



## e-FILING REPORT COVER SHEET

COMPANY NAME:

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes If yes, submit a redacted public version (or a cover letter) by email. Submit the confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

Select report type: RE (Electric) RG (Gas) RW (Water) RT (Telecommunications)  
RO (Other, for example, industry safety information)

Did you previously file a similar report? No Yes, report docket number:

Report is required by: OAR  
Statute  
Order

Note: A one-time submission required by an order is a compliance filing and not a report (file compliance in the applicable docket)

Other  
(For example, federal regulations, or requested by Staff)

Is this report associated with a specific docket/case? No Yes, docket number:

List Key Words for this report. We use these to improve search results.

Send the completed Cover Sheet and the Report in an email addressed to [PUC.FilingCenter@state.or.us](mailto:PUC.FilingCenter@state.or.us)

Send confidential information, voluminous reports, or energy utility Results of Operations Reports to PUC Filing Center, PO Box 1088, Salem, OR 97308-1088 or by delivery service to 201 High Street SE Suite 100, Salem, OR 97301.



**Avista Corp.**

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Spokane, Washington 99220-0500  
Telephone 509-489-0500  
Toll Free 800-727-9170

October 12, 2020

Public Utility Commission of Oregon  
Attn: Filing Center  
201 High Street SE, Suite 100  
Salem, OR 97301-3612

RE: Docket No. RG 85 – Avista Utilities Energy Efficiency Avoided Cost Report

Filing Center:

Pursuant to OAR 860-030-0011, attached for filing with the Commission is an electronic copy of Avista Corporation's, dba Avista Utilities (Avista or the Company), 2020 Energy Efficiency Avoided Cost Report. This report is being submitted utilizing the updated natural gas data collection workbook as provided in UM 1893.

If you have any questions regarding this filing, please contact Tom Pardee at (509) 495-2159.

Sincerely,

*/s/ Shawn Bonfield*

Shawn Bonfield  
Sr. Manager Regulatory Policy & Strategy

## Energy Efficiency Avoided Cost Submission Template - Natural Gas

Utility Name: **AVA**

Submission Date: **10/12/2020**

### Instructions and Definitions

<> Please fill out this workbook as completely as possible and per the instructions.  
 <> Inputs will be reviewed and approved by the OPUC before being sent to the Energy Trust of Oregon for use in Avoided Cost development.  
 <> **Provide as much detail as possible when sourcing** data inputs, including the link to the source (if available), page number and table or graph number.  
*This will increase the efficiency of this process and require less iteration during the OPUC review period.*  
*For worksheets 1,2,3,4,5,6 refer to data presented in the most recently acknowledged IRP, IRP Update, or General Rate Case unless otherwise noted.*

#### **1) Global Inputs - IRP**

<> Standard economic assumptions of the avoided costs are input into this tab, including inflation and discount rates, as well as real dollar year and forecast start year.  
 <> If supply or distribution capacity values were proportioned using a system peak coincident factor, please provide the system peak definition of the utility (calendar Month/Day/Hour) and the peak-day/annual load and peak-hour/Annual Load Ratios for the utility system.  
 <> Note that in tabs 2-6, calendar start year and input table titles are calculated fields that pull from the global input tab, so these must be populated.  
 <> **Ensure that the dollar years of the data inputs match the source** - Energy Trust will inflate to the proper year.

#### **2) Commodity and Transport - IRP**

<> Provide Commodity and Transport price forecast by month.  
 <> **Indicate if the forecast is in nominal or real dollars (if real, dollar value will populate headers from Global Inputs tab).**

#### **3) Environmental Compliance - IRP**

<> Provide the \$/Metric Ton of CO2 assumed for each year of the forecast.  
 <> Provide the metric ton of CO2/dekatherm assumed for each year of the forecast.  
 <> Column 'F' is a calculated field, which multiplies the \$/metric ton of CO2 by the CO2/dekatherm.

#### **4) Infrastructure Capacity - IRP**

<> Provide the Supply Infrastructure Capacity Cost in a \$/Dth/Day format for each year available of the forecast period.  
 <> Provide the Distribution Infrastructure Capacity Cost in a \$/Dth/Day and \$/Dth/Hour format for each year available of the forecast period.  
 <> If supply or distribution capacity values were proportioned using a system peak coincident factor, please provide the corresponding system peak coincident factor in "Global Inputs - IRP" tab on rows 17 and 19.

