



e-FILING REPORT COVER SHEET

COMPANY NAME: Avista Utilities

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: RG 85

Report is required by:  OAR 860-030-0011  
 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: UM 1893

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

OAR 860-030-0011, Avista Utilities 2022 Energy Efficiency Avoided Cost Report

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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September 14, 2022

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 the 2022 Energy Efficiency Avoided Cost Report (Report) of Avista Corporation, dba Avista Utilities (Avista or the Company). The information contained within this year's Report is based off of Avista's most recently approved Integrated Resource Plan (IRP),<sup>1</sup> in accordance with OAR 860-030-0011(2)(a). To provide the most recent data available, the Company has also provided information from its 2023 IRP process, which has not yet been acknowledged or approved by the Commission, in the "Alternative Submissions" portion of the Report per OAR 860-030-0011(2)(b). Avista believes that the information from its 2023 IRP process provides a more accurate depiction of current state and should therefore be considered when calculating the Company's energy efficiency avoided costs.

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

Sincerely,

*/s/ Jaime Majure*

Jaime Majure  
Regulatory Policy Analyst

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<sup>1</sup> See Docket No. LC 75.

Energy Efficiency Avoided Cost Submission Template - Natural Gas	
Utility Name:	AVA
Submission Date:	9/14/2022
Instructions and Definitions	
<p>&lt;&gt; Please fill out this workbook as completely as possible and per the instructions.</p> <p>&lt;&gt; Inputs will be reviewed and approved by the OPUC before being sent to the Energy Trust of Oregon for use in Avoided Cost development.</p> <p>&lt;&gt; <b>Provide as much detail as possible when sourcing</b> data inputs, including the link to the source (if available), page number and table or graph number.  <i>This will increase the efficiency of this process and require less iteration during the OPUC review period.</i></p> <p><i>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.</i></p>	
1) Global Inputs - IRP	
<p>&lt;&gt; 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.</p> <p>&lt;&gt; 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.</p> <p>&lt;&gt; 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.</p> <p>&lt;&gt; <b>Ensure that the dollar years of the data inputs match the source</b> - Energy Trust will inflate to the proper year.</p>	
2) Commodity and Transport - IRP	
<p>&lt;&gt; Provide Commodity and Transport price forecast by month.</p> <p>&lt;&gt; <b>Indicate if the forecast is in nominal or real dollars (if real, dollar value will populate headers from Global Inputs tab).</b></p>	
3) Environmental Compliance - IRP	
<p>&lt;&gt; Provide the \$/Metric Ton of CO2 assumed for each year of the forecast.</p> <p>&lt;&gt; Provide the metric ton of CO2/dekatherm assumed for each year of the forecast.</p> <p>&lt;&gt; Column 'F' is a calculated field, which multiplies the \$/metric ton of CO2 by the CO2/dekatherm.</p>	
4) Infrastructure Capacity - IRP	
<p>&lt;&gt; Provide the Supply Infrastructure Capacity Cost in a \$/Dth/Day format for each year available of the forecast period.</p> <p>&lt;&gt; Provide the Distribution Infrastructure Capacity Cost in a \$/Dth/Day and \$/Dth/Hour format for each year available of the forecast period.</p> <p>&lt;&gt; 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.</p>	
5) Risk Reduction - IRP	
<p>&lt;&gt; Provide the Risk Reduction value in a \$/Dth format if available for each year available of the forecast period.</p> <p>&lt;&gt; 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.</p>	
6) End Use Profiles - IRP	
<p>&lt;&gt; Provide the Monthly share of annual load for the utility's system by end use, if available.</p> <p>&lt;&gt; Provide the peak day/annual load and peak hour/annual load ratios by end use, if available.</p> <p>&lt;&gt; End-use profiles are meant to represent the timing of savings, these can be derived from either savings profiles or load profiles.</p>	
1a, 2a, 3a, 4a, 5a, 6a) Alternative Submissions	
<p>&lt;&gt; 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.</p> <p>&lt;&gt; <b>Submissions in these tabs are not required.</b></p> <p>&lt;&gt; Provide a rationale for submitting the alternative values in the box provided at the top of each alternative worksheet.</p> <p>&lt;&gt; 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.</p>	

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
Discount Rate (Company's Real after-tax weighted average cost of capital (WACC))	Percent	4.36%	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	242			System weighted
Inflation Rate	Percent	2.00%	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	242			GPD price deflator assumption
Regional Act Credit	Percent	10.00%	N/A				
Forecast Period Calendar Start Year	Year	2020	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>	4	Figure 1		Data begins in November 2020
Real Dollar Base Year	Year	2019					
System Peak Definition	Calendar Month/Day/Hour	February 28th & December 20th	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>	4			(WA,ID,La Grande)-2/28 & (Klamath, Roseburg, Medford)-12/20
System Peak Coincident Day Factor (if needed)	Peak Day/Annual Load Ratio	0.0095	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	271			Peak day and annual load 2020-2040
System Peak Coincident Hour Factor (if needed)	Peak Hour/Annual Load Ratio	0.0004	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	271			Peak hour (peak day/24*1.065) and annual load 2020-2040

