Emissions	% of 1990 CO_2
2009	2,152,998	1,131,957	190%
2010	2,405,434	1,131,957	213%
2011	1,706,476	1,131,957	151%
2012	1,943,987	1,131,957	172%
2013	2,054,319	1,131,957	181%
2014	1,978,299	1,131,957	175%
2015	1,761,888	1,131,957	156%
2016	1,677,885	1,131,957	148%
2017	1,839,122	1,131,957	163%
2018	1,689,719	1,131,957	149%

The calculations for energy and emissions for each year are included in the workpapers filed with this report. The workpapers for each year includes the annual CO_2 emissions in short tons from unknown generation sources, the annual MWh delivered to retail customers from

unknown generation sources, and a calculation of the percentage of load served by unknown generation sources. The adjustments made to the data for this report are described below.

Known resources include all of Avista's owned generation and contracts from known sources, such as purchases of a percentage of specified Mid-Columbia hydro projects, the power purchase agreement for the Lancaster combined cycle combustion turbine, and the Palouse Wind contract. The other category of known resources includes PURPA hydro and biomass generation from specific resources, identified in the known resources tab in parentheses after the name of the projects. The individual yearly spreadsheets in Appendix A identify the known resources and type of resource supplying the generation. Emissions from the EPA Acid Rain Report were used where available and the emissions from the World Resource Institute (WRI) protocol were used for known thermal sources that are not part of the Acid Rain Program as in previous reports. Applicable Avista owned or controlled plants in the Acid Rain Program include Colstrip, Coyote Springs 2, Lancaster and Rathdrum. The CO_2 emissions from unknown resources have been assigned using the net-by-counterparty approach. Purchases and sales from the Bonneville Power Administration (BPA) are treated as unknown resources and assigned the appropriate regional or Avista emission factor based on net sales per year.

Resources specifically assigned to serve Idaho customer load were excluded in the emissions calculations. Total sales to non-Avista customers were netted from the emissions calculation in the unknown resources section of the workpapers. The busbar MWh and short tons of CO_2 of the Energy and Emissions Annual Report spreadsheets were multiplied by 65 percent to show the Washington share of customers.

This report uses the net-by-counterparty approach for unknown resources that applies the Department of Commerce fuel mix emissions intensity factor for transaction partners the Company

is a net purchaser with and applies the fleet-wide emission intensity factor for transaction partners the Company is a net seller. Please refer to Table No. 5 for the Avista and Commerce pounds of CO_2/MWh emission factor numbers for 2009 through 2018.

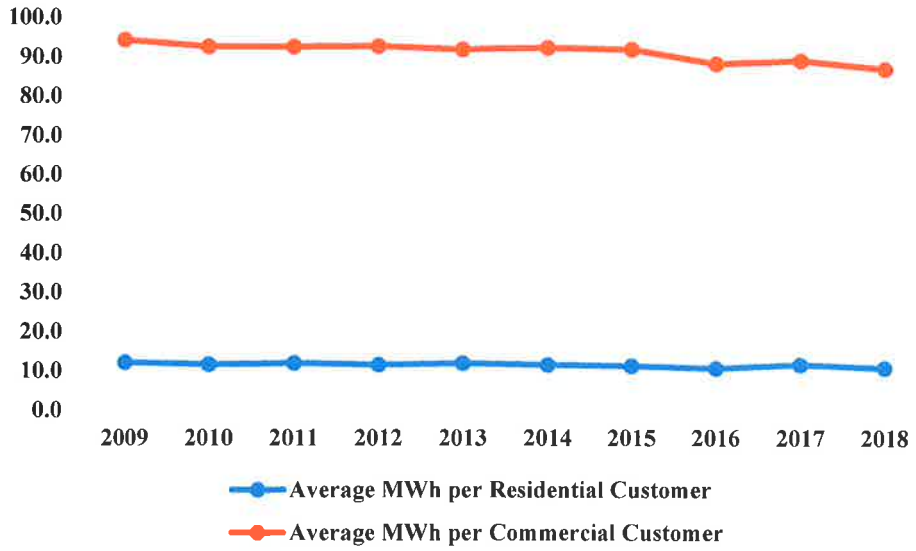
Table No. 5: Commerce and Avista Emissions Factors (Pounds CO_2 per MWh)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Avista	531	647	492	564	553	548	635	569	562	550
Commerce	1,119	1,192	905	903	1,132	1,014	1,074	895	767	976