#### **5) Risk Reduction - IRP**

<> Provide the Risk Reduction value in a \$/Dth format if available for each year available of the forecast period.  
 <> The box in cell C7 calculates the levelized net present value of all years of the forecast period. This is used when negative values occur in any year of the forecast period. If the levelized risk reduction value is negative, zero will be assigned as the final value. This is due to the premise that the risk reduction value is meant to be a benefit.

#### **6) End Use Profiles - IRP**

<> Provide the Monthly share of annual load for the utility's system by end use, if available.  
 <> Provide the peak day/annual load and peak hour/annual load ratios by end use, if available.  
 <> End-use profiles are meant to represent the timing of savings, these can be derived from either savings profiles or load profiles.

#### **1a, 2a, 3a, 4a, 5a, 6a) Alternative Submissions**

<> These worksheets provide a location for the utility to present alternative values to those found in the most recently acknowledged IRP, IRP Update, or General Rate Case.  
 <> **Submissions in these tabs are not required.**  
 <> Provide a rationale for submitting the alternative values in the box provided at the top of each alternative worksheet.  
 <> If a second set of alternative values is submitted, simply copy the alt tabs necessary and rename to 1b, alt 2 in the tab name. However, note that in tabs 2-6, calendar start year and input table titles are calculated fields that pull from the global input tab. Either update these formulas or override them.

Global Assumptions Inputs			SOURCING				
Provide as much detail as possible with sourcing including a link. Ensure that dollar years listed here are the same as the source.							
Avoided Cost Element	Units	Value	Source	Source Page #	Table # (if applicable)	Source Link or File Name	Source Notes
<b>Discount Rate</b> (Company's Real after-tax weighted average cost of capital (WACC))	Percent	4.45%	Avista 2018 Natural Gas IRP	222		<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en</a>	System weighted
<b>Inflation Rate</b>	Percent	2.00%	Avista 2018 Natural Gas IRP	222		<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en</a>	GPD price deflator assumption
<b>Regional Act Credit</b>	Percent	10.00%	N/A				
<b>Forecast Period Calendar Start Year</b>	Year	2017	Avista 2018 Natural Gas IRP	4	Figure 1	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp.pdf?la=en</a>	Data begins in November 2017
<b>Real Dollar Base Year</b>	Year	2016					
<b>System Peak Definition</b>	Calendar Month/Day/Hour	February 15th & December 20th	Avista 2018 Natural Gas IRP	3		<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp.pdf?la=en</a>	(WA, ID, La Grande)-2/15 & (Klamath, Roseburg, Medford)-12/20
<b>System Peak Coincident Day Factor (if needed)</b>	Peak Day/Annual Load Ratio	0.0104186	Avista 2018 Natural Gas IRP	112		<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en</a>	2019-2020 peak day and average load
<b>System Peak Coincident Hour Factor (if needed)</b>	Peak Hour/Annual Load Ratio	0.0004623	Avista 2018 Natural Gas IRP	112		<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp-appendices.pdf?la=en</a>	2019-2020 peak hour (peak day/24*1.065) and average load

**Commodity Price Inputs**

Real or Nominal?	Nominal
Source and Pg #:	2018 IRP
Source Link or File Name:	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp.pdf?la=en">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2018-natural-gas-irp.pdf?la=en</a>
Source Notes:	expected case