**Commodity Price Inputs**

Real or Nominal?	Nominal
Source and Pg #:	2021 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/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</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	2020											-\$1.75	-\$2.46
2	2021	-\$2.51	-\$2.42	-\$2.11	-\$1.79	-\$1.51	-\$1.55	-\$1.67	-\$1.66	-\$1.54	-\$1.60	-\$1.90	-\$2.18
3	2022	-\$2.24	-\$2.15	-\$1.85	-\$1.53	-\$1.22	-\$1.31	-\$1.43	-\$1.39	-\$1.24	-\$1.24	-\$1.52	-\$2.00
4	2023	-\$2.04	-\$1.91	-\$1.64	-\$1.52	-\$1.17	-\$1.32	-\$1.37	-\$1.37	-\$1.14	-\$1.22	-\$1.71	-\$2.00
5	2024	-\$2.11	-\$1.86	-\$1.78	-\$1.66	-\$1.46	-\$1.47	-\$1.45	-\$1.45	-\$1.52	-\$1.54	-\$1.72	-\$2.04
6	2025	-\$2.16	-\$2.08	-\$1.93	-\$2.03	-\$1.85	-\$1.79	-\$1.80	-\$1.79	-\$1.87	-\$1.93	-\$2.14	-\$2.41
7	2026	-\$2.56	-\$2.54	-\$2.35	-\$2.50	-\$2.21	-\$2.19	-\$2.18	-\$2.19	-\$2.23	-\$2.36	-\$2.52	-\$2.73
8	2027	-\$2.75	-\$2.69	-\$2.50	-\$2.72	-\$2.39	-\$2.35	-\$2.34	-\$2.35	-\$2.40	-\$2.47	-\$2.70	-\$2.95
9	2028	-\$2.91	-\$2.84	-\$2.68	-\$2.63	-\$2.52	-\$2.50	-\$2.51	-\$2.52	-\$2.57	-\$2.77	-\$2.92	-\$3.11
10	2029	-\$3.08	-\$2.99	-\$2.80	-\$3.00	-\$2.67	-\$2.67	-\$2.65	-\$2.65	-\$2.70	-\$2.86	-\$3.03	-\$3.28
11	2030	-\$3.19	-\$3.11	-\$2.94	-\$3.14	-\$2.76	-\$2.74	-\$2.69	-\$2.72	-\$2.76	-\$2.97	-\$3.17	-\$3.43
12	2031	-\$3.32	-\$3.27	-\$3.06	-\$3.31	-\$2.90	-\$2.88	-\$2.84	-\$2.84	-\$2.92	-\$3.05	-\$3.29	-\$3.54
13	2032	-\$3.42	-\$3.34	-\$3.14	-\$3.44	-\$2.97	-\$2.94	-\$2.79	-\$2.81	-\$2.97	-\$3.17	-\$3.46	-\$3.74
14	2033	-\$3.64	-\$3.63	-\$3.42	-\$3.69	-\$3.25	-\$3.26	-\$3.15	-\$3.17	-\$3.28	-\$3.43	-\$3.74	-\$3.97
15	2034	-\$3.86	-\$3.79	-\$3.60	-\$3.84	-\$3.43	-\$3.41	-\$3.35	-\$3.37	-\$3.45	-\$4.00	-\$3.89	-\$4.70
16	2035	-\$4.02	-\$3.94	-\$3.68	-\$3.97	-\$3.55	-\$3.50	-\$3.39	-\$3.43	-\$3.53	-\$4.06	-\$4.02	-\$4.94
17	2036	-\$4.21	-\$4.19	-\$3.95	-\$4.06	-\$3.72	-\$3.70	-\$3.53	-\$3.56	-\$3.68	-\$4.19	-\$4.24	-\$5.20
18	2037	-\$4.41	-\$4.28	-\$4.06	-\$4.12	-\$3.91	-\$3.89	-\$3.79	-\$3.87	-\$3.95	-\$4.43	-\$4.54	-\$5.50
19	2038	-\$4.75	-\$4.54	-\$4.24	-\$4.31	-\$4.01	-\$4.01	-\$3.88	-\$3.90	-\$3.98	-\$4.45	-\$4.60	-\$5.64
20	2039	-\$4.86	-\$4.70	-\$4.52	-\$4.56	-\$4.27	-\$4.20	-\$4.09	-\$4.09	-\$4.24	-\$4.69	-\$4.89	-\$5.99
21	2040	-\$5.06	-\$4.90	-\$4.70	-\$4.73	-\$4.43	-\$4.41	-\$4.31	-\$4.34	-\$4.45	-\$4.90		
22	2041												
23	2042												
24	2043												
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26	2045												
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42	2061												
43	2062												
44	2063												
45	2064												

**Environmental Compliance Cost Inputs**

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	2021 IRP
<b>Source Link or File Name:</b>	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>
<b>Source Notes:</b>	Carbon intensity is 128.27 lbs per Metric Ton 2204.623 lbs

**Environmental Compliance Cost**

Year #	Calendar Year	Environmental Compliance Cost (\$/MTCO2e)	Carbon Intensity (MTCO2e/Dth)	Environmental Compliance Cost (\$/Dth)
1	2020			
2	2021	\$15.83	0.0582	\$0.921
3	2022	\$17.02	0.0582	\$0.990
4	2023	\$18.23	0.0582	\$1.060
5	2024	\$19.52	0.0582	\$1.136
6	2025	\$20.91	0.0582	\$1.217
7	2026	\$22.40	0.0582	\$1.303
8	2027	\$23.99	0.0582	\$1.396
9	2028	\$28.06	0.0582	\$1.633
10	2029	\$32.34	0.0582	\$1.882
11	2030	\$36.86	0.0582	\$2.144
12	2031	\$41.62	0.0582	\$2.421
13	2032	\$46.63	0.0582	\$2.713
14	2033	\$51.92	0.0582	\$3.020
15	2034	\$57.49	0.0582	\$3.345
16	2035	\$63.37	0.0582	\$3.687
17	2036	\$69.56	0.0582	\$4.047
18	2037	\$76.09	0.0582	\$4.427
19	2038	\$82.98	0.0582	\$4.828
20	2039	\$90.24	0.0582	\$5.250
21	2040	\$97.90	0.0582	\$5.696
22	2041			
23	2042			
24	2043			
25	2044			
26	2045			
27	2046			
28	2047			
29	2048			
30	2049			
31	2050			
32	2051			
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35	2054			
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40	2059			
41	2060			
42	2061			
43	2062			
44	2063			
45	2064			

**Infrastructure Capacity Cost Inputs**

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	2021 IRP
<b>Source Link or File Name:</b>	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>
<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	2020	-\$0.002		
2	2021	-\$0.001		
3	2022	-\$0.002		
4	2023	-\$0.002		
5	2024	-\$0.002		
6	2025	-\$0.002		
7	2026	-\$0.002		
8	2027	-\$0.002		
9	2028	-\$0.002		
10	2029	-\$0.002		
11	2030	-\$0.002		
12	2031	-\$0.002		
13	2032	-\$0.002		
14	2033	-\$0.002		
15	2034	-\$0.002		
16	2035	-\$0.002		
17	2036	-\$0.002		
18	2037	-\$0.002		
19	2038	-\$0.002		
20	2039	-\$0.002		
21	2040	-\$0.002		
22	2041			
23	2042			
24	2043			
25	2044			
26	2045			
27	2046			
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43	2062			
44	2063			
45	2064			

### Risk Reduction Value Inputs

Real or Nominal?	
Source and Pg #:	
Source Link or File Name:	
Source Notes:	Do not have values in 2021 IRP

\$0.00

= 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.

