

April 28, 2023

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street SE, Suite 100
Salem, OR 97301-3398

Re: UM 1729(7)—Standard Avoided Cost Purchases from Eligible Qualifying Facilities

In compliance with ORS 758.525 and Order No. 14-058 in Docket No. UM 1610, PacifiCorp d/b/a Pacific Power (PacifiCorp or the Company) hereby submits the enclosed update to its standard avoided cost schedule (formerly known as Schedule 37) to the Public Utility Commission of Oregon (Commission).

Oregon avoided cost filing requirements as listed in OAR 860-029-0040 and 860-029-0080 require the Company to file updated avoided costs at least every two years. The Commission Order No. 14-058 requires the Oregon investor-owned utilities to update avoided cost prices annually on May 1 of each year and within 30-days of Integrated Resource Plan (IRP) acknowledgment. Annual updates, filed on May 1 of each year, are required to update the following data inputs: (1) natural gas prices; (2) on-peak and off-peak forward looking electricity market prices; (3) production tax credit status; and (4) any other action or change in an acknowledged IRP relevant to the calculation of avoided costs.

The Company's current standard avoided cost prices were approved in docket UM 1729 Order No. 22-253. In the Commission's June 28, 2022 public input meeting, the Commission approved a modification to the renewable solar pricing to allocate a portion of the capacity value to off-peak hours, instead of allocating all capacity value to on-peak hours as specified in the approved methodology. The same underlying issue is present in this year's annual update, and PacifiCorp has applied the same modification: using the annual average avoided cost values for solar listed in Table 8 for both on-peak and off-peak periods. This change is not expected to impact the total compensation for a solar resource over the course of a year.

In support of this filing, PacifiCorp submits Appendix 1- Avoided Cost Study and Appendix 2- Method Write-up and Minimum Filing Requirements. Also included is a redline version of the Schedule 37 avoided cost price pages Sheet Nos. 37-6, 37-7, 37-8, and 37-9, which reflect the updates since the previous filing. Also provided are the supporting documentation in both "pdf" and original formats.

Public Utility Commission of Oregon

April 28, 2023

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PacifiCorp respectfully requests that all communications related to this filing be addressed to:

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Please direct questions on this filing to Cathie Allen, Regulatory Affairs Manager, at (503) 813-5934.

Sincerely,



Matthew McVee
Vice President, Regulatory Policy and Operations

Enclosures

**PACIFIC POWER
PROPOSED TARIFF CHANGES TO STANDARD RATES
STANDARD RATES FOR AVOIDED COST PURCHASES FROM
ELIGIBLE QUALIFYING FACILITIES
OREGON – APRIL 2023**

Monthly Payments (Continued)
Firm Market Indexed and Non-Firm Market Index Avoided Cost Prices

In accordance with the terms of a contract with a Qualifying Facility, the Company shall pay for all separately metered kilowatt-hours of On-Peak and Off-Peak generation at the market prices calculated at the time of delivery. On-Peak and Off-Peak are defined in the definitions section of this schedule.

Avoided Cost Prices
Standard Fixed Avoided Cost Prices for Base Load and Wind QF (¢/kWh)

Deliveries During Calendar Year	Base Load QF (1)		Wind QF (1,2)		Wind Integration
	On-Peak Energy Price	Off-Peak Energy Price	On-Peak Energy Price	Off-Peak Energy Price	All hours Energy Charge
	(a)	(b)	(c)	(d)	(e)
2023	13.84	7.59	13.61	7.35	0.23
2024	11.54	7.46	11.34	7.26	0.20
2025	11.41	7.68	11.14	7.41	0.27
2026	5.72	3.73	5.67	3.45	0.29
2027	6.04	4.01	5.96	3.69	0.33
2028	6.22	4.15	6.14	3.81	0.34
2029	6.39	4.28	6.47	4.10	0.18
2030	6.47	4.31	6.57	4.14	0.16
2031	6.69	4.49	6.92	4.44	0.05
2032	6.96	4.71	7.17	4.64	0.07
2033	7.17	4.87	7.44	4.85	0.02
2034	7.40	5.04	7.67	5.03	0.01
2035	7.49	5.09	7.77	5.07	0.02
2036	7.65	5.19	7.94	5.18	0.01
2037	7.95	5.44	8.25	5.44	0.00
2038	8.25	5.69	8.57	5.69	0.00
2039	8.54	5.93	8.86	5.92	0.00
2040	8.88	6.20	9.19	6.19	0.01

(C)

(C)

- (1) Standard Resource Sufficiency Period ends December 31, 2025 and Standard Resource Deficiency Period begins January 1, 2026.
- (2) The avoided cost price has been reduced by wind or solar integration charges applicable to QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system). If wind or solar QF resource is not in PacifiCorp's BAA, prices will be increased by the applicable integration charge.

(continued)

Effective for service on and after July 1, 2023

Avoided Cost Prices (Continued)
Standard Fixed Avoided Cost Prices for Fixed and Tracking Solar QF (¢/kWh)

Deliveries During Calendar Year	Fixed Solar QF (1,2)		Tracking Solar QF (1,2)		Solar Integration
	On-Peak Energy Price	Off-Peak Energy Price	On-Peak Energy Price	Off-Peak Energy Price	All hours Energy Charge
	(f)	(g)	(h)	(i)	(j)
2023	13.24	6.98	13.24	6.98	0.61
2024	11.35	7.27	11.35	7.27	0.19
2025	11.29	7.56	11.29	7.56	0.12
2026	4.25	3.64	4.30	3.64	0.09
2027	4.39	3.78	4.44	3.78	0.24
2028	4.55	3.92	4.60	3.92	0.23
2029	4.88	4.24	4.93	4.24	0.04
2030	4.91	4.25	4.96	4.25	0.05
2031	5.14	4.47	5.19	4.47	0.02
2032	5.37	4.68	5.42	4.68	0.03
2033	5.56	4.86	5.62	4.86	0.01
2034	5.75	5.03	5.81	5.03	0.01
2035	5.81	5.07	5.87	5.07	0.01
2036	5.93	5.18	5.99	5.18	0.01
2037	6.20	5.44	6.26	5.44	0.00
2038	6.47	5.69	6.53	5.69	0.00
2039	6.72	5.92	6.78	5.92	0.00
2040	6.98	6.17	7.05	6.17	0.03

 (C)

 (C)

- (1) Standard Resource Sufficiency Period ends December 31, 2025 and Standard Resource Deficiency Period begins January 1, 2026.
- (2) The avoided cost price has been reduced by wind or solar integration charges applicable to QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system). If wind or solar QF resource is not in PacifiCorp's BAA, prices will be increased by the applicable integration charge.

(continued)

Avoided Cost Prices (continued)
Renewable Fixed Avoided Cost Prices for Base Load and Wind QF (¢/kWh)

Deliveries During Calendar Year	Renewable Base Load QF (1)		Wind QF (1,2)		Wind Integration
	On-Peak Energy Price	Off-Peak Energy Price	On-Peak Energy Price	Off-Peak Energy Price	All hours Energy Charge
	(a)	(b)	(c)	(d)	(e)
2023	13.84	7.59	13.61	7.35	0.23
2024	11.54	7.46	11.34	7.26	0.20
2025	11.41	7.68	11.14	7.41	0.27
2026	5.35	3.16	3.90	2.87	0.29
2027	5.27	3.55	3.75	3.23	0.33
2028	5.32	3.73	3.76	3.39	0.34
2029	5.22	3.70	3.79	3.52	0.18
2030	5.27	3.81	3.84	3.65	0.16
2031	5.29	3.75	3.94	3.70	0.05
2032	5.34	3.95	3.95	3.88	0.07
2033	5.32	4.09	3.95	4.07	0.02
2034	5.43	4.17	4.03	4.15	0.01
2035	5.62	4.18	4.19	4.16	0.02
2036	5.89	4.07	4.43	4.06	0.01
2037	5.89	4.30	4.41	4.30	0.00
2038	5.99	4.42	4.48	4.42	0.00
2039	6.11	4.53	4.57	4.53	0.00
2040	6.37	4.50	4.78	4.48	0.01

(C)

(C)

- (1) For the purpose of determining: (i) when the Renewable Qualifying Facility is entitled to renewable avoided cost prices; and (ii) the ownership of environmental attributes and the transfer of Green Tags to PacifiCorp, Renewable Sufficiency Period ends December 31, 2025 and Renewable Deficiency Period begins January 1, 2026.
- (2) The avoided cost price has been reduced by wind or solar integration charges applicable to QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system). If wind or solar QF resource is not in PacifiCorp's BAA, prices will be increased by the applicable integration charge.

(continued)

Avoided Cost Prices (continued)
Renewable Fixed Avoided Cost Prices for Fixed and Tracking Solar QF (¢/kWh)

Deliveries During Calendar Year	Fixed Solar QF (1,2)		Tracking Solar QF (1,2)		Solar Integration
	On-Peak Energy Price	Off-Peak Energy Price	On-Peak Energy Price	Off-Peak Energy Price	All hours Energy Charge
	(f)	(g)	(h)	(i)	(j)
2023	12.24	12.24	12.12	12.12	0.61
2024	10.70	10.70	10.62	10.62	0.19
2025	10.69	10.69	10.62	10.62	0.12
2026	2.60	2.60	2.89	2.89	0.09
2027	2.40	2.40	2.70	2.70	0.24
2028	2.42	2.42	2.74	2.74	0.23
2029	2.47	2.47	2.79	2.79	0.04
2030	2.47	2.47	2.80	2.80	0.05
2031	2.45	2.45	2.79	2.79	0.02
2032	2.46	2.46	2.81	2.81	0.03
2033	2.43	2.43	2.79	2.79	0.01
2034	2.47	2.47	2.84	2.84	0.01
2035	2.58	2.58	2.95	2.95	0.01
2036	2.73	2.73	3.10	3.10	0.01
2037	2.70	2.70	3.09	3.09	0.00
2038	2.75	2.75	3.14	3.14	0.00
2039	2.80	2.80	3.20	3.20	0.00
2040	2.92	2.92	3.32	3.32	0.03

(C)

(C)

- (1) For the purpose of determining: (i) when the Renewable Qualifying Facility is entitled to renewable avoided cost prices; and (ii) the ownership of environmental attributes and the transfer of Green Tags to PacifiCorp, Renewable Sufficiency Period ends December 31, 2025 and Renewable Deficiency Period begins January 1, 2026.
- (2) The avoided cost price has been reduced by wind or solar integration charges applicable to QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system). If wind or solar QF resource is not in PacifiCorp's BAA, prices will be increased by the applicable integration charge.