**Gas Commodity and Transportation/Storage Costs - (\$/Dth)**

Year #	Calendar Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2017	-\$2.17	-\$2.41	-\$1.32	-\$1.42	-\$1.39	-\$1.39	-\$1.43	-\$1.43	-\$1.40	-\$1.53	-\$2.09	-\$2.38
2	2018	-\$2.17	-\$2.08	-\$1.86	-\$1.56	-\$1.55	-\$1.62	-\$1.69	-\$1.69	-\$1.62	-\$1.67	-\$1.87	-\$2.53
3	2019	-\$2.30	-\$2.21	-\$1.99	-\$1.75	-\$1.75	-\$1.76	-\$1.80	-\$1.83	-\$1.79	-\$1.88	-\$2.02	-\$2.69
4	2020	-\$3.32	-\$3.29	-\$3.16	-\$2.92	-\$2.91	-\$2.94	-\$3.01	-\$3.03	-\$2.96	-\$3.03	-\$2.08	-\$2.66
5	2021	-\$3.56	-\$3.59	-\$3.49	-\$3.22	-\$3.23	-\$3.22	-\$3.27	-\$3.29	-\$3.30	-\$3.35	-\$3.31	-\$3.81
6	2022	-\$3.78	-\$3.76	-\$3.68	-\$3.42	-\$3.47	-\$3.49	-\$3.50	-\$3.56	-\$3.55	-\$3.59	-\$3.53	-\$4.06
7	2023	-\$4.23	-\$4.23	-\$4.18	-\$4.00	-\$4.00	-\$3.97	-\$4.09	-\$4.18	-\$4.16	-\$4.24	-\$3.95	-\$4.54
8	2024	-\$4.57	-\$4.58	-\$4.44	-\$4.29	-\$4.31	-\$4.38	-\$4.44	-\$4.47	-\$4.42	-\$4.45	-\$4.40	-\$4.92
9	2025	-\$4.77	-\$4.75	-\$4.60	-\$4.47	-\$4.51	-\$4.59	-\$4.68	-\$4.70	-\$4.64	-\$4.69	-\$4.54	-\$5.09
10	2026	-\$5.06	-\$5.05	-\$4.96	-\$4.85	-\$4.83	-\$4.92	-\$5.02	-\$5.05	-\$4.99	-\$5.05	-\$4.79	-\$5.31
11	2027	-\$5.53	-\$5.44	-\$5.36	-\$5.28	-\$5.27	-\$5.39	-\$5.46	-\$5.51	-\$5.40	-\$5.43	-\$5.22	-\$5.75
12	2028	-\$5.96	-\$5.92	-\$5.79	-\$5.70	-\$5.71	-\$5.73	-\$5.83	-\$5.86	-\$5.79	-\$5.87	-\$5.64	-\$6.07
13	2029	-\$6.41	-\$6.35	-\$6.17	-\$6.08	-\$6.11	-\$6.15	-\$6.26	-\$6.30	-\$6.24	-\$6.30	-\$6.07	-\$6.55
14	2030	-\$6.73	-\$6.70	-\$6.54	-\$6.38	-\$6.43	-\$6.48	-\$6.63	-\$6.67	-\$6.60	-\$6.62	-\$6.41	-\$6.88
15	2031	-\$7.01	-\$6.94	-\$6.80	-\$6.65	-\$6.68	-\$6.73	-\$6.86	-\$6.92	-\$6.86	-\$6.94	-\$6.74	-\$7.17
16	2032	-\$7.40	-\$7.38	-\$7.22	-\$7.07	-\$7.08	-\$7.12	-\$7.31	-\$7.34	-\$7.26	-\$7.27	-\$7.06	-\$7.58
17	2033	-\$7.74	-\$7.75	-\$7.54	-\$7.39	-\$7.40	-\$7.47	-\$7.65	-\$7.67	-\$7.56	-\$7.63	-\$7.44	-\$7.94
18	2034	-\$8.15	-\$8.12	-\$7.95	-\$7.81	-\$7.76	-\$7.83	-\$7.99	-\$8.05	-\$7.94	-\$7.89	-\$7.80	-\$8.26
19	2035	-\$8.69	-\$8.46	-\$8.29	-\$8.12	-\$8.13	-\$8.26	-\$8.57	-\$8.68	-\$8.48	-\$8.49	-\$7.96	-\$8.59
20	2036	-\$9.36	-\$9.12	-\$8.82	-\$8.39	-\$8.40	-\$8.50	-\$8.79	-\$8.88	-\$8.61	-\$8.62	-\$8.68	-\$9.32
21	2037												
22	2038												
23	2039												
24	2040												
25	2041												
26	2042												
27	2043												
28	2044												
29	2045												
30	2046												
31	2047												
32	2048												
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35	2051												
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39	2055												
40	2056												
41	2057												
42	2058												
43	2059												
44	2060												
45	2061												

### Environmental Compliance Cost Inputs

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	EPA
<b>Source Link or File Name:</b>	<a href="https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references">https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references</a>
<b>Source Notes:</b>	carbon intensity is 117 lbs per Metric Ton 2204 lbs

