

# Resource Plan Cover Sheet

**Legend**

Enter your information into these shaded fields

**Utility Information**

Report Year: 2024  
 Utility: Richland, City of  
 Prepared by: Clint Whitney  
 Email: [cwhitney@ci.richland.wa.us](mailto:cwhitney@ci.richland.wa.us)  
 Date of Board/Commission Approval: 8/7/2024  
 Notes: Explain resource choices other than conservation/use of renewable energy credits  
 As of 2024, the City of Richland is a full requirements customer of BPA.

Washington State Utility Resource Plan Year 2024				
Estimate Interval	Base Year	5-year Forecast		10-year Forecast
Estimate Period	2023	2028	2033	
Season	Annual	Annual	Annual	
Units	aMW	aMW	aMW	
<b>Loads</b>	104.49	116.03	121.38	
<b>Exports</b>				
<b>Resources:</b>				
Energy Conservation Measures		3.09	11.20	
BTM Solar				
Demand Response				
BPA Tier 1 or Base	99.74	98.25	96.79	
BPA Tier 2		14.11	12.81	
Cogeneration				
Hydro				
Wind				
Utility-scale Solar	0.66	0.58	0.58	
FTM Distributed Solar				
Biomass				
Biogas				
Landfill Gas				
Geothermal				
Nuclear				
Other Distributed Renewables				
Thermal Natural Gas				
Thermal Coal				
Market Purchases	4.09			
Other				
Imports				
Undecided				
<b>Total Resources</b>	<b>104.49</b>	<b>116.03</b>	<b>121.38</b>	
Load Resource Balance	0.00	0.00	0.00	

From: City of Richland Loads.xlsx

Selected Meters: 10089 City of Richland, Washington; 01TX-10644; 240 First Street 115 kV; 836 First Street 1 Out10089 City of Richland, Washington; 01TX-10644; 240 First Street 115 kV; 922 Fir

Date	Hour Count	Account Number	Account Name	Contract Number	Loss Indicator	Source	Version	Total kWh
10/1/2022	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	70,687,093
11/1/2022	721	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	89,069,303
12/1/2022	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	115,167,497
1/1/2023	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	98,979,823
2/1/2023	672	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	85,415,563
3/1/2023	743	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	79,214,539
4/1/2023	720	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	70,244,003
5/1/2023	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	77,459,693
6/1/2023	720	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	82,020,267
7/1/2023	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	95,338,695
8/1/2023	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	91,674,700
9/1/2023	720	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	74,361,654
10/1/2023	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	73,198,605
11/1/2023	721	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	81,566,215
12/1/2023	744	10089	City of Richland, Washington	01TX-10644	With Losses	NET	Current Version	89,717,914

Report run on 5/21/2024

Options selected: Report Version-Peaks and Totals; Display By-Account Number,UOM- KWh, Loass Adjustments-With Losses, Version-Current, Apply Direction-Billing, Interval Length-60 Minutes, Additional Sources-None

Filters applies: Account Number- 10089; Contract-01TX-10644

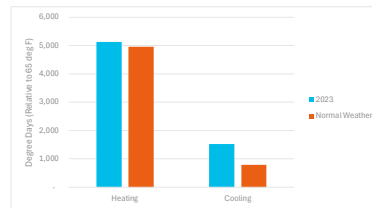
Description: Fahrenheit-based heating degree days with a base temperature of 65 F  
 Source: www.degreedays.net  
 Accuracy: Estimates were made to account for missing data: the "% Estimated" column shows how much each figure was affected (0% is best, 100% is worst)  
 Station: TRI-CITIES AIRPORT, WA, US (119.12W,46.26N)  
 Station ID: KPSC

Description: Fahrenheit-based cooling degree days with a base temperature of 65 F  
 Source: www.degreedays.net  
 Accuracy: Estimates were made to account for missing data: the "% Estimated" column shows how much each figure was affected (0% is best, 100% is worst)  
 Station: TRI-CITIES AIRPORT, WA, US (119.12W,46.26N)  
 Station ID: KPSC

Month starting	HDD 65	% Estimated	Month starting	CDD 65	% Estimated
5/1/2022	197.2	0	5/1/2022	52.9	0
6/1/2022	59.1	0.1	6/1/2022	227.1	0.1
7/1/2022	13.5	0.06	7/1/2022	491.4	0.06
8/1/2022	24.5	0.1	8/1/2022	467.5	0.1
9/1/2022	93.1	0.3	9/1/2022	197.6	0.3
10/1/2022	307.7	0.06	10/1/2022	57.3	0.06
11/1/2022	859	13	11/1/2022	0	13
12/1/2022	1200.5	0	12/1/2022	0	0
1/1/2023	946.8	0.06	1/1/2023	0	0.06
2/1/2023	775.6	0	2/1/2023	0	0
3/1/2023	656.2	0.06	3/1/2023	0	0.06
4/1/2023	407.8	0.03	4/1/2023	30.8	0.03
5/1/2023	107.6	0.06	5/1/2023	205.7	0.06
6/1/2023	67.8	0	6/1/2023	282.8	0
7/1/2023	23.2	0.06	7/1/2023	459.3	0.06
8/1/2023	29.1	0.06	8/1/2023	360.1	0.06
9/1/2023	127.9	0	9/1/2023	154	0
10/1/2023	408.9	0	10/1/2023	35.4	0
11/1/2023	758.4	0	11/1/2023	0	0
12/1/2023	820.2	0	12/1/2023	0	0
1/1/2024	1049.9	0	1/1/2024	0	0
2/1/2024	662.7	0.03	2/1/2024	0	0.03
3/1/2024	554.8	0.03	3/1/2024	9.2	0.03
4/1/2024	347.7	0.03	4/1/2024	22.8	0.03