(continued)

Effective for service on and after July 1, 2023

**PACIFIC POWER
AVOIDED COST CALCULATION**

**STANDARD RATES FOR AVOIDED COST PURCHASES FROM
ELIGIBLE QUALIFYING FACILITIES**

OREGON – APRIL 2023

Exhibit 1
Standard Avoided Cost Prices for Base Load QF
\$/MWh

Year	Standard Avoided Resource		Base Load QF Resource				
	Avoided Firm Capacity Costs	Energy Only Price	Capacity Contribution	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	\$/kW-yr	\$/MWh		(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
			= (a) * (c)	(d) * 1000 / (100.0% x 8760 x 56%)	(e) + (b)	= (b)	
2023	Market Based Prices					\$138.43	\$75.89
2024	2023 through 2025					\$115.42	\$74.58
2025						\$114.10	\$76.78
2026	\$97.39	\$37.33	100.0%	97.39	\$19.84	\$57.17	\$37.33
2027	\$99.49	\$40.13	100.0%	99.49	\$20.26	\$60.40	\$40.13
2028	\$101.63	\$41.55	100.0%	101.63	\$20.70	\$62.25	\$41.55
2029	\$103.82	\$42.78	100.0%	103.82	\$21.15	\$63.92	\$42.78
2030	\$106.06	\$43.06	100.0%	106.06	\$21.60	\$64.66	\$43.06
2031	\$108.35	\$44.87	100.0%	108.35	\$22.07	\$66.94	\$44.87
2032	\$110.69	\$47.06	100.0%	110.69	\$22.54	\$69.61	\$47.06
2033	\$113.08	\$48.69	100.0%	113.08	\$23.03	\$71.72	\$48.69
2034	\$115.52	\$50.44	100.0%	115.52	\$23.53	\$73.97	\$50.44
2035	\$118.01	\$50.88	100.0%	118.01	\$24.04	\$74.91	\$50.88
2036	\$120.55	\$51.94	100.0%	120.55	\$24.55	\$76.49	\$51.94
2037	\$123.15	\$54.40	100.0%	123.15	\$25.08	\$79.48	\$54.40
2038	\$125.80	\$56.92	100.0%	125.80	\$25.62	\$82.55	\$56.92
2039	\$128.51	\$59.26	100.0%	128.51	\$26.17	\$85.44	\$59.26
2040	\$131.28	\$62.04	100.0%	131.28	\$26.74	\$88.78	\$62.04
2041	\$134.11	\$63.38	100.0%	134.11	\$27.31	\$90.70	\$63.38
2042	\$137.00	\$64.75	100.0%	137.00	\$27.90	\$92.66	\$64.75

Columns

- (a) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
- (b) Fuel and Capitalized Energy Cost of the Proxy CCCT
- (c) Capacity Contribution of the Avoided Proxy and Base Load QF resources are assumed to be 100%.
- (e) 100.0% is the on-peak capacity factor of the Base Load QF resource
56% is the percent of all hours that are on-peak
- (f) 2023-2025 On-Peak Blended Market Prices for QF resource
- (g) 2023-2025 Off-Peak Blended Market Prices for QF resource

Exhibit 2
Standard Avoided Cost Prices for Wind QF (1,2)
\$/MWH

Year	Standard Avoided Resource		Wind QF Resource				
	Avoided Firm Capacity Costs	Energy Only Price	Capacity Contribution	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	\$/kW-yr	\$/MWh	(c)	(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
(a)	(b)	(c)	(d)	(e)	(f)	(g)	
				= (a) * (c)	(d) * 1000 / (36.6% x 8760 x 56%)	= (b) + (e) - Integration	= (b) - Integration

2023	Market Based Prices					\$136.08	\$73.54
2024	2023 through 2025					\$113.39	\$72.55
2025	less Wind Integration (2)					\$111.38	\$74.06
2026	\$97.39	\$37.33	41.2%	40.08	\$22.28	\$56.73	\$34.46
2027	\$99.49	\$40.13	41.2%	40.95	\$22.76	\$59.61	\$36.85
2028	\$101.63	\$41.55	41.2%	41.83	\$23.25	\$61.36	\$38.11
2029	\$103.82	\$42.78	41.2%	42.73	\$23.75	\$64.73	\$40.98
2030	\$106.06	\$43.06	41.2%	43.65	\$24.26	\$65.67	\$41.41
2031	\$108.35	\$44.87	41.2%	44.59	\$24.78	\$69.16	\$44.38
2032	\$110.69	\$47.06	41.2%	45.56	\$25.32	\$71.72	\$46.41
2033	\$113.08	\$48.69	41.2%	46.54	\$25.86	\$74.38	\$48.51
2034	\$115.52	\$50.44	41.2%	47.54	\$26.42	\$76.74	\$50.31
2035	\$118.01	\$50.88	41.2%	48.57	\$26.99	\$77.70	\$50.70
2036	\$120.55	\$51.94	41.2%	49.61	\$27.57	\$79.37	\$51.79
2037	\$123.15	\$54.40	41.2%	50.68	\$28.17	\$82.53	\$54.37
2038	\$125.80	\$56.92	41.2%	51.77	\$28.77	\$85.67	\$56.89
2039	\$128.51	\$59.26	41.2%	52.89	\$29.39	\$88.62	\$59.23
2040	\$131.28	\$62.04	41.2%	54.03	\$30.03	\$91.93	\$61.90
2041	\$134.11	\$63.38	41.2%	55.19	\$30.67	\$93.91	\$63.24
2042	\$137.00	\$64.75	41.2%	56.38	\$31.34	\$95.94	\$64.61

- (1) The avoided cost price is reduced by a wind integration charge from Table 11 for wind QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system).
If QF wind resource is not in PacifiCorp's BAA, prices will be increased by the integration charge from Table 11.
- (2) Wind Integration Cost from Table 11.

Columns

- (a) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
(b) Fuel and Capitalized Energy Cost of the Proxy CCCT
(c) Capacity Contribution values for renewable QF (% of nameplate capacity), 2021 IRP
Wind Capacity Contribution 41.2% Seasonal weighting of values from Table 14
(e) 36.6% is the on-peak capacity factor of the Wind QF Resource
56% is the percent of all hours that are on-peak
(f) 2023-2025 On-Peak Blended Market Prices for QF resource
(g) 2023-2025 Off-Peak Blended Market Prices for QF resource

Exhibit 3
Standard Avoided Cost Prices for Fixed Solar QF
\$/MWh

Year	Standard Avoided Resource		Fixed Solar QF				
	Capacity Price	Energy Only Price	Capacity Contribution	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	\$/kW-yr	\$/MWh		(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
(a)	(b)	(c)	(d)	(e)	(f)	(g)	
				= (a) * (c)	(d) * 1000 / (37.3% x 8760 x 56%)	= (b) + (e) - Integration	= (b) - Integration
2023	Market Based Prices					\$132.36	\$69.82
2024	2023 through 2025					\$113.50	\$72.66
2025	less Solar Integration (2)					\$112.88	\$75.56
2026	\$97.39	\$37.33	11.35%	\$11.06	\$6.04	\$42.46	\$36.42
2027	\$99.49	\$40.13	11.35%	\$11.30	\$6.17	\$43.93	\$37.76
2028	\$101.63	\$41.55	11.35%	\$11.54	\$6.30	\$45.52	\$39.23
2029	\$103.82	\$42.78	11.35%	\$11.79	\$6.43	\$48.81	\$42.38
2030	\$106.06	\$43.06	11.35%	\$12.04	\$6.57	\$49.09	\$42.52
2031	\$108.35	\$44.87	11.35%	\$12.30	\$6.72	\$51.38	\$44.67
2032	\$110.69	\$47.06	11.35%	\$12.57	\$6.86	\$53.66	\$46.79
2033	\$113.08	\$48.69	11.35%	\$12.84	\$7.01	\$55.58	\$48.57
2034	\$115.52	\$50.44	11.35%	\$13.12	\$7.16	\$57.49	\$50.33
2035	\$118.01	\$50.88	11.35%	\$13.40	\$7.31	\$58.06	\$50.75
2036	\$120.55	\$51.94	11.35%	\$13.69	\$7.47	\$59.29	\$51.82
2037	\$123.15	\$54.40	11.35%	\$13.98	\$7.63	\$61.98	\$54.35
2038	\$125.80	\$56.92	11.35%	\$14.28	\$7.80	\$64.67	\$56.88
2039	\$128.51	\$59.26	11.35%	\$14.59	\$7.96	\$67.18	\$59.21
2040	\$131.28	\$62.04	11.35%	\$14.91	\$8.14	\$69.83	\$61.70
2041	\$134.11	\$63.38	11.35%	\$15.23	\$8.31	\$71.34	\$63.03
2042	\$137.00	\$64.75	11.35%	\$15.56	\$8.49	\$72.88	\$64.39

- (1) The avoided cost price is reduced by a solar integration charge from Table 11 for solar QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system).
If QF solar resource is not in PacifiCorp's BAA, prices will be increased by the integration charge from Table 11.
- (2) Solar Integration Cost from Table 11

Columns

- (a) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
(b) Fuel and Capitalized Energy Cost of the Proxy CCCT
(c) Capacity Contribution values for renewable QF (% of nameplate capacity), 2021 IRP
Fixed Solar Capacity Contribution 11.4% Profile-specific value consistent with methodology used in Table 14
(e) 37.3% is the on-peak capacity factor of the Fixed Solar QF Resource
56% is the percent of all hours that are on-peak
(f) 2023-2025 On-Peak Blended Market Prices for QF resource
(g) 2023-2025 Off-Peak Blended Market Prices for QF resource

Exhibit 4
Standard Avoided Cost Prices for Tracking Solar QF
\$/MWH

Year	Standard Avoided Resource		Tracking Solar QF				
	Capacity Price	Energy Only Price	Capacity Contribution	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	\$/kW-yr	\$/MWh	(c)	(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
	(a)	(b)		(d)	(e)	(f)	(g)
				= (a) * (c)	(d) * 1000 / (43.0% x 8760 x 56%)	= (b) + (e) - Integration	= (b) - Integration
2023	Market Based Prices					\$132.36	\$69.82
2024	2023 through 2025					\$113.50	\$72.66
2025	ss Solar Integration (2)					\$112.88	\$75.56
2026	\$97.39	\$37.33	14.16%	\$13.79	\$6.54	\$42.96	\$36.42
2027	\$99.49	\$40.13	14.16%	\$14.09	\$6.68	\$44.44	\$37.76
2028	\$101.63	\$41.55	14.16%	\$14.39	\$6.82	\$46.05	\$39.23
2029	\$103.82	\$42.78	14.16%	\$14.70	\$6.97	\$49.35	\$42.38
2030	\$106.06	\$43.06	14.16%	\$15.02	\$7.12	\$49.64	\$42.52
2031	\$108.35	\$44.87	14.16%	\$15.34	\$7.27	\$51.94	\$44.67
2032	\$110.69	\$47.06	14.16%	\$15.67	\$7.43	\$54.23	\$46.79
2033	\$113.08	\$48.69	14.16%	\$16.01	\$7.59	\$56.16	\$48.57
2034	\$115.52	\$50.44	14.16%	\$16.36	\$7.75	\$58.08	\$50.33
2035	\$118.01	\$50.88	14.16%	\$16.71	\$7.92	\$58.67	\$50.75
2036	\$120.55	\$51.94	14.16%	\$17.07	\$8.09	\$59.91	\$51.82
2037	\$123.15	\$54.40	14.16%	\$17.44	\$8.27	\$62.62	\$54.35
2038	\$125.80	\$56.92	14.16%	\$17.81	\$8.44	\$65.32	\$56.88
2039	\$128.51	\$59.26	14.16%	\$18.20	\$8.63	\$67.84	\$59.21
2040	\$131.28	\$62.04	14.16%	\$18.59	\$8.81	\$70.51	\$61.70
2041	\$134.11	\$63.38	14.16%	\$18.99	\$9.00	\$72.03	\$63.03
2042	\$137.00	\$64.75	14.16%	\$19.40	\$9.20	\$73.59	\$64.39