### Environmental Compliance Cost

Year #	Calendar Year	Environmental Compliance Cost (\$/MTCO2e)	Carbon Intesity (MTCO2e/Dth)	Environmental Compliance Cost (\$/Dth)
1	2017	\$14.53	0.0531	\$0.771
2	2018	\$15.57	0.0531	\$0.827
3	2019	\$16.67	0.0531	\$0.885
4	2020	\$17.86	0.0531	\$0.948
5	2021	\$19.11	0.0531	\$1.015
6	2022	\$20.44	0.0531	\$1.085
7	2023	\$21.86	0.0531	\$1.160
8	2024	\$23.36	0.0531	\$1.240
9	2025	\$24.98	0.0531	\$1.326
10	2026	\$26.70	0.0531	\$1.418
11	2027	\$28.57	0.0531	\$1.517
12	2028	\$30.58	0.0531	\$1.623
13	2029	\$32.72	0.0531	\$1.737
14	2030	\$35.02	0.0531	\$1.859
15	2031	\$37.48	0.0531	\$1.989
16	2032	\$40.10	0.0531	\$2.129
17	2033	\$42.91	0.0531	\$2.278
18	2034	\$45.91	0.0531	\$2.437
19	2035	\$48.66	0.0531	\$2.583
20	2036	\$51.58	0.0531	\$2.738
21	2037			\$0.000
22	2038			\$0.000
23	2039			\$0.000
24	2040			\$0.000
25	2041			\$0.000
26	2042			\$0.000
27	2043			\$0.000
28	2044			\$0.000
29	2045			\$0.000
30	2046			\$0.000
31	2047			\$0.000
32	2048			\$0.000
33	2049			\$0.000
34	2050			\$0.000
35	2051			\$0.000
36	2052			\$0.000
37	2053			\$0.000
38	2054			\$0.000
39	2055			\$0.000
40	2056			\$0.000
41	2057			\$0.000
42	2058			\$0.000
43	2059			\$0.000
44	2060			\$0.000
45	2061			\$0.000

### Infrastructure Capacity Cost Inputs

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	
<b>Source Link or File Name:</b>	2018 IRP Expected Case
<b>Source Notes:</b>	per day costs of Jackson prairie O&M/Capital for Avistas share of owned storage

### Infrastructure Capacity Costs

Year #	Calendar Year	Infrastructure Capacity Costs		
		Supply \$/Dth/Day	Distribution Peak DAY (\$/Dth/Day)	Distribution Peak HOUR (\$/Dth/Hour)
1	2017	-\$0.002		
2	2018	-\$0.002		
3	2019	-\$0.002		
4	2020	-\$0.002		
5	2021	-\$0.002		
6	2022	-\$0.002		
7	2023	-\$0.002		
8	2024	-\$0.002		
9	2025	-\$0.002		
10	2026	-\$0.002		
11	2027	-\$0.002		
12	2028	-\$0.002		
13	2029	-\$0.002		
14	2030	-\$0.002		
15	2031	-\$0.002		
16	2032	-\$0.002		
17	2033	-\$0.003		
18	2034	-\$0.003		
19	2035	-\$0.003		
20	2036	-\$0.002		
21	2037			
22	2038			
23	2039			
24	2040			
25	2041			
26	2042			
27	2043			
28	2044			
29	2045			
30	2046			
31	2047			
32	2048			
33	2049			
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38	2054			
39	2055			
40	2056			
41	2057			
42	2058			
43	2059			
44	2060			
45	2061			

### Risk Reduction Value Inputs

Real or Nominal?	Nominal
Source and Pg #:	
Source Link or File Name:	
Source Notes:	Do not have values in 2018 IRP

### Risk Reduction Value

\$0.00
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= Levelized Risk Reduction Value (for use when negative values occur in any years of the forecast period). If this value is negative, then zero will be assigned as the final value.

Year #	Calendar Year	Risk Reduction Value (\$/Dth)
1	2017	\$0.000
2	2018	\$0.000
3	2019	\$0.000
4	2020	\$0.000
5	2021	\$0.000
6	2022	\$0.000
7	2023	\$0.000
8	2024	\$0.000
9	2025	\$0.000
10	2026	\$0.000
11	2027	\$0.000
12	2028	\$0.000
13	2029	\$0.000
14	2030	\$0.000
15	2031	\$0.000
16	2032	\$0.000
17	2033	\$0.000
18	2034	\$0.000
19	2035	\$0.000
20	2036	\$0.000



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End Use Profiles & Peak Day/Hour Ratios

Source and Pg # and/or Table #:	2018 Natural Gas IRP - Avista
Source Link or File Name:	
Source Notes:	