III. TREND ANALYSIS NARRATIVE AND GRAPHICS

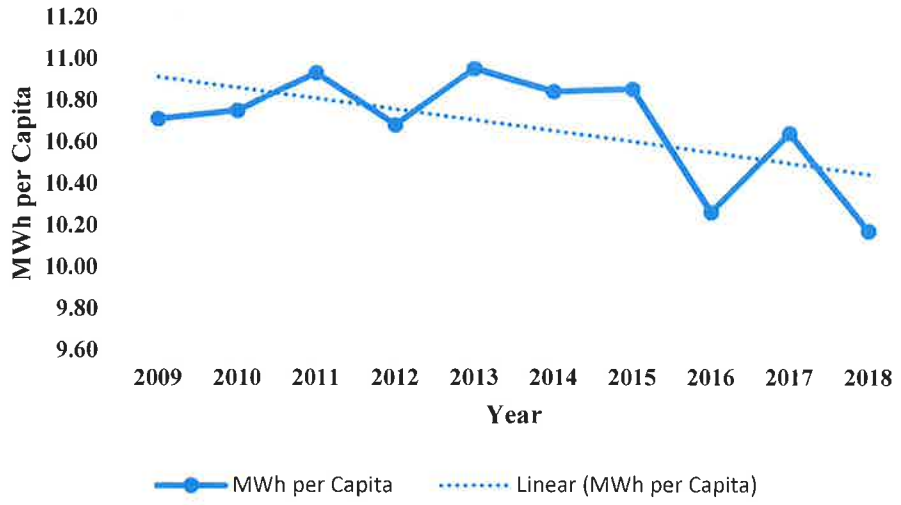
The average MWh use per customer has experienced fairly minor variation from year-to-year, which started decreasing on the residential side in 2014. Commercial customers exhibit gradual decreases. Please refer to Chart No. 1 for the average use per commercial and residential customers. Avista's own energy efficiency efforts combined with regional efforts, improved energy efficiency technologies, and more stringent codes and standards are expected to be driving these decreases. The scope of commercial customers is wide enough to make detailed analysis difficult, if not impossible to identify any specific causes for the fluctuation. This analysis is based on actual load data and is not normalized for weather.

Chart No. 1: Average MWh per Commercial and Residential Customers 2008 – 2018



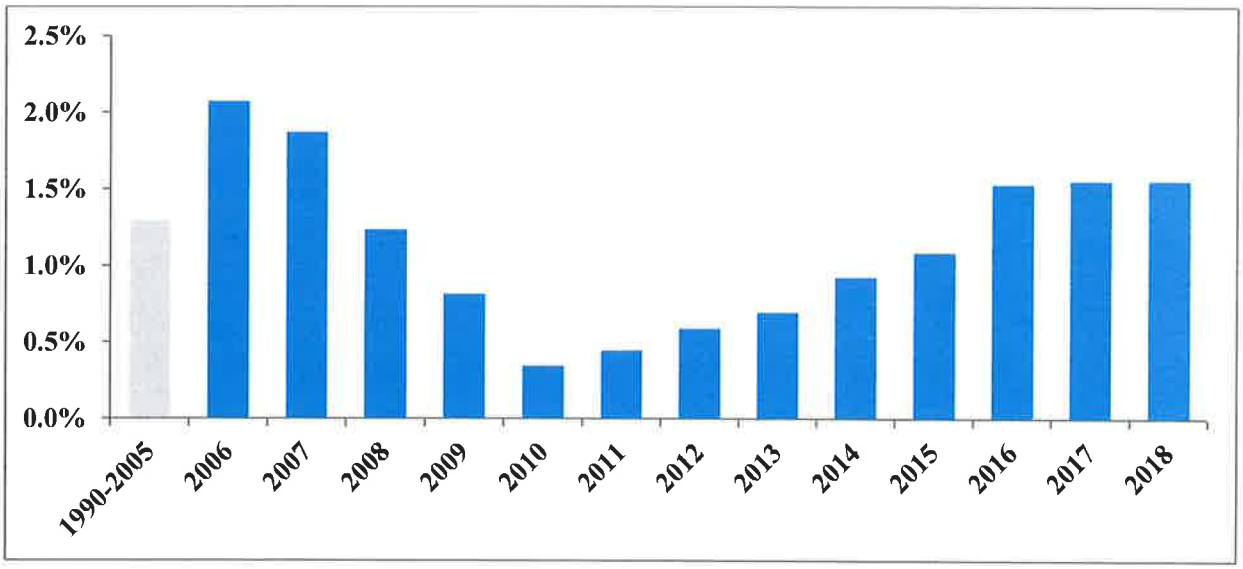
The next metric covers the amount of MWh/capita from 2008 through 2018. The specifics underlying the population calculation for Avista's service territory are provided in Appendix B – Population Methodology. The trend line shows a pronounced decreasing MWh per capita trend, with significant decreases from 2015 to 2016, and again from 2017 to 2018, pulling the trend downwards as shown in Chart No. 2. This remains a short enough trend to make it difficult, if not impossible, to determine the ultimate root cause, but the continuation of the downward trend is encouraging considering the local and regional funding, and programs devoted towards energy efficiency programs, efficiency education, and the ongoing improvements to codes and standards.