- (1) The avoided cost price is reduced by a solar integration charge from Table 11 for solar QF resources located in PacifiCorp's Balancing Area Authority (BAA) (in-system). If QF solar resource is not in PacifiCorp's BAA, prices will be increased by the integration charge from Table 11.
- (2) Solar Integration Cost from Table 11

Columns

- (a) Full fixed cost of a proxy CCCT less capitalized energy
- (b) Fuel and Capitalized Energy Cost of the Proxy CCCT
- (c) Peak Capacity Contribution values for renewables (% of nameplate capacity)
Tracking Solar Capacity Contribution 14.2% Seasonal weighting of values from Table 14
- (e) 43.0% is the on-peak capacity factor of the Tracking Solar QF Resource
56% is the percent of all hours that are on-peak
- (f) 2023-2025 On-Peak Blended Market Prices for QF resource
- (g) 2023-2025 Off-Peak Blended Market Prices for QF resource

Exhibit 5
Renewable Standard Avoided Cost Prices for Base Load QF
\$/MWH

Year	Renewable Wind Avoided Resource		Renewable Base Load QF Resource			On-Peak	Off-Peak
	On-Peak	Off-Peak	Avoided Firm Capacity Costs	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours		
	(\$/MWh)	(\$/MWh)	\$/kW-yr	(\$/kW-yr)	(\$/MWh)		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
				(c) x 59%	(d) *1000 / (100.0%x 8760 x 56%)	= (a) + (e) + Int	= (b) + Int
2023	Market Based Prices					\$138.43	\$75.89
2024	2023 through 2025					\$115.42	\$74.58
2025						\$114.10	\$76.78
2026	\$38.96	\$28.70	\$97.39	\$57.31	\$11.67	\$53.51	\$31.58
2027	\$37.51	\$32.25	\$99.49	\$58.54	\$11.92	\$52.71	\$35.53
2028	\$37.61	\$33.90	\$101.63	\$59.80	\$12.18	\$53.23	\$37.34
2029	\$37.94	\$35.24	\$103.82	\$61.09	\$12.44	\$52.18	\$37.04
2030	\$38.36	\$36.46	\$106.06	\$62.41	\$12.71	\$52.72	\$38.11
2031	\$39.40	\$37.02	\$108.35	\$63.76	\$12.99	\$52.88	\$37.52
2032	\$39.46	\$38.83	\$110.69	\$65.13	\$13.27	\$53.38	\$39.49
2033	\$39.49	\$40.68	\$113.08	\$66.54	\$13.55	\$53.22	\$40.86
2034	\$40.34	\$41.54	\$115.52	\$67.98	\$13.85	\$54.31	\$41.67
2035	\$41.91	\$41.61	\$118.01	\$69.44	\$14.14	\$56.23	\$41.78
2036	\$44.31	\$40.58	\$120.55	\$70.94	\$14.45	\$58.91	\$40.73
2037	\$44.07	\$42.98	\$123.15	\$72.47	\$14.76	\$58.86	\$43.01
2038	\$44.79	\$44.18	\$125.80	\$74.03	\$15.08	\$59.90	\$44.21
2039	\$45.65	\$45.25	\$128.51	\$75.62	\$15.40	\$61.09	\$45.28
2040	\$47.78	\$44.83	\$131.28	\$77.25	\$15.73	\$63.66	\$44.97
2041	\$48.13	\$46.53	\$134.11	\$78.92	\$16.07	\$64.35	\$46.68
2042	\$52.29	\$43.64	\$137.00	\$80.62	\$16.42	\$68.86	\$43.79

Columns

- (a) Table 13 Column (d)
- (b) Table 13 Column (e)
- (c) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
- (d) Column (c) multiplied by difference in capacity contribution relative to renewable proxy wind resource
- (e) 100.0% is the on-peak capacity factor of the Proxy CCCT Resource
56% is the percent of all hours that are on-peak
- (f) 2023-2025 On-Peak Blended Market Prices for QF resource
- (g) 2023-2025 Off-Peak Blended Market Prices for QF resource
- Int During the deficiency period, prices are increased by the avoided wind integration charge from Table 11

Exhibit 6
Renewable Standard Avoided Cost Prices for Wind QF (1)
\$/MWH

Year	Renewable Wind Avoided Resource		Wind QF Resource			Wind QF Resource	
	On-Peak	Off-Peak	Avoided Firm Capacity Costs	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	(\$/MWh)	(\$/MWh)	\$/kW-yr	(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
			(c) x 0%	(d) *1000 / (36.6%x 8760 x 56%)		= (a) + (e) + Int	= (b) + Int

2023	Market Based Prices					\$136.08	\$73.54
2024	2023-2025					\$113.39	\$72.55
2025						\$111.38	\$74.06
2026	\$38.96	\$28.70	\$97.39	\$0.00	\$0.00	\$38.96	\$28.70
2027	\$37.51	\$32.25	\$99.49	\$0.00	\$0.00	\$37.51	\$32.25
2028	\$37.61	\$33.90	\$101.63	\$0.00	\$0.00	\$37.61	\$33.90
2029	\$37.94	\$35.24	\$103.82	\$0.00	\$0.00	\$37.94	\$35.24
2030	\$38.36	\$36.46	\$106.06	\$0.00	\$0.00	\$38.36	\$36.46
2031	\$39.40	\$37.02	\$108.35	\$0.00	\$0.00	\$39.40	\$37.02
2032	\$39.46	\$38.83	\$110.69	\$0.00	\$0.00	\$39.46	\$38.83
2033	\$39.49	\$40.68	\$113.08	\$0.00	\$0.00	\$39.49	\$40.68
2034	\$40.34	\$41.54	\$115.52	\$0.00	\$0.00	\$40.34	\$41.54
2035	\$41.91	\$41.61	\$118.01	\$0.00	\$0.00	\$41.91	\$41.61
2036	\$44.31	\$40.58	\$120.55	\$0.00	\$0.00	\$44.31	\$40.58
2037	\$44.07	\$42.98	\$123.15	\$0.00	\$0.00	\$44.07	\$42.98
2038	\$44.79	\$44.18	\$125.80	\$0.00	\$0.00	\$44.79	\$44.18
2039	\$45.65	\$45.25	\$128.51	\$0.00	\$0.00	\$45.65	\$45.25
2040	\$47.78	\$44.83	\$131.28	\$0.00	\$0.00	\$47.78	\$44.83
2041	\$48.13	\$46.53	\$134.11	\$0.00	\$0.00	\$48.13	\$46.53
2042	\$52.29	\$43.64	\$137.00	\$0.00	\$0.00	\$52.29	\$43.64

- (1) If wind QF is not in PacifiCorp's BAA, prices in all years will be increased by the wind integration charge from Table 11.
(2) Wind Integration Cost from Table 11

Columns

- (a) Table 13 Column (d)
(b) Table 13 Column (e)
(c) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
(d) Column (c) multiplied by difference in capacity contribution relative to renewable proxy wind resource
(e) 36.6% is the on-peak capacity factor of the Wind QF resource
56% is the percent of all hours that are on-peak
(f) 2023-2025 On-Peak Blended Market Prices for QF resource
(g) 2023-2025 Off-Peak Blended Market Prices for QF resource
Int During the deficiency period, the stated avoided cost prices reflect the same integration costs for the avoided wind proxy and a wind QF in PacifiCorp's Balancing Area Authority (BAA).
During the sufficiency period, the stated avoided cost prices are reduced by the integration charge from Table 11 applicable to wind QF resources located in PacifiCorp's BAA (in-system).

Exhibit 7

**Renewable Standard Avoided Cost Prices for Fixed Solar QF (1)
\$/MWH**

Year	Renewable Wind Avoided Resource		Fixed Solar QF Resource			Fixed Solar QF	
	On-Peak	Off-Peak	Avoided Firm Capacity Costs	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	(\$/MWh)	(\$/MWh)	\$/kW-yr	(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
	(a)	(b)	(c)	(d) (c) x -29.8%	(e) (d) *1000 / (37.3%x 8760 x 56%)	(f) = (a) + (e) + Int	(g) = (b) + Int
2023	Market Based Prices					\$132.36	\$69.82
2024	2023-2025					\$113.50	\$72.66
2025	2023-2025					\$112.88	\$75.56
2026	\$38.96	\$28.70	\$97.39	(\$29.02)	(\$15.84)	\$25.08	\$30.67
2027	\$37.51	\$32.25	\$99.49	(\$29.65)	(\$16.18)	\$22.24	\$33.16
2028	\$37.61	\$33.90	\$101.63	(\$30.29)	(\$16.53)	\$22.19	\$35.02
2029	\$37.94	\$35.24	\$103.82	(\$30.94)	(\$16.89)	\$22.45	\$36.64
2030	\$38.36	\$36.46	\$106.06	(\$31.61)	(\$17.25)	\$22.21	\$37.57
2031	\$39.40	\$37.02	\$108.35	(\$32.29)	(\$17.63)	\$22.07	\$37.31
2032	\$39.46	\$38.83	\$110.69	(\$32.99)	(\$18.01)	\$21.84	\$39.22
2033	\$39.49	\$40.68	\$113.08	(\$33.70)	(\$18.39)	\$21.16	\$40.74
2034	\$40.34	\$41.54	\$115.52	(\$34.43)	(\$18.79)	\$21.56	\$41.55
2035	\$41.91	\$41.61	\$118.01	(\$35.17)	(\$19.20)	\$22.76	\$41.65
2036	\$44.31	\$40.58	\$120.55	(\$35.93)	(\$19.61)	\$24.73	\$40.61
2037	\$44.07	\$42.98	\$123.15	(\$36.70)	(\$20.03)	\$24.02	\$42.97
2038	\$44.79	\$44.18	\$125.80	(\$37.49)	(\$20.46)	\$24.31	\$44.16
2039	\$45.65	\$45.25	\$128.51	(\$38.30)	(\$20.90)	\$24.73	\$45.24
2040	\$47.78	\$44.83	\$131.28	(\$39.12)	(\$21.36)	\$26.22	\$44.62
2041	\$48.13	\$46.53	\$134.11	(\$39.97)	(\$21.82)	\$26.10	\$46.32
2042	\$52.29	\$43.64	\$137.00	(\$40.83)	(\$22.29)	\$29.79	\$43.43

- (1) If solar QF is not in PacifiCorp's BAA, prices in all years will be increased by the solar integration charge from Table 11.
- (2) Solar Integration Cost from Table 11

Columns

- (a) Table 13 Column (d)
- (b) Table 13 Column (e)
- (c) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
- (d) Column (c) multiplied by difference in capacity contribution relative to renewable proxy wind resource
- (e) 37.3% is the on-peak capacity factor of the Fixed Solar QF resource
56% is the percent of all hours that are on-peak
- (f) 2023-2025 On-Peak Blended Market Prices for QF resource
- (g) 2023-2025 Off-Peak Blended Market Prices for QF resource
- Int During the deficiency period, the stated avoided cost prices reflect the difference in integration costs for the avoided wind proxy and a solar QF in PacifiCorp's Balancing Area Authority (BAA).
During the sufficiency period, the stated avoided cost prices are reduced by the integration charge from Table 11 applicable to solar QF resources located in PacifiCorp's BAA (in-system).