2020-2021 OR Peak Day 98,462 OR Peak Hour 4,369

End Use Profiles	Monthly Share of Normal Weather Annual Load												Peak to Annual Normal Weather Usage Ratios		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Peak Day	Peak Hour	
													0.010267396	0.000455616	
New Building Construction	Commercial	0.029332	0.033323	0.042100	0.060067	0.105145	0.153719	0.159213	0.158123	0.147751	0.068951	0.039932	0.025568	43879.2101	
Retrofit	Commercial	0.030353	0.034483	0.043566	0.062158	0.108805	0.159070	0.164755	0.163627	0.152894	0.071351	0.041322	0.026458	45406.49826	
Replacement on Burnout	Commercial	0.010067	0.011438	0.014450	0.020617	0.036089	0.052761	0.054646	0.054272	0.050712	0.023666	0.013706	0.008776	15060.57461	
Strategic Energy Management	Commercial	0.004095	0.004653	0.005878	0.008387	0.014680	0.021462	0.022229	0.022077	0.020629	0.009627	0.005575	0.003570	6126.412501	
Retrofit	Industrial	0.003796	0.004313	0.005449	0.007774	0.013608	0.019895	0.020606	0.020465	0.019122	0.008924	0.005168	0.003309	5678.962533	
Replacement on Burnout	Industrial	0.000682	0.000775	0.000979	0.001397	0.002445	0.003575	0.003702	0.003677	0.003436	0.001603	0.000929	0.000595	1020.344967	
New Home Construction	Residential	0.064897	0.073728	0.093148	0.132900	0.232635	0.340107	0.352262	0.349850	0.326902	0.152556	0.088351	0.056569	97083.40972	
Retrofit	Residential	0.025173	0.028599	0.036132	0.051552	0.090239	0.131926	0.136641	0.135706	0.126804	0.059176	0.034271	0.021943	37658.37447	
Replacement on Burnout	Residential	0.011333	0.012875	0.016266	0.023208	0.040625	0.059393	0.061516	0.061095	0.057087	0.026641	0.015429	0.009879	16953.75483	
Smart Thermostat	Residential	0.018001	0.020450	0.025837	0.036863	0.064527	0.094336	0.097708	0.097039	0.090674	0.042315	0.024506	0.015691	26928.26288	
Mega-Project Adder	Other	0.016388	0.018618	0.023522	0.033561	0.058746	0.085885	0.088955	0.088346	0.082551	0.038524	0.022311	0.014285	24515.975	
20 years (2017 - 2037) avg, by month, normal weather		1,495,970	1,316,770	1,042,250	730,500	417,320	285,450	275,600	277,500	296,980	636,380	1,098,840	1,716,190		

Notes:  
 Energy Trust will work with Utility and OPUC Staff to determine the most appropriate load or savings profiles and peak factors to use, whether that is utility specific values or Northwest Power and Conservation Council proxies. In order for utility-specific values to be used, utility staff must review the methodology they used to develop the values with OPUC Staff.

Average per month of 20 years of EE vs. normal weather annual load. Peak day in for Oregon territories only for the upcoming winter season (2020-2021). Peak hour takes the peak day/24\*1.065

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> <i>2020 IRP is currently being developed</i>
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Global Assumptions Inputs			SOURCING				
<i>Provide as much detail as possible with sourcing including a link. Ensure that dollar years listed here are the same as the source.</i>							
Avoided Cost Element	Units	Value	Source	Source Page #	Table # (if applicable)	Source Link or File Name	Source Notes
<b>Discount Rate</b> (Company's Real after-tax weighted average cost of capital (WACC))	Percent	4.60%					
<b>Inflation Rate</b>	Percent	2.11%					
<b>Regional Act Credit</b>	Percent	10.00%	N/A				
<b>Forecast Period Calendar Start Year</b>	Year	2021					
<b>Real Dollar Base Year</b>	Year	2019					

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> <i>2020 IRP is currently being developed</i>
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**Commodity Price Inputs**

Real or Nominal?	Nominal
Source and Pg #:	
Source Link or File Name:	
Source Notes:	