### Risk Reduction Value

Year #	Calendar Year	Risk Reduction Value (\$/Dth)
1	2020	\$0.000
2	2021	\$0.000
3	2022	\$0.000
4	2023	\$0.000
5	2024	\$0.000
6	2025	\$0.000
7	2026	\$0.000
8	2027	\$0.000
9	2028	\$0.000
10	2029	\$0.000
11	2030	\$0.000
12	2031	\$0.000
13	2032	\$0.000
14	2033	\$0.000
15	2034	\$0.000
16	2035	\$0.000
17	2036	\$0.000
18	2037	\$0.000
19	2038	\$0.000
20	2039	\$0.000



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

<b>Source and Pg # and/or Table #:</b>	2021 IRP
<b>Source Link or File Name:</b>	t-documents/about-us/our-company/irp-documen
<b>Source Notes:</b>	Avista 2021 IRP - ETO study used for the Expected Case (dths)

End Use Profiles	Monthly Share of Normal Weather Annual Load											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Com-New Buildings	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215
Com-Replacement	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622
Com-SEM	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036
Com-Retrofit	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562
Ind-Retrofit	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144
Ind-Replacement	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019
Res-Manufactured New Homes	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006
Res-SF New Homes	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112
Res-Market Transformation	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785
Res-Showerheads & Aerators	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Res-Smart Thermostat	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245
Res-Thermostat Optimization	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042
Res-WaterHeat	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021
Res-Insulation	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118
Res-Heating & Windows	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065
MF-Retrofit	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023
MF-Replacement	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033
	1,435,853	1,268,797	1,009,279	713,429	414,346	291,381	283,558	285,601	302,501	618,914	1,083,101	1,624,483

2021	Peak to Annual Normal Weather Usage Ratios	
	Peak Day	Peak Hour
3,080	0.009585	0.000425
8,927		
516		
8,071		
2,073		
279		
81		
1,613		
11,278		
18		
3,524		
610		
296		
1,689		
927		
329		
469		

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.

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> Current 2023 IRP Process
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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
Discount Rate (Company's Real after-tax weighted average cost of capital (WACC))	Percent	4.71%					
Inflation Rate	Percent	2.00%					
Regional Act Credit	Percent	10.00%					
Forecast Period Calendar Start Year	Year	2023					
Real Dollar Base Year	Year	2022					

Alternative Submissions	Rationale for alternative submission: Current 2022 BIP Process
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**Commodity Price Inputs**

Feed or Nominal?	Business
Source and Pk #	
Source Link or File Name:	
Source Notes:	Cost to serve the next unit of load while maintaining compliance with CPP emission targets and considering the following resources: natural gas, renewable natural gas, hydrogen, and CCG. The first table (left) reflects such costs for firm customer load (residential, commercial, industrial) while the second table (right) reflects such costs when also including transport customer load.

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

Year #	Calendar Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2023	\$8.56	\$8.22	\$8.85	\$5.04	\$4.91	\$5.03	\$5.04	\$4.50	\$4.89	\$5.24	\$5.44	
2	2024	\$12.90	\$12.90	\$12.97	\$12.99	\$12.98	\$12.74	\$12.93	\$12.93	\$12.57	\$12.85	\$12.24	\$12.46
3	2025	\$14.64	\$14.98	\$15.97	\$15.87	\$15.86	\$15.87	\$15.81	\$15.91	\$15.55	\$15.51	\$15.14	\$15.38
4	2026	\$16.34	\$16.34	\$16.08	\$16.00	\$16.00	\$16.00	\$16.00	\$15.84	\$15.55	\$15.69	\$15.94	\$16.09
5	2027	\$17.57	\$17.44	\$17.44	\$17.44	\$17.44	\$17.44	\$17.34	\$17.34	\$17.04	\$17.07	\$17.07	\$17.07
6	2028	\$18.61	\$18.61	\$18.46	\$18.35	\$18.35	\$18.35	\$18.24	\$18.14	\$17.85	\$17.80	\$17.81	\$17.81
7	2029	\$19.54	\$19.54	\$19.35	\$19.41	\$19.41	\$19.38	\$19.41	\$19.41	\$19.05	\$19.13	\$19.52	\$19.54
8	2030	\$20.42	\$20.42	\$20.30	\$20.37	\$20.37	\$20.36	\$20.37	\$20.35	\$19.94	\$20.04	\$20.42	\$20.42
9	2031	\$20.83	\$20.83	\$20.69	\$20.77	\$20.77	\$20.77	\$20.77	\$20.75	\$20.43	\$20.53	\$20.83	\$20.83
10	2032	\$21.19	\$21.19	\$21.09	\$21.14	\$21.14	\$21.14	\$21.14	\$20.77	\$20.83	\$21.19	\$21.19	\$21.19
11	2033	\$21.54	\$21.54	\$21.46	\$21.46	\$21.46	\$21.46	\$21.46	\$21.04	\$21.17	\$21.54	\$21.54	\$21.54
12	2034	\$21.90	\$21.90	\$21.83	\$21.87	\$21.87	\$21.87	\$21.87	\$21.78	\$21.40	\$21.58	\$21.90	\$21.90
13	2035	\$22.27	\$22.27	\$22.22	\$22.26	\$22.26	\$22.26	\$22.22	\$21.84	\$22.06	\$22.27	\$22.27	\$22.27
14	2036	\$22.64	\$22.64	\$22.60	\$22.64	\$22.64	\$22.64	\$22.60	\$22.18	\$22.41	\$22.64	\$22.64	\$22.64
15	2037	\$23.01	\$23.01	\$23.02	\$23.03	\$23.03	\$23.03	\$23.02	\$22.61	\$22.81	\$23.01	\$23.01	\$23.01
16	2038	\$23.42	\$23.42	\$23.41	\$23.42	\$23.42	\$23.42	\$23.42	\$23.00	\$23.22	\$23.42	\$23.42	\$23.42
17	2039	\$23.81	\$23.81	\$23.80	\$23.81	\$23.81	\$23.81	\$23.81	\$23.36	\$23.58	\$23.81	\$23.81	\$23.81
18	2040	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$23.95	\$24.12	\$24.21	\$24.21	\$24.21
19	2041	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.21	\$24.45	\$24.61	\$24.61	\$24.61
20	2042	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$24.64	\$24.87	\$25.01	\$25.01	\$25.01
21	2043	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.21	\$25.38	\$25.42	\$25.42	\$25.42
22	2044	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.59	\$25.76	\$25.84	\$25.84	\$25.84
23	2045	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.00	\$26.19	\$26.25	\$26.25	\$26.25
24	2046												
25	2047												
26	2048												
27	2049												
28	2050												
29	2051												
30	2052												
31	2053												
32	2054												
33	2055												
34	2056												
35	2057												
36	2058												
37	2059												
38	2060												
39	2061												
40	2062												
41	2063												
42	2064												
43	2065												
44	2066												
45	2067												