Exhibit 8

**Renewable Standard Avoided Cost Prices for Tracking Solar QF (1)
\$/MWH**

Year	Renewable Wind Avoided Resource		Tracking Solar QF Resource			Tracking Solar QF	
	On-Peak	Off-Peak	Avoided Firm Capacity Costs	QF Capacity Adder	Capacity Adder Allocated to On-Peak Hours	On-Peak	Off-Peak
	(\$/MWh)	(\$/MWh)	\$/kW-yr	(\$/kW-yr)	(\$/MWh)	\$/MWh	\$/MWh
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
				(c) x -27.0%	(d) *1000 / (43.0%x 8760 x 56%)	= (a) + (e) + Int	= (b) + Int
2023	Market Based Prices					\$132.36	\$69.82
2024	2023-2025					\$113.50	\$72.66
2025						\$112.88	\$75.56
2026	\$38.96	\$28.70	\$97.39	(\$26.29)	(\$12.46)	\$28.46	\$30.67
2027	\$37.51	\$32.25	\$99.49	(\$26.86)	(\$12.73)	\$25.69	\$33.16
2028	\$37.61	\$33.90	\$101.63	(\$27.44)	(\$13.01)	\$25.72	\$35.02
2029	\$37.94	\$35.24	\$103.82	(\$28.03)	(\$13.29)	\$26.05	\$36.64
2030	\$38.36	\$36.46	\$106.06	(\$28.63)	(\$13.57)	\$25.89	\$37.57
2031	\$39.40	\$37.02	\$108.35	(\$29.25)	(\$13.87)	\$25.83	\$37.31
2032	\$39.46	\$38.83	\$110.69	(\$29.88)	(\$14.17)	\$25.68	\$39.22
2033	\$39.49	\$40.68	\$113.08	(\$30.53)	(\$14.47)	\$25.08	\$40.74
2034	\$40.34	\$41.54	\$115.52	(\$31.19)	(\$14.79)	\$25.57	\$41.55
2035	\$41.91	\$41.61	\$118.01	(\$31.86)	(\$15.10)	\$26.85	\$41.65
2036	\$44.31	\$40.58	\$120.55	(\$32.54)	(\$15.43)	\$28.91	\$40.61
2037	\$44.07	\$42.98	\$123.15	(\$33.25)	(\$15.76)	\$28.29	\$42.97
2038	\$44.79	\$44.18	\$125.80	(\$33.96)	(\$16.10)	\$28.67	\$44.16
2039	\$45.65	\$45.25	\$128.51	(\$34.69)	(\$16.45)	\$29.19	\$45.24
2040	\$47.78	\$44.83	\$131.28	(\$35.44)	(\$16.80)	\$30.77	\$44.62
2041	\$48.13	\$46.53	\$134.11	(\$36.21)	(\$17.16)	\$30.76	\$46.32
2042	\$52.29	\$43.64	\$137.00	(\$36.99)	(\$17.53)	\$34.54	\$43.43

- (1) If solar QF is not in PacifiCorp's BAA, prices in all years will be increased by the solar integration charge from Table 11.
(2) Solar Integration Cost from Table 11

Columns

- (a) Table 13 Column (d)
- (b) Table 13 Column (e)
- (c) Full fixed cost of a proxy CCCT less Capitalized Energy Cost
- (d) Column (c) multiplied by difference in capacity contribution relative to renewable proxy wind resource
- (e) 43.0% is the on-peak capacity factor of the Tracking Solar QF Resource
56% is the percent of all hours that are on-peak
- (f) 2023-2025 On-Peak Blended Market Prices for QF resource
- (g) 2023-2025 Off-Peak Blended Market Prices for QF resource
- Int During the deficiency period, the stated avoided cost prices reflect the difference in integration costs for the avoided wind proxy and a solar QF in PacifiCorp's Balancing Area Authority (BAA).
During the sufficiency period, the stated avoided cost prices are reduced by the integration charge from Table 11 applicable to solar QF resources located in PacifiCorp's BAA (in-system).

Exhibit 9
Market Price - Blending Matrix (1)

Period	On-Peak				Off-Peak			
	COB	Mid Columbia	Palo Verde	Total	COB	Mid Columbia	Palo Verde	Total
1/1/2023	81.9%	17.1%	1.0%	100.0%	0.0%	78.3%	21.7%	100.0%
2/1/2023	58.4%	26.3%	15.3%	100.0%	40.7%	37.4%	21.9%	100.0%
3/1/2023	36.0%	31.1%	32.9%	100.0%	18.8%	51.6%	29.6%	100.0%
4/1/2023	34.5%	40.3%	25.2%	100.0%	0.0%	58.7%	41.3%	100.0%
5/1/2023	0.2%	88.7%	11.1%	100.0%	0.0%	87.0%	13.0%	100.0%
6/1/2023	0.4%	99.3%	0.4%	100.0%	0.0%	100.0%	0.0%	100.0%
7/1/2023	4.8%	94.2%	1.0%	100.0%	0.7%	99.3%	0.0%	100.0%
8/1/2023	20.7%	78.8%	0.5%	100.0%	0.0%	99.2%	0.8%	100.0%
9/1/2023	33.8%	61.5%	4.7%	100.0%	0.0%	77.3%	22.7%	100.0%
10/1/2023	0.0%	89.2%	10.8%	100.0%	0.0%	48.9%	51.1%	100.0%
11/1/2023	0.0%	96.5%	3.5%	100.0%	0.0%	84.7%	15.3%	100.0%
12/1/2023	0.0%	97.9%	2.1%	100.0%	0.0%	86.8%	13.2%	100.0%

1/1/2040	15.7%	77.8%	6.5%	100.0%	18.9%	72.3%	8.7%	100.0%
2/1/2040	27.7%	64.3%	8.0%	100.0%	41.5%	43.4%	15.1%	100.0%
3/1/2040	25.1%	68.0%	6.9%	100.0%	49.1%	43.7%	7.2%	100.0%
4/1/2040	29.7%	61.3%	9.0%	100.0%	26.6%	71.2%	2.2%	100.0%
5/1/2040	22.2%	72.4%	5.5%	100.0%	22.6%	70.4%	7.0%	100.0%
6/1/2040	28.5%	66.7%	4.8%	100.0%	27.9%	64.7%	7.4%	100.0%
7/1/2040	27.4%	69.7%	2.9%	100.0%	32.5%	63.1%	4.4%	100.0%
8/1/2040	30.8%	63.4%	5.8%	100.0%	38.5%	51.8%	9.7%	100.0%
9/1/2040	33.7%	59.0%	7.2%	100.0%	41.9%	54.3%	3.8%	100.0%
10/1/2040	36.4%	56.0%	7.6%	100.0%	30.9%	39.2%	29.9%	100.0%
11/1/2040	28.8%	64.2%	7.0%	100.0%	21.6%	64.4%	14.0%	100.0%
12/1/2040	31.8%	65.9%	2.3%	100.0%	33.4%	66.0%	0.5%	100.0%
1/1/2041	15.7%	77.8%	6.5%	100.0%	0.0%	100.0%	0.0%	100.0%
2/1/2041	27.7%	64.3%	8.0%	100.0%	0.0%	100.0%	0.0%	100.0%
3/1/2041	25.1%	68.0%	6.9%	100.0%	0.0%	100.0%	0.0%	100.0%
4/1/2041	29.7%	61.3%	9.0%	100.0%	0.0%	100.0%	0.0%	100.0%
5/1/2041	22.2%	72.4%	5.5%	100.0%	0.0%	100.0%	0.0%	100.0%
6/1/2041	28.5%	66.7%	4.8%	100.0%	0.0%	100.0%	0.0%	100.0%
7/1/2041	27.4%	69.7%	2.9%	100.0%	0.0%	100.0%	0.0%	100.0%
8/1/2041	30.8%	63.4%	5.8%	100.0%	0.0%	100.0%	0.0%	100.0%
9/1/2041	33.7%	59.0%	7.2%	100.0%	0.0%	100.0%	0.0%	100.0%
10/1/2041	36.4%	56.0%	7.6%	100.0%	0.0%	100.0%	0.0%	100.0%
11/1/2041	28.8%	64.2%	7.0%	100.0%	0.0%	100.0%	0.0%	100.0%
12/1/2041	31.8%	65.9%	2.3%	100.0%	0.0%	100.0%	0.0%	100.0%
1/1/2042	15.7%	77.8%	6.5%	100.0%	0.0%	100.0%	0.0%	100.0%
2/1/2042	27.7%	64.3%	8.0%	100.0%	0.0%	100.0%	0.0%	100.0%
3/1/2042	25.1%	68.0%	6.9%	100.0%	0.0%	100.0%	0.0%	100.0%
4/1/2042	29.7%	61.3%	9.0%	100.0%	0.0%	100.0%	0.0%	100.0%
5/1/2042	22.2%	72.4%	5.5%	100.0%	0.0%	100.0%	0.0%	100.0%
6/1/2042	28.5%	66.7%	4.8%	100.0%	0.0%	100.0%	0.0%	100.0%
7/1/2042	27.4%	69.7%	2.9%	100.0%	0.0%	100.0%	0.0%	100.0%
8/1/2042	30.8%	63.4%	5.8%	100.0%	0.0%	100.0%	0.0%	100.0%
9/1/2042	33.7%	59.0%	7.2%	100.0%	0.0%	100.0%	0.0%	100.0%
10/1/2042	36.4%	56.0%	7.6%	100.0%	0.0%	100.0%	0.0%	100.0%
11/1/2042	28.8%	64.2%	7.0%	100.0%	0.0%	100.0%	0.0%	100.0%
12/1/2042	31.8%	65.9%	2.3%	100.0%	0.0%	100.0%	0.0%	100.0%

(1) Blending weights are calculated using system balancing purchases and sales from GRID run using March 2023 Official Forward Price Curve