**Gas Commodity and Transportation/Storage Costs (\$/Dth)**

Year #	Calendar Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2021	-\$3.43	-\$3.34	-\$3.03	-\$2.71	-\$2.43	-\$2.47	-\$2.59	-\$2.58	-\$2.46	-\$2.52	-\$2.82	-\$3.11
2	2022	-\$3.23	-\$3.14	-\$2.84	-\$2.52	-\$2.21	-\$2.30	-\$2.42	-\$2.38	-\$2.23	-\$2.23	-\$2.51	-\$3.00
3	2023	-\$3.10	-\$2.97	-\$2.70	-\$2.58	-\$2.23	-\$2.38	-\$2.43	-\$2.43	-\$2.21	-\$2.28	-\$2.77	-\$3.07
4	2024	-\$3.24	-\$3.00	-\$2.91	-\$2.80	-\$2.59	-\$2.61	-\$2.58	-\$2.59	-\$2.65	-\$2.68	-\$2.86	-\$3.18
5	2025	-\$3.37	-\$3.30	-\$3.15	-\$3.25	-\$3.07	-\$3.01	-\$3.01	-\$3.01	-\$3.08	-\$3.15	-\$3.35	-\$3.63
6	2026	-\$3.86	-\$3.84	-\$3.66	-\$3.81	-\$3.51	-\$3.50	-\$3.49	-\$3.50	-\$3.53	-\$3.66	-\$3.82	-\$4.04
7	2027	-\$4.15	-\$4.08	-\$3.90	-\$4.11	-\$3.79	-\$3.75	-\$3.73	-\$3.75	-\$3.79	-\$3.86	-\$4.10	-\$4.34
8	2028	-\$4.54	-\$4.47	-\$4.32	-\$4.26	-\$4.15	-\$4.14	-\$4.14	-\$4.16	-\$4.20	-\$4.40	-\$4.55	-\$4.73
9	2029	-\$4.96	-\$4.87	-\$4.69	-\$4.88	-\$4.55	-\$4.55	-\$4.54	-\$4.54	-\$4.58	-\$4.74	-\$4.91	-\$5.16
10	2030	-\$5.33	-\$5.26	-\$5.09	-\$5.28	-\$4.91	-\$4.88	-\$4.84	-\$4.86	-\$4.91	-\$5.11	-\$5.32	-\$5.57
11	2031	-\$5.74	-\$5.70	-\$5.48	-\$5.74	-\$5.32	-\$5.30	-\$5.26	-\$5.26	-\$5.35	-\$5.47	-\$5.71	-\$5.95
12	2032	-\$6.13	-\$6.06	-\$5.85	-\$6.15	-\$5.69	-\$5.65	-\$5.50	-\$5.53	-\$5.69	-\$5.88	-\$6.18	-\$6.43
13	2033	-\$6.66	-\$6.65	-\$6.45	-\$6.71	-\$6.27	-\$6.28	-\$6.17	-\$6.19	-\$6.30	-\$6.46	-\$6.76	-\$6.97
14	2034	-\$7.20	-\$7.14	-\$6.94	-\$7.19	-\$6.77	-\$6.75	-\$6.70	-\$6.72	-\$6.80	-\$6.99	-\$7.24	-\$7.49
15	2035	-\$7.70	-\$7.63	-\$7.37	-\$7.65	-\$7.23	-\$7.19	-\$7.08	-\$7.12	-\$7.22	-\$7.39	-\$7.69	-\$8.01
16	2036	-\$8.25	-\$8.24	-\$7.99	-\$8.11	-\$7.77	-\$7.75	-\$7.58	-\$7.60	-\$7.73	-\$7.94	-\$8.28	-\$8.57
17	2037	-\$8.83	-\$8.69	-\$8.47	-\$8.55	-\$8.34	-\$8.32	-\$8.22	-\$8.30	-\$8.38	-\$8.57	-\$8.96	-\$9.26
18	2038	-\$9.55	-\$9.36	-\$9.06	-\$9.14	-\$8.84	-\$8.84	-\$8.71	-\$8.73	-\$8.81	-\$9.28	-\$9.39	-\$9.74
19	2039	-\$10.07	-\$9.92	-\$9.73	-\$9.81	-\$9.52	-\$9.45	-\$9.34	-\$9.34	-\$9.49	-\$9.94	-\$10.09	-\$10.39
20	2040	-\$10.70	-\$10.55	-\$10.34	-\$10.42	-\$10.12	-\$10.10	-\$10.01	-\$10.04	-\$10.15	-\$10.60	-\$10.95	-\$11.30
21	2041												
22	2042												
23	2043												
24	2044												
25	2045												
26	2046												
27	2047												
28	2048												
29	2049												
30	2050												
31	2051												
32	2052												
33	2053												
34	2054												
35	2055												
36	2056												
37	2057												
38	2058												
39	2059												
40	2060												
41	2061												
42	2062												
43	2063												
44	2064												
45	2065												

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> <i>2020 IRP is currently being developed</i>
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**Environmental Compliance Cost Inputs**

Real or Nominal?	Nominal
Source and Pg #:	
Source Link or File Name:	
Source Notes:	2020 IRP - Cap and Trade scenario from Wood Mackenzie June 2002 Long Term Outlook