Year #	Calendar Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2023	\$10.86	\$8.22	\$9.33	\$7.31	\$7.21	\$7.79	\$7.43	\$7.39	\$6.93	\$7.28	\$7.63	\$5.44
2	2024	\$12.90	\$12.90	\$12.93	\$12.99	\$12.98	\$12.99	\$12.99	\$12.99	\$12.93	\$12.75	\$12.99	\$12.26
3	2025	\$14.64	\$14.98	\$15.97	\$15.87	\$15.86	\$15.87	\$15.81	\$15.91	\$15.55	\$15.51	\$15.14	\$15.38
4	2026	\$16.34	\$16.34	\$16.17	\$16.00	\$16.00	\$16.00	\$16.00	\$15.84	\$15.55	\$15.69	\$15.94	\$16.09
5	2027	\$17.57	\$17.44	\$17.44	\$17.44	\$17.44	\$17.34	\$17.34	\$17.04	\$17.07	\$17.07	\$17.07	\$17.07
6	2028	\$18.61	\$18.61	\$18.46	\$18.35	\$18.35	\$18.35	\$18.24	\$18.14	\$17.85	\$17.80	\$17.81	\$17.81
7	2029	\$19.54	\$19.54	\$19.35	\$19.41	\$19.41	\$19.38	\$19.41	\$19.41	\$19.18	\$19.18	\$19.54	\$19.54
8	2030	\$20.42	\$20.42	\$20.30	\$20.37	\$20.37	\$20.36	\$20.37	\$20.35	\$19.94	\$20.04	\$20.42	\$20.42
9	2031	\$20.83	\$20.83	\$20.75	\$20.79	\$20.79	\$20.78	\$20.83	\$20.78	\$20.43	\$20.53	\$20.83	\$20.83
10	2032	\$21.19	\$21.19	\$21.09	\$21.14	\$21.14	\$21.14	\$21.14	\$20.82	\$21.19	\$21.19	\$21.19	\$21.19
11	2033	\$21.54	\$21.54	\$21.46	\$21.46	\$21.46	\$21.46	\$21.46	\$21.04	\$21.17	\$21.54	\$21.54	\$21.54
12	2034	\$21.90	\$21.90	\$21.83	\$21.87	\$21.87	\$21.87	\$21.87	\$21.78	\$21.40	\$21.58	\$21.90	\$21.90
13	2035	\$22.27	\$22.27	\$22.22	\$22.26	\$22.26	\$22.22	\$21.84	\$22.06	\$22.27	\$22.27	\$22.27	\$22.27
14	2036	\$22.64	\$22.64	\$22.60	\$22.64	\$22.64	\$22.64	\$22.60	\$22.18	\$22.41	\$22.64	\$22.64	\$22.64
15	2037	\$23.01	\$23.01	\$23.01	\$23.01	\$23.01	\$23.01	\$23.01	\$22.61	\$22.81	\$23.01	\$23.01	\$23.01
16	2038	\$23.42	\$23.42	\$23.42	\$23.42	\$23.42	\$23.42	\$23.42	\$23.00	\$23.22	\$23.42	\$23.42	\$23.42
17	2039	\$23.81	\$23.81	\$23.80	\$23.81	\$23.81	\$23.81	\$23.81	\$23.36	\$23.58	\$23.81	\$23.81	\$23.81
18	2040	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$23.95	\$24.12	\$24.21	\$24.21	\$24.21
19	2041	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.21	\$24.45	\$24.61	\$24.61	\$24.61
20	2042	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$24.64	\$24.87	\$25.01	\$25.01	\$25.01
21	2043	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.21	\$25.38	\$25.42	\$25.42	\$25.42
22	2044	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.59	\$25.76	\$25.84	\$25.84	\$25.84
23	2045	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.00	\$26.19	\$26.25	\$26.25	\$26.25

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> Current 2023 IRP Process
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**Environmental Compliance Cost Inputs**

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	
<b>Source Link or File Name:</b>	<a href="https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/clean-energy-transformation-act/social-cost-carbon">https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/clean-energy-transformation-act/social-cost-carbon</a>
<b>Source Notes:</b>	Carbon intensity of natural gas is 116.9797214653 lbs per Metric Ton (2204.623 lbs). Environmental compliance cost is the social cost of carbon from the link provided above.

**Environmental Compliance Cost**

Year #	Calendar Year	Environmental Compliance Cost (\$/MTCO <sub>2</sub> e)	Carbon Intesity (MTCO <sub>2</sub> e/Dth)	Environmental Compliance Cost (\$/Dth)
1	2023	\$92.68	0.0531	\$4.918
2	2024	\$96.67	0.0531	\$5.129
3	2025	\$100.68	0.0531	\$5.342
4	2026	\$104.58	0.0531	\$5.549
5	2027	\$108.61	0.0531	\$5.763
6	2028	\$112.73	0.0531	\$5.982
7	2029	\$116.98	0.0531	\$6.207
8	2030	\$121.36	0.0531	\$6.439
9	2031	\$125.61	0.0531	\$6.665
10	2032	\$130.00	0.0531	\$6.898
11	2033	\$134.51	0.0531	\$7.137
12	2034	\$139.16	0.0531	\$7.384
13	2035	\$143.95	0.0531	\$7.638
14	2036	\$149.47	0.0531	\$7.931
15	2037	\$155.16	0.0531	\$8.233
16	2038	\$161.03	0.0531	\$8.544
17	2039	\$167.09	0.0531	\$8.866
18	2040	\$173.33	0.0531	\$9.197
19	2041	\$179.11	0.0531	\$9.504
20	2042	\$185.07	0.0531	\$9.820
21	2043	\$191.19	0.0531	\$10.145
22	2044	\$197.50	0.0531	\$10.480
23	2045	\$203.99	0.0531	\$10.824
24	2046			
25	2047			
26	2048			
27	2049			
28	2050			
29	2051			
30	2052			
31	2053			
32	2054			
33	2055			
34	2056			
35	2057			
36	2058			
37	2059			
38	2060			
39	2061			
40	2062			
41	2063			
42	2064			
43	2065			
44	2066			
45	2067			