Table 1
2021 IRP Preferred Portfolio
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	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	10-year	20-year
East																						
Thermal Plant Retirements, Conversions																						
Coal Plant End-of-life Retirements																						
Craig 1	-	-	-	-	-	(82)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(82)	(82)
Craig 2	-	-	-	-	-	-	-	-	(79)	-	-	-	-	-	-	-	-	-	-	-	(79)	(79)
DaveJohnston 1	-	-	-	-	-	-	-	(99)	-	-	-	-	-	-	-	-	-	-	-	-	(99)	(99)
DaveJohnston 2	-	-	-	-	-	-	-	(106)	-	-	-	-	-	-	-	-	-	-	-	-	(106)	(106)
DaveJohnston 3	-	-	-	-	-	-	-	(220)	-	-	-	-	-	-	-	-	-	-	-	-	(220)	(220)
DaveJohnston 4	-	-	-	-	-	-	-	(330)	-	-	-	-	-	-	-	-	-	-	-	-	(330)	(330)
Hayden 1	-	-	-	-	-	-	-	-	(44)	-	-	-	-	-	-	-	-	-	-	-	(44)	(44)
Hayden 2	-	-	-	-	-	-	-	(33)	-	-	-	-	-	-	-	-	-	-	-	-	(33)	(33)
Huntington 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(459)	-	-	(459)
Huntington 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(450)	-	-	-	(450)
Wyodak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(268)	-	(268)
Coal Early Retirements																						
Naughton 1 (Coal Early Retirement - 2025)	-	-	-	-	-	(156)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(156)	(156)
Naughton 2 (Coal Early Retirement - 2025)	-	-	-	-	-	(201)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(201)	(201)
Gas Plant End-of-life Retirements																						
Gadsby 1	-	-	-	-	-	-	-	-	-	-	-	-	(64)	-	-	-	-	-	-	-	-	(64)
Gadsby 2	-	-	-	-	-	-	-	-	-	-	-	-	(69)	-	-	-	-	-	-	-	-	(69)
Gadsby 3	-	-	-	-	-	-	-	-	-	-	-	-	(105)	-	-	-	-	-	-	-	-	(105)
Gadsby 4	-	-	-	-	-	-	-	-	-	-	-	-	(40)	-	-	-	-	-	-	-	-	(40)
Gadsby 5	-	-	-	-	-	-	-	-	-	-	-	-	(40)	-	-	-	-	-	-	-	-	(40)
Gadsby 6	-	-	-	-	-	-	-	-	-	-	-	-	(40)	-	-	-	-	-	-	-	-	(40)
Naughton 3 GC	-	-	-	-	-	-	-	-	-	(247)	-	-	-	-	-	-	-	-	-	-	(247)	(247)
Non-Thermal Retirements & Expirations																						
Retire - Hydro																						
Hydro - Utah North - ID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro - Utah North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro - Utah South	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expire - Wind PPA																						
Wind-Wyoming East	-	-	-	-	-	-	-	(99)	(200)	-	-	-	-	-	-	-	-	-	-	-	(299)	(299)
Wind-Goshen	-	-	-	-	-	(65)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(65)	(65)
Retire - Wind																						
Wind-Wyoming East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind-Wyoming North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expire - Solar PPA																						
Solar-Utah North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(73)	-	-	-	(73)
Solar-Utah South	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expire - QF																						
Qualified Facility - Solar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(19)	(59)	(671)	(11)	(71)	(52)	-	(883)
Qualified Facility - Wind	-	-	-	-	-	(3)	-	(19)	-	-	(45)	(181)	(80)	-	(140)	-	-	-	-	-	(22)	(467)
Qualified Facility - Thermal	-	-	-	(50)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(50)	(50)
Qualified Facility - Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qualified Facility - Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expire - Other																						
Hydro PPA - GOE	-	-	-	(22)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(22)	(22)
Contract - MNA	-	-	-	-	(91)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(91)	(91)
Contract - UTS	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10
Contract - WYE	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17
Contract Exchange - 4CR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retire - Other																						
Existing - Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(32)	-	-	(32)
MagCorp Interruptible	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monsanto Curtailment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nucor Interruptible	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Existing - DR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Existing - EE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Battery - Panguitch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retire - Solar																						
Solar-Utah North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solar-Utah South	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(18)	-	-	-	(18)

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East	Expansion Resources																							
	NonEmitting Peaker																							
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206	-	-	206
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196	-	-	196
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206	206
	Nuclear																							
	-	-	-	-	-	-	-	345	-	-	-	-	-	-	-	-	-	-	-	-	-	-	345	345
	Nuclear Storage																							
	-	-	-	-	-	-	-	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	155
	Renewable - Wind																							
	-	-	-	-	-	-	-	-	-	489	-	-	-	-	-	-	-	-	-	-	-	-	489	549
	49	-	-	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92	92
	-	-	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151	151
	-	-	-	-	1,641	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,641	1,641
	Renewable - Utility Solar																							
	-	-	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95	-	95	95
	-	-	-	-	-	-	-	-	-	820	-	-	-	-	-	-	-	-	-	-	-	-	820	820
	-	-	-	-	-	-	-	-	-	-	-	1,100	-	-	-	-	-	-	-	-	-	-	-	1,100
	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	909	-	-	-	-	-	-	1	910
	-	-	-	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	45
	-	-	-	498	455	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	953	953
	Renewable - Battery, Solar+Storage																							
	-	-	-	-	-	-	-	-	-	820	-	-	-	-	-	-	-	-	-	-	-	-	820	820
	-	-	-	-	-	-	-	-	-	-	-	1,100	-	-	-	-	-	-	-	-	-	-	-	1,100
	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	909	-	-	-	-	-	-	1	910
	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13
	-	-	-	174	258	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	432	432
	Battery - Stand Alone																							
	-	-	-	-	-	-	-	-	549	1	-	-	-	-	-	-	-	-	-	-	-	-	550	550
	-	-	-	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	200
	DSM - Demand Response																							
	-	-	1	10	2	1	1	4	6	2	2	2	3	2	15	2	3	5	3	5	28	67		
	-	-	29	26	8	3	5	10	9	8	10	11	105	20	30	30	66	34	29	42	109	475		
	-	-	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	4	36	8	57		
	-	-	1	1	0	1	1	2	2	2	2	2	4	2	2	2	3	2	7	8	11	43		
	-	-	35	41	3	3	4	6	10	7	8	12	73	22	24	34	59	24	27	74	117	465		
	-	-	0	1	0	1	1	1	1	1	1	1	3	1	1	1	1	1	6	30	6	52		
	-	5	6	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	34	34		
	-	55	59	9	9	9	9	9	9	9	9	-	-	-	-	-	-	-	-	-	186	186		
	-	17	2	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	41	41		
	DSM - Energy Efficiency																							
	6	6	6	7	9	12	14	16	18	20	20	20	19	18	17	15	13	11	9	8	134	263		
	60	67	73	82	97	109	124	138	145	166	166	161	151	137	121	105	110	95	86	88	1,227	2,282		
	8	7	7	18	19	21	23	24	24	24	23	21	19	17	15	12	10	9	8	8	198	319		
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3		
	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	26		
	Front Office Transactions																							
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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West																						
West	Thermal Plant Retirements, Conversions																					
	Coal Plant End-of-life Retirements																					
	Colstrip 3	-	-	-	-	-	(74)	-	-	-	-	-	-	-	-	-	-	-	-	-	(74)	(74)
	Colstrip 4	-	-	-	-	-	(74)	-	-	-	-	-	-	-	-	-	-	-	-	-	(74)	(74)
	JimBridger 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(349)	-	(349)
	JimBridger 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(351)	-	(351)
	Coal - Gas Conversions																					
	JimBridger 1 GC (2024)	-	-	-	354	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(354)	-	354
	JimBridger 2 GC (2024)	-	-	-	359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(359)	-	359
	2024 JimBridger 1 GC, Coal Ends	-	-	-	(354)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(354)
	2024 JimBridger 2 GC, Coal Ends	-	-	-	(359)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(359)
	Gas Plant End-of-life Retirements																					
	Hermiston	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(237)	-	(237)
	Non-Thermal Retirements & Expirations																					
	Retire - Hydro																					
	Hydro - Southern OR	-	-	(163)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(163)	(163)
	Expire - Wind PPA																					
	Wind-Walla Walla - WA	-	(175)	-	(41)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(216)	(216)
	Wind-Mid-C	-	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	175
	Retire - Wind																					
	Wind-Walla Walla - WA	-	(10)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(10)	(10)
	Expire - Solar PPA																					
	Solar-Southern OR	-	-	-	-	-	-	(2)	-	-	-	(8)	-	-	-	-	-	-	-	-	(2)	(10)
	Expire - QF																					
	Qualified Facility - Solar	-	-	-	-	-	-	-	-	-	(36)	-	(12)	-	(10)	(73)	(20)	(29)	-	-	-	(179)
	Qualified Facility - Wind	-	-	-	-	-	-	-	(65)	-	-	-	-	-	-	-	-	-	-	(40)	(65)	(105)
	Qualified Facility - Biomass	-	-	-	-	-	-	(26)	-	-	-	-	-	-	-	-	-	-	-	-	(26)	(26)
	Qualified Facility - Hydro	-	(2)	-	-	-	-	-	-	(0)	-	-	-	-	-	-	-	-	-	-	(2)	(2)
	Expire - Other																					
	Contract - SOR	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11
	Contract - BDG	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Contract - MDC	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	25

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West	Expansion Resources																								
	NonEmitting Peaker																								
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	412	-	-	-	412	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206	-	-	-	206	
	Nuclear																								
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	690	-	-	-	690	
	Nuclear Storage																								
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	310	-	-	-	310	
	Renewable - Wind																								
	-	-	-	-	-	130 (*)	-	-	-	-	-	450	-	-	-	-	-	-	-	-	-	-	-	130	580
	-	-	-	-	-	615 (*)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	615	615
	Renewable - Wind+Storage																								
	-	-	-	-	-	-	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-	-	160	160
	-	-	-	-	-	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	600
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	100
	-	-	-	-	-	-	-	83	-	377	-	-	-	-	-	-	-	-	-	-	-	-	-	460	460
	-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	180	336
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	209
	-	-	-	209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	100
	-	-	-	-	-	-	-	42	-	377	-	-	-	-	-	-	-	-	-	-	-	-	-	419	419
	-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	180	336
	-	-	-	-	-	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	600
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	53
	-	-	-	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	650
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	650	-	-	-	-	650
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
	DSM - Demand Response																								
	-	-	1	2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	4	2	3	7	23	
	-	-	16	16	6	5	7	8	2	8	8	10	14	9	26	11	10	25	13	53	-	-	78	248	
	-	-	4	5	2	1	2	2	2	1	2	1	2	1	4	14	6	3	2	1	-	-	21	55	
	-	-	1	1	0	0	0	1	1	1	1	1	1	1	1	1	2	8	2	3	-	-	6	26	
	-	-	14	15	3	3	3	4	4	5	5	8	6	10	44	15	9	51	11	45	-	-	57	256	
	-	-	3	4	1	1	1	1	1	1	1	1	1	1	11	12	21	1	1	1	-	-	12	63	
	-	2	2	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	9	9	
	-	34	48	29	25	19	18	18	19	20	20	-	-	-	-	-	-	-	-	-	-	-	249	249	
	-	11	19	16	13	10	8	6	5	5	5	-	-	-	-	-	-	-	-	-	-	-	100	100	
	DSM - Energy Efficiency																								
	1	2	1	2	2	2	2	4	4	4	3	3	2	2	2	2	2	2	2	2	-	-	26	46	
	37	38	34	34	33	36	39	41	46	47	47	46	44	42	38	35	33	37	40	38	-	-	430	784	
	10	16	19	21	26	31	36	40	42	43	43	41	37	33	29	24	21	17	14	11	-	-	328	554	
	4	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13	
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	
	Front Office Transactions																								
	733	670	514	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,925	1,925	
	236	216	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	618	618	
	95	86	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	247	
	58	22	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	21	150	82	453	
	81	31	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	30	210	115	635	
	23	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	8	60	33	181	
East	Existing Retirements and Conversion																								
	-	-	-	(45)	(91)	(504)	(3)	(788)	(241)	(447)	-	(45)	(537)	(80)	(19)	(199)	(1,671)	(43)	(71)	(320)	-	-	(2,119)	(5,104)	
West	Existing Retirements and Conversion																								
	-	(1)	(163)	(14)	-	(148)	(26)	(2)	(65)	(0)	-	(45)	-	(12)	-	(10)	(310)	(1,432)	(29)	(40)	-	-	(419)	(2,296)	
East	Expansion Resources Total																								
	153	156	371	1,270	2,507	164	189	716	779	737	1,888	232	2,979	221	225	203	2,083	183	179	566	-	-	8,931	15,801	
West	Expansion Resources Total																								
	1,280	1,140	918	415	111	2,055	118	251	126	1,410	136	561	108	99	156	117	957	2,324	148	1,389	-	-	7,962	13,820	