Month Beginning	Actual kWh	HDD	CDD	Predicted Usage (kWh)
1/1/2023	98,979,823	947	-	94,456,933
2/1/2023	85,415,563	776	-	86,430,308
3/1/2023	79,214,539	656	-	80,832,300
4/1/2023	70,244,003	408	31	72,368,731
5/1/2023	77,459,693	108	206	76,366,279
6/1/2023	82,020,267	68	283	82,466,956
7/1/2023	95,338,695	23	459	98,613,507
8/1/2023	91,674,700	29	360	88,639,871
9/1/2023	74,361,654	128	154	71,975,916
10/1/2023	73,198,605	409	35	72,895,618
11/1/2023	81,566,215	758	-	85,623,895
12/1/2023	89,717,914	820	-	88,521,357
<b>CY 2023 Totals</b>	<b>999,191,671</b>	<b>5,130</b>	<b>1,528</b>	<b>999,191,671</b>
<b>Weather Normalized</b>	<b>4,958</b>	<b>794</b>	<b>915,313,011</b>	
aMW	114.06			104.49

1.03 1.92



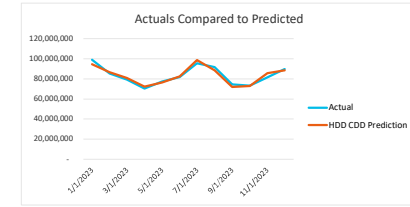
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.95889556
R Square	0.919480695
Adjusted R Square	0.901587516
Standard Error	2860217.329
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	2	8.40782E+14	4.20391E+14	51.38721831	1.19275E-05
Residual	9	7.36276E+13	8.18084E+12		
Total	11	9.14409E+14			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	50066696.5	3397119.102	14.73798681	1.31454E-07	42381879.19	57751513.81	42381879.19	57751513.81
X Variable 1	46884.49172	4866.676423	9.633780356	4.87703E-06	35875.30479	57893.67865	35875.30479	57893.67865
X Variable 2	103329.1753	10429.10794	9.907767367	3.86493E-06	79736.89407	126921.4565	79736.89407	126921.4565



Tier 1 Load Calculation (MWh) for Load Following, Block, and Slice (Block Only)

		BP-22																	
BESID	AccountName	1/1/2023	1/1/2023	2/1/2023	2/1/2023	3/1/2023	3/1/2023	4/1/2023	4/1/2023	5/1/2023	5/1/2023	6/1/2023	6/1/2023	7/1/2023	7/1/2023	8/1/2023	8/1/2023	9/1/2023	9/1/2023
10089	Richland, City of	52,416	39,699	40,077	26,506	41,228	25,516	35,295	23,216	39,919	24,148	44,065	24,100	49,631	31,790	52,464	27,497	38,251	23,617

Calendar Year 2023 Tier 1 Load  
 873,728 MWh  
 99.74 aMW

BP-24					
Oct-23	Oct-23	Nov-23	Nov-23	Dec-23	Dec-23
HLH	LLH	HLH	LLH	HLH	LLH
39,791	25,528	42,225	29,246	55,575	41,929

Loads											
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
BPA Weather-Adjusted TRL (MWh)	967,593	974,006	978,992	983,706	986,868	988,201	988,593	989,309	992,400	997,070	1,002,049
BPA Transmission Forecast (MWh)	974,005	978,992	983,706	986,868	988,201	988,593	989,309	992,400	997,070	1,002,049	1,007,639
Embedded Conservation											
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
BPA Transmission Forecast Conservation (aMW)		0.63	0.64	0.73	0.58	0.60	0.63	0.63	0.63	0.64	0.64
BPA Transmission Conservation Forecast (MWh)		5,498	5,607	6,408	5,081	5,278	5,503	5,524	5,557	5,565	5,592
<i>Cumulative</i>		5,498	11,105	17,513	22,594	27,872	33,375	38,899	44,456	50,022	55,614

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Load without Conservation (MWh)	974,005	984,490	994,811	1,004,381	1,010,795	1,016,465	1,022,684	1,031,299	1,041,526	1,052,070	1,063,253
Load without Conservation (aMW)	111	112	114	115	115	116	117	118	119	120	121

**Resources**

Conservation											
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
2023 RES CPA Cumulative Cost-Effective Potential (MWh)		2,731	6,538	11,716	18,506	27,087	37,640	50,211	64,690	80,786	98,102
(aMW)		0.31	0.75	1.34	2.11	3.09	4.30	5.73	7.38	9.22	11.20
Non-BPA Resources											
HRSST (aMW)	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
HRSST (MWh)	5,098	5,098	5,097	5,097	5,097	5,097	5,097	5,096	5,096	5,096	5,096
NIES Purchases? (aMW)	5.98										
(MWh)	52,408										