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b>
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**Infrastructure Capacity Cost Inputs**

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	
<b>Source Link or File Name:</b>	
<b>Source Notes:</b>	

**Infrastructure Capacity Costs**

Year #	Calendar Year	Infrastructure Capacity Costs		
		Supply (\$/Dth/Day)	Distribution Peak DAY (\$/Dth/Day)	Distribution Peak HOUR (\$/Dth/Hour)
1	2023			
2	2024			
3	2025			
4	2026			
5	2027			
6	2028			
7	2029			
8	2030			
9	2031			
10	2032			
11	2033			
12	2034			
13	2035			
14	2036			
15	2037			
16	2038			
17	2039			
18	2040			
19	2041			
20	2042			
21	2043			
22	2044			
23	2045			
24	2046			
25	2047			
26	2048			
27	2049			
28	2050			
29	2051			
30	2052			
31	2053			
32	2054			
33	2055			
34	2056			
35	2057			
36	2058			
37	2059			
38	2060			
39	2061			
40	2062			
41	2063			
42	2064			
43	2065			
44	2066			
45	2067			

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b>
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**Risk Reduction Value Inputs**

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

\$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.

**Risk Reduction Value**

Year #	Calendar Year	Risk Reduction Value (\$/Dth)
1	2023	\$0.000
2	2024	\$0.000
3	2025	\$0.000
4	2026	\$0.000
5	2027	\$0.000
6	2028	\$0.000
7	2029	\$0.000
8	2030	\$0.000
9	2031	\$0.000
10	2032	\$0.000
11	2033	\$0.000
12	2034	\$0.000
13	2035	\$0.000
14	2036	\$0.000
15	2037	\$0.000
16	2038	\$0.000
17	2039	\$0.000
18	2040	\$0.000
19	2041	\$0.000
20	2042	\$0.000



## Energy Efficiency Avoided Cost Submission Template - Natural Gas

Utility Name: **AVA**

Submission Date: **9/14/2022**

### 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				
<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
Discount Rate (Company's Real after-tax weighted average cost of capital (WACC))	Percent	4.36%	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	242			System weighted
Inflation Rate	Percent	2.00%	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	242			GPD price deflator assumption
Regional Act Credit	Percent	10.00%	N/A				
Forecast Period Calendar Start Year	Year	2020	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>	4	Figure 1		Data begins in November 2020
Real Dollar Base Year	Year	2019					
System Peak Definition	Calendar Month/Day/Hour	February 28th & December 20th	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>	4			(WA,ID,La Grande)-2/28 & (Klamath, Roseburg, Medford)-12/20
System Peak Coincident Day Factor (if needed)	Peak Day/Annual Load Ratio	0.0095	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	271			Peak day and annual load 2020-2040
System Peak Coincident Hour Factor (if needed)	Peak Hour/Annual Load Ratio	0.0004	<a href="https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp-appendices-final.pdf</a>	271			Peak hour (peak day/24*1.065) and annual load 2020-2040

**Commodity Price Inputs**

Real or Nominal?	Nominal
Source and Pg #:	2021 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/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</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	2020											-\$1.75	-\$2.46
2	2021	-\$2.51	-\$2.42	-\$2.11	-\$1.79	-\$1.51	-\$1.55	-\$1.67	-\$1.66	-\$1.54	-\$1.60	-\$1.90	-\$2.18
3	2022	-\$2.24	-\$2.15	-\$1.85	-\$1.53	-\$1.22	-\$1.31	-\$1.43	-\$1.39	-\$1.24	-\$1.24	-\$1.52	-\$2.00
4	2023	-\$2.04	-\$1.91	-\$1.64	-\$1.52	-\$1.17	-\$1.32	-\$1.37	-\$1.37	-\$1.14	-\$1.22	-\$1.71	-\$2.00
5	2024	-\$2.11	-\$1.86	-\$1.78	-\$1.66	-\$1.46	-\$1.47	-\$1.45	-\$1.45	-\$1.52	-\$1.54	-\$1.72	-\$2.04
6	2025	-\$2.16	-\$2.08	-\$1.93	-\$2.03	-\$1.85	-\$1.79	-\$1.80	-\$1.79	-\$1.87	-\$1.93	-\$2.14	-\$2.41
7	2026	-\$2.56	-\$2.54	-\$2.35	-\$2.50	-\$2.21	-\$2.19	-\$2.18	-\$2.19	-\$2.23	-\$2.36	-\$2.52	-\$2.73
8	2027	-\$2.75	-\$2.69	-\$2.50	-\$2.72	-\$2.39	-\$2.35	-\$2.34	-\$2.35	-\$2.40	-\$2.47	-\$2.70	-\$2.95
9	2028	-\$2.91	-\$2.84	-\$2.68	-\$2.63	-\$2.52	-\$2.50	-\$2.51	-\$2.52	-\$2.57	-\$2.77	-\$2.92	-\$3.11
10	2029	-\$3.08	-\$2.99	-\$2.80	-\$3.00	-\$2.67	-\$2.67	-\$2.65	-\$2.65	-\$2.70	-\$2.86	-\$3.03	-\$3.28
11	2030	-\$3.19	-\$3.11	-\$2.94	-\$3.14	-\$2.76	-\$2.74	-\$2.69	-\$2.72	-\$2.76	-\$2.97	-\$3.17	-\$3.43
12	2031	-\$3.32	-\$3.27	-\$3.06	-\$3.31	-\$2.90	-\$2.88	-\$2.84	-\$2.84	-\$2.92	-\$3.05	-\$3.29	-\$3.54
13	2032	-\$3.42	-\$3.34	-\$3.14	-\$3.44	-\$2.97	-\$2.94	-\$2.79	-\$2.81	-\$2.97	-\$3.17	-\$3.46	-\$3.74
14	2033	-\$3.64	-\$3.63	-\$3.42	-\$3.69	-\$3.25	-\$3.26	-\$3.15	-\$3.17	-\$3.28	-\$3.43	-\$3.74	-\$3.97
15	2034	-\$3.86	-\$3.79	-\$3.60	-\$3.84	-\$3.43	-\$3.41	-\$3.35	-\$3.37	-\$3.45	-\$4.00	-\$3.89	-\$4.70
16	2035	-\$4.02	-\$3.94	-\$3.68	-\$3.97	-\$3.55	-\$3.50	-\$3.39	-\$3.43	-\$3.53	-\$4.06	-\$4.02	-\$4.94
17	2036	-\$4.21	-\$4.19	-\$3.95	-\$4.06	-\$3.72	-\$3.70	-\$3.53	-\$3.56	-\$3.68	-\$4.19	-\$4.24	-\$5.20
18	2037	-\$4.41	-\$4.28	-\$4.06	-\$4.12	-\$3.91	-\$3.89	-\$3.79	-\$3.87	-\$3.95	-\$4.43	-\$4.54	-\$5.50
19	2038	-\$4.75	-\$4.54	-\$4.24	-\$4.31	-\$4.01	-\$4.01	-\$3.88	-\$3.90	-\$3.98	-\$4.45	-\$4.60	-\$5.64
20	2039	-\$4.86	-\$4.70	-\$4.52	-\$4.56	-\$4.27	-\$4.20	-\$4.09	-\$4.09	-\$4.24	-\$4.69	-\$4.89	-\$5.99
21	2040	-\$5.06	-\$4.90	-\$4.70	-\$4.73	-\$4.43	-\$4.41	-\$4.31	-\$4.34	-\$4.45	-\$4.90		
22	2041												
23	2042												
24	2043												
25	2044												
26	2045												
27	2046												
28	2047												
29	2048												
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39	2058												
40	2059												
41	2060												
42	2061												
43	2062												
44	2063												
45	2064												