**Environmental Compliance Cost**

Year #	Calendar Year	Environmental Compliance Cost (\$/MTCO2e)	Carbon Intesity (MTCO2e/Dth)	Environmental Compliance Cost (\$/Dth)
1	2021	\$15.83	0.0582	\$0.921
2	2022	\$17.02	0.0582	\$0.990
3	2023	\$18.23	0.0582	\$1.060
4	2024	\$19.52	0.0582	\$1.136
5	2025	\$20.91	0.0582	\$1.217
6	2026	\$22.40	0.0582	\$1.303
7	2027	\$23.99	0.0582	\$1.396
8	2028	\$28.06	0.0582	\$1.633
9	2029	\$32.34	0.0582	\$1.882
10	2030	\$36.86	0.0582	\$2.144
11	2031	\$41.62	0.0582	\$2.421
12	2032	\$46.63	0.0582	\$2.713
13	2033	\$51.92	0.0582	\$3.020
14	2034	\$57.49	0.0582	\$3.345
15	2035	\$63.37	0.0582	\$3.687
16	2036	\$69.56	0.0582	\$4.047
17	2037	\$76.09	0.0582	\$4.427
18	2038	\$82.98	0.0582	\$4.828
19	2039	\$90.24	0.0582	\$5.250
20	2040	\$97.90	0.0582	\$5.696
21	2041			
22	2042			
23	2043			
24	2044			
25	2045			
26	2046			
27	2047			
28	2048			
29	2049			
30	2050			
31	2051			
32	2052			
33	2053			
34	2054			
35	2055			
36	2056			
37	2057			
38	2058			
39	2059			
40	2060			
41	2061			
42	2062			
43	2063			
44	2064			
45	2065			

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> <i>2020 IRP is currently being developed</i>
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**Infrastructure Capacity Cost Inputs**

Real or Nominal?	Nominal
Source and Pg #:	2020 IRP
Source Link or File Name:	
Source Notes:	Avg. distribution cost of 1 - mile over a 45 year

**Infrastructure Capacity Costs**

Year #	Calendar Year	Infrastructure Capacity Costs		
		Supply (\$/Dth/Day)	Distribution Peak DAY (\$/Dth/Day)	Distribution Peak HOUR (\$/Dth/Hour)
1	2021	-\$0.00151	\$0.354	\$0.0157
2	2022	-\$0.00154	\$0.346	\$0.0154
3	2023	-\$0.00157	\$0.337	\$0.0150
4	2024	-\$0.00160	\$0.328	\$0.0146
5	2025	-\$0.00163	\$0.320	\$0.0142
6	2026	-\$0.00166	\$0.312	\$0.0138
7	2027	-\$0.00170	\$0.304	\$0.0135
8	2028	-\$0.00173	\$0.296	\$0.0131
9	2029	-\$0.00176	\$0.288	\$0.0128
10	2030	-\$0.00180	\$0.280	\$0.0124
11	2031	-\$0.00184	\$0.273	\$0.0121
12	2032	-\$0.00187	\$0.265	\$0.0118
13	2033	-\$0.00191	\$0.257	\$0.0114
14	2034	-\$0.00195	\$0.249	\$0.0111
15	2035	-\$0.00199	\$0.242	\$0.0107
16	2036	-\$0.00203	\$0.234	\$0.0104
17	2037	-\$0.00207	\$0.226	\$0.0100
18	2038	-\$0.00211	\$0.219	\$0.0097
19	2039	-\$0.00215	\$0.211	\$0.0094
20	2040	-\$0.00219	\$0.203	\$0.0090
21	2041		\$0.196	\$0.0087
22	2042		\$0.190	\$0.0084
23	2043		\$0.185	\$0.0082
24	2044		\$0.179	\$0.0080
25	2045		\$0.174	\$0.0077
26	2046		\$0.169	\$0.0075
27	2047		\$0.163	\$0.0073
28	2048		\$0.158	\$0.0070
29	2049		\$0.153	\$0.0068
30	2050		\$0.147	\$0.0065
31	2051		\$0.142	\$0.0063
32	2052		\$0.137	\$0.0061
33	2053		\$0.131	\$0.0058
34	2054		\$0.126	\$0.0056
35	2055		\$0.121	\$0.0053
36	2056		\$0.115	\$0.0051
37	2057		\$0.110	\$0.0049
38	2058		\$0.104	\$0.0046
39	2059		\$0.099	\$0.0044
40	2060		\$0.094	\$0.0042
41	2061		\$0.088	\$0.0039
42	2062		\$0.083	\$0.0037
43	2063		\$0.078	\$0.0034
44	2064		\$0.072	\$0.0032
45	2065		\$0.000	\$0.0000

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> <i>2020 IRP is currently being developed</i>
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**Risk Reduction Value Inputs**

Real or Nominal?	
Source and Pg #:	
Source Link or File Name:	
Source Notes:	

**Risk Reduction Value**

<b>\$0.00</b>
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= Levelized Risk Reduction Value (for use when negative values occur in any years of the forecast period). If this value is negative, then zero will be assigned as the final value.