(*) Deficiency Period / Renewable Proxy Resource

Table 2
Avoided Costs (\$/MWh)
Energy Prices

Year	Winter Season					Summer Season				Winter Season		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
On-Peak (HLH Market Purchase)												
2023					66.62	73.12	165.74	266.05	224.94	82.55	94.62	133.81
2024	130.30	108.98	68.08	55.75	49.04	57.79	191.98	236.99	182.85	78.19	93.44	131.60
2025	117.07	101.74	84.08	54.68	54.83	58.16	199.09	217.66	181.97	87.97	97.83	114.13
2026	112.36	94.72	74.64	63.71	35.99	48.02	129.78	148.42	124.95	69.82	76.14	90.49
2027	87.14	83.41	60.14	52.18	20.99	32.00	65.44	82.36	75.17	59.38	62.41	64.96
2028	58.73	69.05	40.07	35.97	20.89	31.99	66.73	81.50	75.25	62.35	63.99	65.02
2029	59.26	72.48	43.94	35.11	20.63	26.77	64.00	83.69	73.29	56.79	66.44	64.87
2030	60.60	73.95	44.29	32.40	21.20	28.24	66.11	83.47	74.90	55.89	66.09	69.03
2031	60.68	75.68	43.23	31.10	17.57	27.78	70.15	86.40	78.37	53.72	71.35	73.56
2032	59.00	68.76	45.03	29.14	15.01	26.35	61.85	84.61	76.87	53.35	64.92	75.22
2033	54.69	65.28	33.69	20.62	12.90	24.14	46.86	72.56	58.92	40.61	60.78	67.04
2034	46.87	66.63	39.44	25.97	11.96	22.82	54.07	70.05	63.67	43.82	57.15	72.62
2035	50.27	68.33	38.83	24.16	11.72	25.45	50.98	70.56	69.46	45.90	66.64	72.53
2036	57.65	69.77	41.13	22.98	8.12	26.25	65.51	76.25	73.40	44.89	69.55	77.13
2037	61.63	70.80	50.43	24.27	11.98	30.21	57.64	85.40	73.93	44.90	65.96	80.82
2038	57.54	78.84	44.64	24.66	12.73	30.45	64.52	89.90	79.78	49.51	74.37	82.60
2039	72.84	76.03	43.17	26.16	15.40	33.71	57.45	82.94	74.92	53.48	82.41	84.73
2040	64.01	81.15	47.65	30.49	16.01	36.67	62.49	88.15	84.08	61.22	92.71	94.72
2041	75.77	88.53	59.11	24.49	17.97	33.03	62.46	92.80	85.98	52.31	72.67	95.82
Off-Peak (LLH Market Purchase)												
2023					55.44	41.62	71.57	100.40	94.03	63.44	79.13	101.48
2024	103.46	90.67	55.14	51.26	41.94	43.50	84.12	114.13	83.06	56.17	69.91	101.63
2025	96.44	84.26	70.37	50.68	45.25	46.10	89.44	101.05	84.93	74.52	82.25	96.03
2026	88.63	77.50	63.97	51.98	36.89	41.75	74.31	82.67	72.10	66.42	69.64	78.89
2027	71.74	69.43	57.27	48.49	27.90	34.77	54.82	62.74	56.67	57.97	57.79	58.77
2028	52.51	60.49	47.38	38.40	26.27	34.97	56.37	64.17	59.33	57.29	58.77	60.08
2029	57.75	65.53	50.53	38.97	26.58	35.92	54.85	63.84	59.68	56.08	59.66	64.44
2030	58.10	66.54	50.02	39.45	26.38	34.91	57.19	66.90	63.37	59.31	61.67	72.07
2031	56.99	65.19	46.96	38.92	27.45	37.58	58.89	69.14	65.81	59.96	65.73	68.76
2032	56.09	63.60	53.05	39.95	25.15	37.00	60.59	66.68	65.26	58.16	66.09	69.60
2033	48.87	55.26	45.80	33.24	20.32	37.25	51.05	59.49	58.21	51.06	52.92	65.67
2034	45.98	62.97	44.15	34.06	16.59	37.43	57.93	59.15	61.95	52.55	54.71	70.41
2035	57.38	65.91	44.87	24.18	16.42	37.97	49.32	58.26	61.31	53.80	60.39	68.27
2036	50.42	58.69	38.25	28.43	13.28	39.32	52.33	63.20	62.24	56.32	58.95	68.70
2037	51.84	59.13	49.31	33.42	20.07	45.39	55.56	73.45	68.71	60.43	60.83	70.38
2038	51.10	72.94	48.17	35.52	20.13	44.52	67.63	70.48	68.46	64.92	74.01	74.31
2039	55.67	62.56	56.08	39.38	22.94	47.59	67.91	68.59	69.53	66.50	68.22	82.43
2040	50.53	75.74	52.46	28.43	20.43	47.86	63.24	76.24	76.47	65.01	81.06	85.60
2041	60.89	66.79	57.31	37.06	14.93	45.54	73.71	77.70	80.31	59.36	69.93	98.99

Combined

2023					61.81	59.57	125.25	194.82	168.65	74.34	87.96	119.91
2024	118.76	101.11	62.52	53.82	45.98	51.65	145.60	184.16	139.94	68.72	83.33	118.71
2025	108.20	94.22	78.18	52.96	50.71	52.97	151.94	167.52	140.24	82.19	91.13	106.35
2026	102.15	87.31	70.05	58.67	36.38	45.32	105.93	120.15	102.23	68.36	73.35	85.50
2027	80.52	77.40	58.91	50.59	23.96	33.19	60.88	73.92	67.21	58.77	60.42	62.29
2028	56.05	65.37	43.21	37.01	23.20	33.27	62.28	74.05	68.40	60.17	61.75	62.89
2029	58.61	69.49	46.77	36.77	23.19	30.71	60.06	75.16	67.44	56.48	63.53	64.68
2030	59.53	70.77	46.76	35.43	23.43	31.11	62.28	76.35	69.94	57.36	64.19	70.34
2031	59.09	71.17	44.83	34.46	21.82	31.99	65.31	78.98	72.97	56.40	68.93	71.50
2032	57.75	66.54	48.48	33.79	19.37	30.93	61.31	76.90	71.88	55.42	65.42	72.81
2033	52.19	60.97	38.90	26.05	16.09	29.78	48.66	66.94	58.61	45.11	57.40	66.45
2034	46.49	65.06	41.47	29.45	13.95	29.10	55.73	65.36	62.93	47.57	56.10	71.67
2035	53.32	67.29	41.43	24.17	13.74	30.83	50.26	65.27	65.96	49.30	63.95	70.70
2036	54.54	65.01	39.89	25.32	10.34	31.87	59.85	70.64	68.60	49.80	64.99	73.51
2037	57.42	65.78	49.95	28.21	15.46	36.74	56.74	80.26	71.69	51.58	63.75	76.33
2038	54.77	76.30	46.16	29.33	15.91	36.50	65.86	81.55	74.91	56.14	74.22	79.04
2039	65.46	70.24	48.72	31.85	18.64	39.68	61.94	76.77	72.60	59.08	76.31	83.74
2040	58.21	78.82	49.72	29.60	17.91	41.48	62.82	83.03	80.81	62.85	87.70	90.80
2041	69.37	79.18	58.33	29.89	16.66	38.41	67.30	86.31	83.54	55.34	71.49	97.19

Annual Average

	On-Peak	Off-Peak	Combined
2023	\$138.43	\$75.89	\$111.54
2024	\$115.42	\$74.58	\$97.86
2025	\$114.10	\$76.78	\$98.05
2026	\$89.09	\$67.06	\$79.62
2027	\$62.13	\$54.86	\$59.00
2028	\$55.96	\$51.34	\$53.97
2029	\$55.61	\$52.82	\$54.41
2030	\$56.35	\$54.66	\$55.62
2031	\$57.47	\$55.11	\$56.45
2032	\$55.01	\$55.10	\$55.05
2033	\$46.51	\$48.26	\$47.26
2034	\$47.92	\$49.82	\$48.74
2035	\$49.57	\$49.84	\$49.69
2036	\$52.72	\$49.18	\$51.20
2037	\$54.83	\$54.04	\$54.49
2038	\$57.46	\$57.68	\$57.56
2039	\$58.60	\$58.95	\$58.75
2040	\$63.28	\$60.26	\$61.98
2041	\$63.41	\$61.88	\$62.75

Source 2023-2040: Official Market Price Forecast dated March 2023
 Blended Market Prices: weights are based on system balancing purchases and sales from GRID run using March 2023 Official Forward Price Curve

Table 3
Capitalized Energy Costs

Year	Combined Cycle CT Fixed Costs	Simple Cycle CT Fixed Costs	Capitalized Energy Costs	Capitalized Energy Costs 71.5% CF
	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/MWh)
	(a)	(b)	(c) ((a) - (b))	(d) (c)/(8.760 x 71.5%)
2026	\$141.52	\$97.39	\$44.13	\$7.05
2027	\$144.56	\$99.49	\$45.07	\$7.20
2028	\$147.66	\$101.63	\$46.03	\$7.35
2029	\$150.82	\$103.82	\$47.00	\$7.50
2030	\$154.05	\$106.06	\$47.99	\$7.66
2031	\$157.41	\$108.35	\$49.06	\$7.83
2032	\$160.82	\$110.69	\$50.13	\$8.00
2033	\$164.30	\$113.08	\$51.22	\$8.18
2034	\$167.85	\$115.52	\$52.33	\$8.35
2035	\$171.47	\$118.01	\$53.46	\$8.54
2036	\$175.15	\$120.55	\$54.60	\$8.72
2037	\$178.92	\$123.15	\$55.77	\$8.90
2038	\$182.76	\$125.80	\$56.96	\$9.09
2039	\$186.67	\$128.51	\$58.16	\$9.29
2040	\$190.66	\$131.28	\$59.38	\$9.48
2041	\$194.80	\$134.11	\$60.69	\$9.69
2042	\$199.02	\$137.00	\$62.02	\$9.90

Columns

- (a) Table 9. Page 2 of 3 Column (f)
- (b) Table 9. Page 1 of 3 Column (f)
- (c) and (d) Capitalized energy costs reflect the incremental fixed cost of CCCT versus a SCCT

Table 4
Total Standard Avoided Energy Cost

Year	Combined Cycle		Capitalized Energy Costs 71.5% CF	Total Standard Avoided Energy Cost
	Gas Price	Energy Cost		
	(\$/MMBtu)	(\$/MWh)	(\$/MWh)	(\$/MWh)
	(a)	(b)	(c)	(d)
		(a) x 6.310		(b) + (c)
2026	\$4.80	\$30.29	\$7.05	\$37.33
2027	\$5.22	\$32.94	\$7.20	\$40.13
2028	\$5.42	\$34.20	\$7.35	\$41.55
2029	\$5.59	\$35.27	\$7.50	\$42.78
2030	\$5.61	\$35.40	\$7.66	\$43.06
2031	\$5.87	\$37.04	\$7.83	\$44.87
2032	\$6.19	\$39.06	\$8.00	\$47.06
2033	\$6.42	\$40.51	\$8.18	\$48.69
2034	\$6.67	\$42.09	\$8.35	\$50.44
2035	\$6.71	\$42.34	\$8.54	\$50.88
2036	\$6.85	\$43.22	\$8.72	\$51.94
2037	\$7.21	\$45.50	\$8.90	\$54.40
2038	\$7.58	\$47.83	\$9.09	\$56.92
2039	\$7.92	\$49.98	\$9.29	\$59.26
2040	\$8.33	\$52.56	\$9.48	\$62.04
2041	\$8.51	\$53.70	\$9.69	\$63.38
2042	\$8.69	\$54.85	\$9.90	\$64.75