### Environmental Compliance Cost Inputs

Real or Nominal?	Nominal
Source and Pg #:	2021 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/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>
Source Notes:	Carbon intensity is 128.27 lbs per Metric Ton 2204.623 lbs

### Environmental Compliance Cost

Year #	Calendar Year	Environmental Compliance Cost (\$/MTCO2e)	Carbon Intensity (MTCO2e/Dth)	Environmental Compliance Cost (\$/Dth)
1	2020			
2	2021	\$15.83	0.0582	\$0.921
3	2022	\$17.02	0.0582	\$0.990
4	2023	\$18.23	0.0582	\$1.060
5	2024	\$19.52	0.0582	\$1.136
6	2025	\$20.91	0.0582	\$1.217
7	2026	\$22.40	0.0582	\$1.303
8	2027	\$23.99	0.0582	\$1.396
9	2028	\$28.06	0.0582	\$1.633
10	2029	\$32.34	0.0582	\$1.882
11	2030	\$36.86	0.0582	\$2.144
12	2031	\$41.62	0.0582	\$2.421
13	2032	\$46.63	0.0582	\$2.713
14	2033	\$51.92	0.0582	\$3.020
15	2034	\$57.49	0.0582	\$3.345
16	2035	\$63.37	0.0582	\$3.687
17	2036	\$69.56	0.0582	\$4.047
18	2037	\$76.09	0.0582	\$4.427
19	2038	\$82.98	0.0582	\$4.828
20	2039	\$90.24	0.0582	\$5.250
21	2040	\$97.90	0.0582	\$5.696
22	2041			
23	2042			
24	2043			
25	2044			
26	2045			
27	2046			
28	2047			
29	2048			
30	2049			
31	2050			
32	2051			
33	2052			
34	2053			
35	2054			
36	2055			
37	2056			
38	2057			
39	2058			
40	2059			
41	2060			
42	2061			
43	2062			
44	2063			
45	2064			

**Infrastructure Capacity Cost Inputs**

Real or Nominal?	Nominal
Source and Pg #:	2021 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/2021-natural-gas-irp.pdf">https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2021-natural-gas-irp.pdf</a>
Source Notes:	per day costs of Jackson priarie 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	2020	-\$0.002		
2	2021	-\$0.001		
3	2022	-\$0.002		
4	2023	-\$0.002		
5	2024	-\$0.002		
6	2025	-\$0.002		
7	2026	-\$0.002		
8	2027	-\$0.002		
9	2028	-\$0.002		
10	2029	-\$0.002		
11	2030	-\$0.002		
12	2031	-\$0.002		
13	2032	-\$0.002		
14	2033	-\$0.002		
15	2034	-\$0.002		
16	2035	-\$0.002		
17	2036	-\$0.002		
18	2037	-\$0.002		
19	2038	-\$0.002		
20	2039	-\$0.002		
21	2040	-\$0.002		
22	2041			
23	2042			
24	2043			
25	2044			
26	2045			
27	2046			
28	2047			
29	2048			
30	2049			
31	2050			
32	2051			
33	2052			
34	2053			
35	2054			
36	2055			
37	2056			
38	2057			
39	2058			
40	2059			
41	2060			
42	2061			
43	2062			
44	2063			
45	2064			

### Risk Reduction Value Inputs

Real or Nominal?	
Source and Pg #:	
Source Link or File Name:	
Source Notes:	Do not have values in 2021 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	2020	\$0.000
2	2021	\$0.000
3	2022	\$0.000
4	2023	\$0.000
5	2024	\$0.000
6	2025	\$0.000
7	2026	\$0.000
8	2027	\$0.000
9	2028	\$0.000
10	2029	\$0.000
11	2030	\$0.000
12	2031	\$0.000
13	2032	\$0.000
14	2033	\$0.000
15	2034	\$0.000
16	2035	\$0.000
17	2036	\$0.000
18	2037	\$0.000
19	2038	\$0.000
20	2039	\$0.000

2020-2021 OR Peak Day 89,441 OR Peak Hour 3,969

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

<b>Source and Pg # and/or Table #:</b>	2021 IRP
<b>Source Link or File Name:</b>	-documents/about-us/our-company/irp-documenter
<b>Source Notes:</b>	Avista 2021 IRP - ETO study used for the Expected Case (dths)

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	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	0.00215	3,080	0.009585	0.000425
Com-Replacement	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	0.00622	8,927		
Com-SEM	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	516		
Com-Retrofit	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	0.00562	8,071		
Ind-Retrofit	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	0.00144	2,073		
Ind-Replacement	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	279		
Res-Manufactured New Homes	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	81		
Res-SF New Homes	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	0.00112	1,613		
Res-Market Transformation	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	0.00785	11,278		
Res-Showerheads & Aerators	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	18		
Res-Smart Thermostat	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245	3,524		
Res-Thermostat Optimization	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	610		
Res-WaterHeat	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	296		
Res-Insulation	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	0.00118	1,689		
Res-Heating & Windows	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	0.00065	927		
MF-Retrofit	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	329		
MF-Replacement	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	0.00033	469		
	1,435,853	1,268,797	1,009,279	713,429	414,346	291,381	283,558	285,601	302,501	618,914	1,083,101	1,624,483				

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.