Year #	Calendar Year	Risk Reduction Value (\$/Dth)
1	2021	\$0.000
2	2022	\$0.000
3	2023	\$0.000
4	2024	\$0.000
5	2025	\$0.000
6	2026	\$0.000
7	2027	\$0.000
8	2028	\$0.000
9	2029	\$0.000
10	2030	\$0.000
11	2031	\$0.000
12	2032	\$0.000
13	2033	\$0.000
14	2034	\$0.000
15	2035	\$0.000
16	2036	\$0.000
17	2037	\$0.000
18	2038	\$0.000
19	2039	\$0.000
20	2040	\$0.000

**Alternative Submissions**

**Rationale for alternative submission:**  
2020 IRP is currently being developed

OR Peak Day OR Peak Hour  
2020-2021 97,511 4,327

**End Use Profiles & Peak Day/Hour Ratios**

Source and Pg # and/or Table #:	
Source Link or File Name:	
Source Notes:	Avista 2020 IRP - ETO study used for the Expected Case

End Use Profiles	Monthly Share of Normal Weather Annual Load												2021	Peak to Annual Normal Weather Usage Ratios	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Peak Day	Peak Hour
Com-New Buildings	0.00002	0.00002	0.00002	0.00004	0.00006	0.00009	0.00009	0.00009	0.00009	0.00004	0.00002	0.00001	256.6900833	0.010168	0.000451
Com-Replacement	0.00005	0.00006	0.00007	0.00010	0.00018	0.00026	0.00027	0.00027	0.00025	0.00012	0.00007	0.00004	743.9333333		
Com-SEM	0.00000	0.00000	0.00000	0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00001	0.00000	0.00000	42.99524999		
Com-Retrofit	0.00004	0.00005	0.00006	0.00009	0.00016	0.00024	0.00024	0.00024	0.00023	0.00011	0.00006	0.00004	672.55188		
Ind-Retrofit	0.00001	0.00001	0.00002	0.00002	0.00004	0.00006	0.00006	0.00006	0.00006	0.00003	0.00002	0.00001	172.7179167		
Ind-Replacement	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	0.00000	0.00000	23.27375		
Res-Manufactured New Homes	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.748750008		
Res-SF New Homes	0.00001	0.00001	0.00001	0.00002	0.00003	0.00005	0.00005	0.00005	0.00005	0.00002	0.00001	0.00001	134.4583333		
Res-Market Transformation	0.00006	0.00007	0.00009	0.00013	0.00023	0.00033	0.00034	0.00034	0.00032	0.00015	0.00009	0.00005	939.8666667		
Res-Showerheads & Aerators	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.532995833		
Res-Smart Thermostat	0.00002	0.00002	0.00003	0.00004	0.00007	0.00010	0.00011	0.00011	0.00010	0.00005	0.00003	0.00002	293.6656333		
Res-Thermostat Optimization	0.00000	0.00000	0.00000	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	0.00001	0.00000	0.00000	50.84826249		
Res-WaterHeat	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	0.00000	0.00000	24.67165317		
Res-Insulation	0.00001	0.00001	0.00001	0.00002	0.00003	0.00005	0.00005	0.00005	0.00005	0.00002	0.00001	0.00001	140.7674952		
Res-Heating & Windows	0.00001	0.00001	0.00001	0.00001	0.00002	0.00003	0.00003	0.00003	0.00003	0.00001	0.00001	0.00000	77.21738168		
MF-Retrofit	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	0.00000	0.00000	27.38928668		
MF-Replacement	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	0.00000	39.04465		
	1495.97	1316.77	1042.25	730.5	417.32	285.45	275.6	277.5	296.98	636.38	1098.84	1716.19			

Notes: Energy Trust will work with Utility and OPUC Staff to determine the most appropriate load or savings profiles and peak factors to use, whether that is utility specific values or Northwest Power and Conservation Council proxies. In order for utility-specific values to be used, utility staff must review the methodology they used to develop the values with OPUC Staff.