Columns

- (a) Table 10
- (b) 6.310 MWh/MMBtu Heat Rate - Table 9. Page 3 of 3
- (c) Table 3 Column (d)

Table 5
Total Standard Avoided Cost

Year	Avoided Firm Capacity Costs	Total Standard Avoided Energy Cost	Total Standard Avoided Costs At Stated Capacity Factor		
			75%	85%	90%
	(\$/kW-yr)	(\$/MWh)	(\$/MWh)	(\$/MWh)	(\$/MWh)
(a)	(b)	(c)	(d)	(e)	
			(b)+(a) x1000/(8760 x 0.75)	(b)+(a) x1000/(8760 x 0.85)	(b)+(a) x1000/(8760 x 0.9)
2026	\$97.39	\$37.33	\$52.16	\$50.41	\$49.69
2027	\$99.49	\$40.13	\$55.28	\$53.50	\$52.75
2028	\$101.63	\$41.55	\$57.02	\$55.20	\$54.44
2029	\$103.82	\$42.78	\$58.58	\$56.72	\$55.95
2030	\$106.06	\$43.06	\$59.20	\$57.30	\$56.51
2031	\$108.35	\$44.87	\$61.36	\$59.42	\$58.62
2032	\$110.69	\$47.06	\$63.91	\$61.93	\$61.10
2033	\$113.08	\$48.69	\$65.90	\$63.87	\$63.03
2034	\$115.52	\$50.44	\$68.03	\$65.96	\$65.10
2035	\$118.01	\$50.88	\$68.84	\$66.72	\$65.84
2036	\$120.55	\$51.94	\$70.29	\$68.13	\$67.23
2037	\$123.15	\$54.40	\$73.14	\$70.94	\$70.02
2038	\$125.80	\$56.92	\$76.07	\$73.82	\$72.88
2039	\$128.51	\$59.26	\$78.82	\$76.52	\$75.56
2040	\$131.28	\$62.04	\$82.02	\$79.67	\$78.69
2041	\$134.11	\$63.38	\$83.80	\$81.40	\$80.40
2042	\$137.00	\$64.75	\$85.61	\$83.15	\$82.13

Columns

- (a) Table 3 Column (a) minus Column (c)
- (b) Table 4 Column (d)

Table 6
On- & Off- Peak Energy Prices

Year	Avoided Firm Capacity Costs	Capacity Cost Allocated to On-Peak Hours	Total Standard Avoided Energy Cost	On-Peak 4,910 Hours	Off-Peak 3,850 Hours
	(\$/kW-yr)	(\$/MWh)	(\$/MWh)	(\$/MWh)	(\$/MWh)
	(a)	(b)	(c)	(d)	(e)
		(a) *1000 / (100.0% x 8760 x 56%)		(b) + (c)	(c)
2026	\$97.39	\$19.84	\$37.33	\$57.17	\$37.33
2027	\$99.49	\$20.26	\$40.13	\$60.40	\$40.13
2028	\$101.63	\$20.70	\$41.55	\$62.25	\$41.55
2029	\$103.82	\$21.15	\$42.78	\$63.92	\$42.78
2030	\$106.06	\$21.60	\$43.06	\$64.66	\$43.06
2031	\$108.35	\$22.07	\$44.87	\$66.94	\$44.87
2032	\$110.69	\$22.54	\$47.06	\$69.61	\$47.06
2033	\$113.08	\$23.03	\$48.69	\$71.72	\$48.69
2034	\$115.52	\$23.53	\$50.44	\$73.97	\$50.44
2035	\$118.01	\$24.04	\$50.88	\$74.91	\$50.88
2036	\$120.55	\$24.55	\$51.94	\$76.49	\$51.94
2037	\$123.15	\$25.08	\$54.40	\$79.48	\$54.40
2038	\$125.80	\$25.62	\$56.92	\$82.55	\$56.92
2039	\$128.51	\$26.17	\$59.26	\$85.44	\$59.26
2040	\$131.28	\$26.74	\$62.04	\$88.78	\$62.04
2041	\$134.11	\$27.31	\$63.38	\$90.70	\$63.38
2042	\$137.00	\$27.90	\$64.75	\$92.66	\$64.75

Columns

- (a) Table 3 Column (a) minus Column (c)
- (b) Table 9. 100.0% is the on-peak capacity factor of the Proxy CCCT Resource
- (d) 56% is the percent of all hours that are on-peak
- (c) Table 4 Column (d)

**Table 3 (Renewable)
Capitalized Energy Costs**

Year	Combined Cycle CT Fixed Costs	Simple Cycle CT Fixed Costs	Capitalized Energy Costs	Capitalized Energy Costs 71.5% CF
	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/MWh)
	(a)	(b)	(c)	(d)
			(a) - (b)	(c)/(8.760 x 71.5%)

2023	\$132.75	\$91.36	\$41.39	\$6.61
2024	\$135.62	\$93.32	\$42.30	\$6.75
2025	\$138.54	\$95.33	\$43.21	\$6.90
2026	\$141.52	\$97.39	\$44.13	\$7.05
2027	\$144.56	\$99.49	\$45.07	\$7.20
2028	\$147.66	\$101.63	\$46.03	\$7.35
2029	\$150.82	\$103.82	\$47.00	\$7.50
2030	\$154.05	\$106.06	\$47.99	\$7.66
2031	\$157.41	\$108.35	\$49.06	\$7.83
2032	\$160.82	\$110.69	\$50.13	\$8.00
2033	\$164.30	\$113.08	\$51.22	\$8.18
2034	\$167.85	\$115.52	\$52.33	\$8.35
2035	\$171.47	\$118.01	\$53.46	\$8.54
2036	\$175.15	\$120.55	\$54.60	\$8.72
2037	\$178.92	\$123.15	\$55.77	\$8.90
2038	\$182.76	\$125.80	\$56.96	\$9.09
2039	\$186.67	\$128.51	\$58.16	\$9.29
2040	\$190.66	\$131.28	\$59.38	\$9.48
2041	\$194.80	\$134.11	\$60.69	\$9.69
2042	\$199.02	\$137.00	\$62.02	\$9.90

Columns

- (a) Table 9, Page 2 of 3 Column (f)
- (b) Table 9, Page 1 of 3 Column (f)
- (c) and (d) Capitalized energy costs reflect the incremental fixed cost of CCCT versus a SCCT

**Table 4 (Renewable)
Avoided Capacity Costs**

Year	Avoided Firm Capacity Costs
	(\$/kW-yr)
	(a)

2023	\$91.36
2024	\$93.32
2025	\$95.33
2026	\$97.39
2027	\$99.49
2028	\$101.63
2029	\$103.82
2030	\$106.06
2031	\$108.35
2032	\$110.69
2033	\$113.08
2034	\$115.52
2035	\$118.01
2036	\$120.55
2037	\$123.15
2038	\$125.80
2039	\$128.51
2040	\$131.28
2041	\$134.11
2042	\$137.00

Columns

- (a) Table 3 (Renewable) Column (a) minus Column (c)

Table 7
Comparison between Proposed and Current Standard Fixed Avoided Costs
\$/MWh

Year	Proposed	Eff. 7/1/2022	Difference	Proposed	Eff. 7/1/2022	Difference	Proposed	Eff. 7/1/2022	Difference	Proposed	Eff. 7/1/2022	Difference
	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	Base Load QF	Base Load QF	Base Load QF	Wind QF (2)	Wind QF (2)	Wind QF (2)	Fixed Solar QF (2)	Fixed Solar QF (2)	Fixed Solar QF (2)	Tracking Solar QF (2)	Tracking Solar QF (2)	Tracking Solar QF (2)
2023	\$110.94	\$60.63	\$50.31	\$108.22	\$58.15	\$50.07	\$122.40	\$60.69	\$61.71	\$121.23	\$60.29	\$60.95
2024	\$97.47	\$57.77	\$39.70	\$95.20	\$55.65	\$39.55	\$106.99	\$60.50	\$46.50	\$106.23	\$60.19	\$46.04
2025	\$97.70	\$49.92	\$47.78	\$94.76	\$47.16	\$47.60	\$106.94	\$50.65	\$56.29	\$106.24	\$50.52	\$55.72
2026	\$48.45	\$42.14	\$6.31	\$46.81	\$40.50	\$6.31	\$41.50	\$35.19	\$6.31	\$41.80	\$35.49	\$6.31
2027	\$51.49	\$42.78	\$8.71	\$49.47	\$40.76	\$8.71	\$42.95	\$34.24	\$8.71	\$43.25	\$34.55	\$8.71
2028	\$53.15	\$43.81	\$9.34	\$51.00	\$41.66	\$9.34	\$44.52	\$35.18	\$9.34	\$44.83	\$35.50	\$9.34
2029	\$54.63	\$44.66	\$9.97	\$54.15	\$44.18	\$9.97	\$47.79	\$37.82	\$9.97	\$48.11	\$38.14	\$9.97
2030	\$55.17	\$44.88	\$10.29	\$54.86	\$44.58	\$10.29	\$48.04	\$37.76	\$10.29	\$48.37	\$38.09	\$10.29
2031	\$57.24	\$46.32	\$10.92	\$58.12	\$47.20	\$10.92	\$50.32	\$39.40	\$10.92	\$50.65	\$39.73	\$10.92
2032	\$59.70	\$47.46	\$12.24	\$60.44	\$48.20	\$12.24	\$52.56	\$40.32	\$12.24	\$52.90	\$40.66	\$12.24
2033	\$61.60	\$49.04	\$12.56	\$62.85	\$50.30	\$12.56	\$54.46	\$41.91	\$12.56	\$54.81	\$42.26	\$12.56
2034	\$63.63	\$50.69	\$12.94	\$64.96	\$52.03	\$12.94	\$56.35	\$43.41	\$12.94	\$56.70	\$43.77	\$12.94
2035	\$64.35	\$51.73	\$12.62	\$65.67	\$53.05	\$12.62	\$56.89	\$44.27	\$12.62	\$57.26	\$44.64	\$12.62
2036	\$65.70	\$53.27	\$12.43	\$67.08	\$54.65	\$12.43	\$58.10	\$45.67	\$12.43	\$58.47	\$46.04	\$12.43
2037	\$68.46	\$55.40	\$13.06	\$69.98	\$56.92	\$13.06	\$60.77	\$47.71	\$13.06	\$61.15	\$48.09	\$13.06
2038	\$71.28	\$57.97	\$13.31	\$72.85	\$59.53	\$13.31	\$63.43	\$50.12	\$13.31	\$63.82	\$50.51	\$13.31
2039	\$73.93	\$60.62	\$13.31	\$75.53	\$62.21	\$13.31	\$65.91	\$52.60	\$13.31	\$66.30	\$52.99	\$13.31
2040	\$77.03	\$63.21	\$13.82	\$78.55	\$64.73	\$13.82	\$68.54	\$54.72	\$13.82	\$68.94	\$55.12	\$13.82

15 Year Nominal Levelized Price (\$/MWh) at 6.880% Discount Rate (1)

2023 - 2037	\$70.19	\$49.51	\$20.68	\$69.33	\$48.71	\$20.62	\$67.77	\$44.52	\$23.25	\$67.75	\$44.67	\$23.08
2024 - 2038	\$65.79	\$48.64	\$17.15	\$65.24	\$48.12	\$17.12	\$61.64	\$42.98	\$18.66	\$61.76	\$43.20	\$18.56