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> Current 2023 IRP Process
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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
Discount Rate (Company's Real after-tax weighted average cost of capital (WACC))	Percent	4.71%					
Inflation Rate	Percent	2.00%					
Regional Act Credit	Percent	10.00%					
Forecast Period Calendar Start Year	Year	2023					
Real Dollar Base Year	Year	2022					

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> <i>Current 2023 IRP Process</i>
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**Commodity Price Inputs**

Real or Nominal?	Nominal
Source and Pg #:	
Source Link or File Name:	
Source Notes:	Cost to serve the next unit of load while maintaining compliance with CPP emission targets and considering the following resources: natural gas, renewable natural gas, hydrogen, and CCl <sub>4</sub> . The first table (left) reflects such costs for firm customer load (residential, commercial, industrial) while the second table (right) reflects such costs when also including transport custo

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

Year #	Calendar Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2023	\$8.56	\$8.22	\$6.85	\$5.04	\$4.91	\$4.91	\$5.03	\$5.04	\$4.50	\$4.89	\$5.24	\$5.44
2	2024	\$12.90	\$12.90	\$12.07	\$11.69	\$11.68	\$11.74	\$11.93	\$11.93	\$11.57	\$11.85	\$12.14	\$12.46
3	2025	\$14.64	\$14.58	\$13.97	\$13.67	\$13.66	\$13.67	\$13.67	\$13.59	\$13.38	\$13.33	\$13.74	\$13.98
4	2026	\$16.34	\$16.34	\$16.08	\$16.00	\$16.00	\$16.00	\$16.00	\$15.84	\$15.55	\$15.69	\$15.94	\$16.09
5	2027	\$17.57	\$17.57	\$17.44	\$17.44	\$17.44	\$17.44	\$17.44	\$17.34	\$17.00	\$17.10	\$17.47	\$17.57
6	2028	\$18.61	\$18.61	\$18.46	\$18.55	\$18.55	\$18.55	\$18.55	\$18.44	\$18.14	\$18.25	\$18.60	\$18.61
7	2029	\$19.54	\$19.54	\$19.35	\$19.41	\$19.41	\$19.38	\$19.41	\$19.41	\$19.05	\$19.19	\$19.52	\$19.54
8	2030	\$20.42	\$20.42	\$20.30	\$20.37	\$20.37	\$20.35	\$20.37	\$20.35	\$19.95	\$20.04	\$20.42	\$20.42
9	2031	\$20.83	\$20.83	\$20.69	\$20.77	\$20.77	\$20.77	\$20.77	\$20.75	\$20.43	\$20.58	\$20.83	\$20.83
10	2032	\$21.19	\$21.19	\$21.09	\$21.14	\$21.14	\$21.14	\$21.14	\$21.14	\$20.72	\$20.83	\$21.19	\$21.19
11	2033	\$21.54	\$21.54	\$21.40	\$21.45	\$21.45	\$21.45	\$21.45	\$21.41	\$21.05	\$21.17	\$21.54	\$21.54
12	2034	\$21.90	\$21.90	\$21.83	\$21.87	\$21.87	\$21.87	\$21.87	\$21.79	\$21.40	\$21.58	\$21.90	\$21.90
13	2035	\$22.27	\$22.27	\$22.22	\$22.26	\$22.26	\$22.26	\$22.26	\$22.22	\$21.84	\$22.06	\$22.27	\$22.27
14	2036	\$22.64	\$22.64	\$22.60	\$22.64	\$22.64	\$22.64	\$22.64	\$22.61	\$22.19	\$22.43	\$22.64	\$22.64
15	2037	\$23.03	\$23.03	\$23.02	\$23.03	\$23.03	\$23.03	\$23.03	\$23.02	\$22.61	\$22.83	\$23.03	\$23.03
16	2038	\$23.42	\$23.42	\$23.41	\$23.42	\$23.42	\$23.42	\$23.42	\$23.42	\$23.00	\$23.22	\$23.42	\$23.42
17	2039	\$23.81	\$23.81	\$23.80	\$23.81	\$23.81	\$23.81	\$23.81	\$23.81	\$23.36	\$23.58	\$23.81	\$23.81
18	2040	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$23.95	\$24.12	\$24.21	\$24.21
19	2041	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.21	\$24.45	\$24.61	\$24.61
20	2042	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$24.64	\$24.87	\$25.01	\$25.01
21	2043	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.21	\$25.38	\$25.42	\$25.42
22	2044	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.59	\$25.76	\$25.84	\$25.84
23	2045	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.08	\$26.19	\$26.25	\$26.25
24	2046												
25	2047												
26	2048												
27	2049												
28	2050												
29	2051												
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34	2056												
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36	2058												
37	2059												
38	2060												
39	2061												
40	2062												
41	2063												
42	2064												
43	2065												
44	2066												
45	2067												