Chart No. 2: MWh per Capita 2008 – 2018



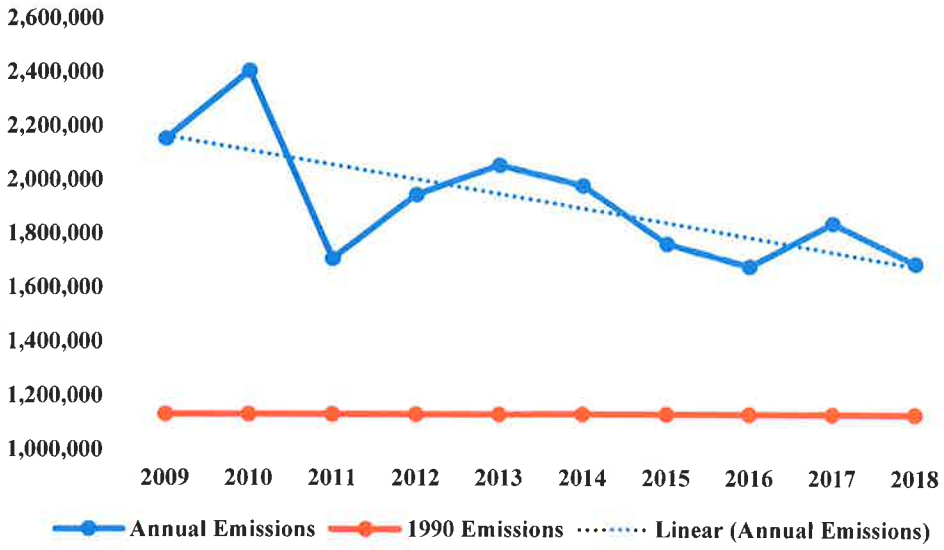
The estimated annual population growth is also trending up towards previous levels. Please see Chart No. 3 for details. This upward trend in population growth, combined with lower average megawatt hours per capita, indicates the benefits of energy efficiency programs, as well as better building codes and standards.

Chart No. 3: Estimated Annual Population Growth Rates



The last two metrics include the annual CO_2 emissions in short tons, from 2009 through 2018, and a comparison of those emissions with the 1990 emissions data. Chart No. 4 shows the emissions data for this report. Emissions increased from 2009 through 2010, with another increase from 2011 to 2013, followed by an overall downward trend with the exception of a one-year increase in 2017. There is an expectation that emissions will decrease over time as a higher percentage of zero emitting resources are added to the regional mix as prices continue to decease, and as more of the remaining regional coal plants retire.

Chart No. 4: Annual CO_2 Emissions in Short Tons and 2009 – 2018



However, CO_2 emissions from year-to-year may still increase in any given year because the regional generation system is still predominantly based on hydro generation while reliably serving load while keeping costs at minimum reasonable levels. The 100 percent clean legislation passed in Washington this year will inevitably drive CO_2 emissions down further as the amount of emissions free resources increase as the system reaches carbon neutrality by 2030, and becomes

totally emissions free by 2045. Near-term regional emissions will still be affected by the variable amount of hydroelectric, wind and increasingly solar generation in any given year. The impact of this variability should be mitigated as more renewables, energy storage, and demand response programs are initiated across the region.

IV. APPENDICES

The following appendices provide further details about Avista's 2018 Energy and Emissions Intensity Report. The spreadsheets with the "raw data" are included as workpapers in support of this filing.

Appendix A: Summary Energy and Emissions Intensity Reports for 2009 – 2018
Appendix B: Population Methodology

RESPECTFULLY SUBMITTED this 30th day of May 2019.

AVISTA CORPORATION

By: _____

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