Year #	Calendar Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2023	\$10.86	\$8.22	\$9.13	\$7.34	\$7.21	\$7.29	\$7.43	\$7.39	\$6.93	\$7.28	\$7.63	\$5.44
2	2024	\$12.90	\$12.90	\$12.15	\$11.69	\$11.68	\$11.99	\$11.99	\$11.93	\$11.75	\$11.99	\$12.26	\$12.46
3	2025	\$14.64	\$14.58	\$14.18	\$13.82	\$13.72	\$13.67	\$13.67	\$13.60	\$13.71	\$13.58	\$13.89	\$13.98
4	2026	\$16.34	\$16.34	\$16.17	\$16.00	\$16.00	\$16.00	\$16.00	\$15.84	\$15.80	\$15.86	\$16.17	\$16.09
5	2027	\$17.57	\$17.57	\$17.44	\$17.44	\$17.44	\$17.44	\$17.44	\$17.34	\$17.12	\$17.13	\$17.57	\$17.57
6	2028	\$18.61	\$18.61	\$18.46	\$18.55	\$18.55	\$18.55	\$18.55	\$18.44	\$18.24	\$18.25	\$18.61	\$18.61
7	2029	\$19.54	\$19.54	\$19.35	\$19.41	\$19.41	\$19.38	\$19.41	\$19.41	\$19.05	\$19.19	\$19.54	\$19.54
8	2030	\$20.42	\$20.42	\$20.30	\$20.37	\$20.37	\$20.35	\$20.37	\$20.35	\$19.95	\$20.04	\$20.42	\$20.42
9	2031	\$20.83	\$20.83	\$20.69	\$20.77	\$20.77	\$20.77	\$20.77	\$20.75	\$20.43	\$20.58	\$20.83	\$20.83
10	2032	\$21.19	\$21.19	\$21.09	\$21.14	\$21.14	\$21.14	\$21.14	\$21.14	\$20.72	\$20.83	\$21.19	\$21.19
11	2033	\$21.54	\$21.54	\$21.40	\$21.45	\$21.45	\$21.45	\$21.45	\$21.41	\$21.05	\$21.17	\$21.54	\$21.54
12	2034	\$21.90	\$21.90	\$21.83	\$21.87	\$21.87	\$21.87	\$21.87	\$21.79	\$21.40	\$21.58	\$21.90	\$21.90
13	2035	\$22.27	\$22.27	\$22.22	\$22.26	\$22.26	\$22.26	\$22.26	\$22.22	\$21.84	\$22.06	\$22.27	\$22.27
14	2036	\$22.64	\$22.64	\$22.60	\$22.64	\$22.64	\$22.64	\$22.64	\$22.64	\$22.63	\$22.51	\$22.56	\$22.64
15	2037	\$23.03	\$23.03	\$23.02	\$23.03	\$23.03	\$23.03	\$23.03	\$23.02	\$22.87	\$22.90	\$23.03	\$23.03
16	2038	\$23.42	\$23.42	\$23.41	\$23.42	\$23.42	\$23.42	\$23.42	\$23.42	\$23.27	\$23.31	\$23.42	\$23.42
17	2039	\$23.81	\$23.81	\$23.80	\$23.81	\$23.81	\$23.81	\$23.81	\$23.81	\$23.64	\$23.68	\$23.81	\$23.81
18	2040	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.21	\$24.02	\$24.12	\$24.21	\$24.21
19	2041	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.61	\$24.40	\$24.46	\$24.61	\$24.61
20	2042	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$25.01	\$24.81	\$24.87	\$25.01	\$25.01
21	2043	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.42	\$25.24	\$25.38	\$25.42	\$25.42
22	2044	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.84	\$25.62	\$25.76	\$25.84	\$25.84
23	2045	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.25	\$26.08	\$26.19	\$26.25	\$26.25



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<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b> Current 2023 IRP Process
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**Environmental Compliance Cost Inputs**

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	
<b>Source Link or File Name:</b>	<a href="https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/clean-energy-transformation-act/social-cost-carbon">https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/clean-energy-transformation-act/social-cost-carbon</a>
<b>Source Notes:</b>	Carbon intensity of natural gas is 116.9797214653 lbs per Metric Ton (2204.623 lbs). Environmental compliance cost is the social cost of carbon from the link provided above.

**Environmental Compliance Cost**

Year #	Calendar Year	Environmental Compliance Cost (\$/MTCO <sub>2e</sub> )	Carbon Intesity (MTCO <sub>2e</sub> /Dth)	Environmental Compliance Cost (\$/Dth)
1	2023	\$92.68	0.0531	\$4.918
2	2024	\$96.67	0.0531	\$5.129
3	2025	\$100.68	0.0531	\$5.342
4	2026	\$104.58	0.0531	\$5.549
5	2027	\$108.61	0.0531	\$5.763
6	2028	\$112.73	0.0531	\$5.982
7	2029	\$116.98	0.0531	\$6.207
8	2030	\$121.36	0.0531	\$6.439
9	2031	\$125.61	0.0531	\$6.665
10	2032	\$130.00	0.0531	\$6.898
11	2033	\$134.51	0.0531	\$7.137
12	2034	\$139.16	0.0531	\$7.384
13	2035	\$143.95	0.0531	\$7.638
14	2036	\$149.47	0.0531	\$7.931
15	2037	\$155.16	0.0531	\$8.233
16	2038	\$161.03	0.0531	\$8.544
17	2039	\$167.09	0.0531	\$8.866
18	2040	\$173.33	0.0531	\$9.197
19	2041	\$179.11	0.0531	\$9.504
20	2042	\$185.07	0.0531	\$9.820
21	2043	\$191.19	0.0531	\$10.145
22	2044	\$197.50	0.0531	\$10.480
23	2045	\$203.99	0.0531	\$10.824
24	2046			
25	2047			
26	2048			
27	2049			
28	2050			
29	2051			
30	2052			
31	2053			
32	2054			
33	2055			
34	2056			
35	2057			
36	2058			
37	2059			
38	2060			
39	2061			
40	2062			
41	2063			
42	2064			
43	2065			
44	2066			
45	2067			

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b>
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**Infrastructure Capacity Cost Inputs**

<b>Real or Nominal?</b>	Nominal
<b>Source and Pg #:</b>	
<b>Source Link or File Name:</b>	
<b>Source Notes:</b>	

**Infrastructure Capacity Costs**

Year #	Calendar Year	Infrastructure Capacity Costs		
		Supply (\$/Dth/Day)	Distribution Peak DAY (\$/Dth/Day)	Distribution Peak HOUR (\$/Dth/Hour)
1	2023			
2	2024			
3	2025			
4	2026			
5	2027			
6	2028			
7	2029			
8	2030			
9	2031			
10	2032			
11	2033			
12	2034			
13	2035			
14	2036			
15	2037			
16	2038			
17	2039			
18	2040			
19	2041			
20	2042			
21	2043			
22	2044			
23	2045			
24	2046			
25	2047			
26	2048			
27	2049			
28	2050			
29	2051			
30	2052			
31	2053			
32	2054			
33	2055			
34	2056			
35	2057			
36	2058			
37	2059			
38	2060			
39	2061			
40	2062			
41	2063			
42	2064			
43	2065			
44	2066			
45	2067			

<b>Alternative Submissions</b>	<b>Rationale for alternative submission:</b>
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**Risk Reduction Value Inputs**

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

<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.

**Risk Reduction Value**

Year #	Calendar Year	Risk Reduction Value (\$/Dth)
1	2023	\$0.000
2	2024	\$0.000
3	2025	\$0.000
4	2026	\$0.000
5	2027	\$0.000
6	2028	\$0.000
7	2029	\$0.000
8	2030	\$0.000
9	2031	\$0.000
10	2032	\$0.000
11	2033	\$0.000
12	2034	\$0.000
13	2035	\$0.000
14	2036	\$0.000
15	2037	\$0.000
16	2038	\$0.000
17	2039	\$0.000
18	2040	\$0.000
19	2041	\$0.000
20	2042	\$0.000