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Table 8
Comparison between Proposed and Current Renewable Standard Fixed Avoided Costs
\$/MWh

Year	Year	Proposed	Eff. 7/1/2022	Difference	Proposed	Eff. 7/1/2022	Difference	Proposed	Eff. 7/1/2022	Difference	Proposed	Eff. 7/1/2022	Difference	Wind Integration Cost	Solar Integration Cost	
		Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard	Renewable Standard			Renewable Standard
		Base Load QF	Base Load QF	Base Load QF	Wind QF (2)	Wind QF (2)	Wind QF (2)	Fixed Solar QF (2)	Fixed Solar QF (2)	Fixed Solar QF (2)	Tracking Solar QF (2)	Tracking Solar QF (2)	Tracking Solar QF (2)			
2023	2023	\$110.94	\$60.63	\$50.31	\$108.22	\$58.15	\$50.07	\$122.40	\$60.69	\$61.71	\$121.23	\$60.29	\$60.95	\$2.35	\$6.07	
2024	2024	\$97.47	\$57.77	\$39.70	\$95.20	\$55.65	\$39.55	\$106.99	\$60.50	\$46.50	\$106.23	\$60.19	\$46.04	\$2.03	\$1.92	
2025	2025	\$97.70	\$49.92	\$47.78	\$94.76	\$47.16	\$47.60	\$106.94	\$50.65	\$56.29	\$106.24	\$50.52	\$55.72	\$2.72	\$1.22	
2026	2026	\$43.87	\$51.20	(\$7.33)	\$34.39	\$41.78	(\$7.39)	\$25.97	\$30.50	(\$4.53)	\$28.85	\$33.57	(\$4.72)	\$2.88	\$0.91	
2027	2027	\$45.16	\$52.64	(\$7.48)	\$35.17	\$42.68	(\$7.52)	\$23.97	\$29.87	(\$5.90)	\$27.02	\$33.02	(\$6.01)	\$3.28	\$2.37	
2028	2028	\$46.25	\$53.88	(\$7.63)	\$35.96	\$43.61	(\$7.66)	\$24.24	\$30.63	(\$6.40)	\$27.37	\$33.85	(\$6.48)	\$3.44	\$2.32	
2029	2029	\$45.53	\$53.31	(\$7.79)	\$36.74	\$44.54	(\$7.80)	\$24.71	\$31.59	(\$6.88)	\$27.93	\$34.88	(\$6.94)	\$1.80	\$0.40	
2030	2030	\$46.30	\$54.26	(\$7.96)	\$37.51	\$45.49	(\$7.98)	\$24.66	\$31.76	(\$7.11)	\$27.97	\$35.13	(\$7.16)	\$1.65	\$0.54	
2031	2031	\$46.13	\$54.25	(\$8.12)	\$38.34	\$46.49	(\$8.15)	\$24.50	\$31.62	(\$7.13)	\$27.87	\$35.06	(\$7.19)	\$0.50	\$0.20	
2032	2032	\$47.27	\$55.56	(\$8.29)	\$39.18	\$47.48	(\$8.30)	\$24.61	\$32.36	(\$7.75)	\$28.09	\$35.88	(\$7.79)	\$0.66	\$0.27	
2033	2033	\$47.78	\$56.26	(\$8.48)	\$40.02	\$48.51	(\$8.49)	\$24.27	\$32.38	(\$8.10)	\$27.86	\$35.99	(\$8.13)	\$0.18	\$0.12	
2034	2034	\$48.76	\$57.44	(\$8.69)	\$40.87	\$49.57	(\$8.70)	\$24.75	\$32.90	(\$8.15)	\$28.41	\$36.60	(\$8.19)	\$0.13	\$0.12	
2035	2035	\$49.88	\$58.68	(\$8.80)	\$41.78	\$50.60	(\$8.83)	\$25.77	\$33.29	(\$7.52)	\$29.48	\$37.09	(\$7.61)	\$0.17	\$0.13	
2036	2036	\$50.92	\$59.94	(\$9.02)	\$42.65	\$51.72	(\$9.07)	\$27.26	\$33.92	(\$6.66)	\$30.99	\$37.81	(\$6.82)	\$0.15	\$0.12	
2037	2037	\$51.90	\$61.09	(\$9.20)	\$43.58	\$52.82	(\$9.23)	\$27.04	\$34.56	(\$7.52)	\$30.90	\$38.53	(\$7.63)	\$0.03	\$0.05	
2038	2038	\$53.00	\$62.42	(\$9.42)	\$44.52	\$53.98	(\$9.46)	\$27.47	\$35.04	(\$7.57)	\$31.43	\$39.12	(\$7.69)	\$0.03	\$0.05	
2039	2039	\$54.14	\$63.74	(\$9.60)	\$45.47	\$55.11	(\$9.64)	\$28.00	\$35.69	(\$7.70)	\$32.04	\$39.87	(\$7.82)	\$0.03	\$0.05	
2040	2040	\$55.44	\$65.21	(\$9.76)	\$46.47	\$56.28	(\$9.81)	\$29.15	\$36.50	(\$7.34)	\$33.24	\$40.74	(\$7.51)	\$0.14	\$0.35	
15 Year Nomin	15 Year Nominal Levelized Price (\$/MWh) at 6.880% Discount Rate (1)													Discount Rate - 2021 IRP	6.880%	
2023 - 2037	2023 - 2037	\$62.84	\$55.44	\$7.40	\$55.82	\$48.49	\$7.33	\$50.08	\$39.18	\$10.90	\$52.22	\$41.55	\$10.67			
2024 - 2038	2024 - 2038	\$57.20	\$55.15	\$2.05	\$49.66	\$47.66	\$2.00	\$41.29	\$36.67	\$4.62	\$43.86	\$39.41	\$4.45			

(1) Discount Rate - 2021 IRP. Levelized values are for informational purposes only.

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If the QF resource is not in PacifiCorp's BAA, prices will be increased by the applicable inte

If the QF resource is not in PacifiCorp's BAA, prices will be increased by the applicable integration charges

**Table 9
Total Cost of Displaceable Resources**

Year	Estimated Capital Cost \$/kW	Fixed Capital Cost at Real Levelized Rate \$/kW-yr	Fixed O&M \$/kW-yr	Variable O&M \$/MWh	Total O&M at Expected CF \$/kW-yr	Total Resource Fixed Costs \$/kW-yr
	(a)	(b)	(c)	(d)	(e)	(f)

227 MW - SCCT Frame "F" x1 - (1,500')

2020	\$738	\$52.00	\$33.71	\$16.92	\$33.71	\$85.71
2021		\$53.12	\$34.43	\$17.29	\$34.43	\$87.55
2022		\$54.26	\$35.17	\$17.66	\$35.17	\$89.43
2023		\$55.43	\$35.93	\$18.04	\$35.93	\$91.36
2024		\$56.62	\$36.70	\$18.43	\$36.70	\$93.32
2025		\$57.84	\$37.49	\$18.83	\$37.49	\$95.33
2026		\$59.09	\$38.30	\$19.24	\$38.30	\$97.39
2027		\$60.36	\$39.13	\$19.65	\$39.13	\$99.49
2028		\$61.66	\$39.97	\$20.07	\$39.97	\$101.63
2029		\$62.99	\$40.83	\$20.50	\$40.83	\$103.82
2030		\$64.35	\$41.71	\$20.94	\$41.71	\$106.06
2031		\$65.74	\$42.61	\$21.39	\$42.61	\$108.35
2032		\$67.16	\$43.53	\$21.85	\$43.53	\$110.69
2033		\$68.61	\$44.47	\$22.32	\$44.47	\$113.08
2034		\$70.09	\$45.43	\$22.80	\$45.43	\$115.52
2035		\$71.60	\$46.41	\$23.29	\$46.41	\$118.01
2036		\$73.14	\$47.41	\$23.79	\$47.41	\$120.55
2037		\$74.72	\$48.43	\$24.30	\$48.43	\$123.15
2038		\$76.33	\$49.47	\$24.82	\$49.47	\$125.80
2039		\$77.97	\$50.54	\$25.35	\$50.54	\$128.51
2040		\$79.65	\$51.63	\$25.90	\$51.63	\$131.28
2041		\$81.37	\$52.74	\$26.46	\$52.74	\$134.11
2042		\$83.12	\$53.88	\$27.03	\$53.88	\$137.00

Source: (a)(c)(d) Plant Costs - 2021 IRP - Table 7.1 & 7.2
 (b) = (a) x 7.049%
 (e) = (d) x (8.76 x %) + (c)
 (f) = (b) + (e)

227 MW - SCCT Frame "F" x1 - (1,500')

2020 \$	\$738	Plant capacity cost	\$/kW
2020 \$	\$0.00	Fixed O&M & Capitalized O&M	\$/kW-yr
2020 \$	<u>\$33.71</u>	Fixed Pipeline	\$/kW-yr
2020 \$	\$33.71	Fixed O&M Including Fixed Pipeline & Capitalized O&M (†)	\$/kW-yr
2020 \$	\$	16.92 Variable O&M and Other Costs	\$/MWh
	7.049%	Payment Factor	
	0%	Capacity Factor	
	2.155%	Inflation: 2021 IRP	

**Table 9
Total Cost of Displaceable Resources**

Year	Estimated Capital Cost \$/kW	Fixed Capital Cost at Real Levelized Rate \$/kW-yr	Fixed O&M \$/kW-yr	Variable O&M \$/MWh	Total O&M at Expected CF \$/kW-yr	Total Resource Fixed Costs \$/kW-yr	Fuel Cost \$/MMBtu	IRP Resource Energy Cost \$/MWh	Total Avoided Costs \$/MWh
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)

645 MW - CCCT Dry "J", 1x1 - West Side Resource (1,500')

2020	\$1,054	\$72.58	\$41.25	\$1.70	\$51.90	\$124.48			
2021		\$74.14	\$42.14	\$1.74	\$53.04	\$127.18			
2022		\$75.74	\$43.05	\$1.78	\$54.20	\$129.94			
2023		\$77.37	\$43.98	\$1.82	\$55.38	\$132.75			
2024		\$79.04	\$44.93	\$1.86	\$56.58	\$135.62			
2025		\$80.74	\$45.90	\$1.90	\$57.80	\$138.54			
2026		\$82.48	\$46.89	\$1.94	\$59.04	\$141.52	\$4.80	\$30.29	\$52.88
2027		\$84.26	\$47.90	\$1.98	\$60.30	\$144.56	\$5.22	\$32.94	\$56.02
2028		\$86.08	\$48.93	\$2.02	\$61.58	\$147.66	\$5.42	\$34.20	\$57.78
2029		\$87.94	\$49.98	\$2.06	\$62.88	\$150.82	\$5.59	\$35.27	\$59.35
2030		\$89.84	\$51.06	\$2.10	\$64.21	\$154.05	\$5.61	\$35.40	\$60.00
2031		\$91.78	\$52.16	\$2.15	\$65.63	\$157.41	\$5.87	\$37.04	\$62.17
2032		\$93.76	\$53.28	\$2.20	\$67.06	\$160.82	\$6.19	\$39.06	\$64.74
2033		\$95.78	\$54.43	\$2.25	\$68.52	\$164.30	\$6.42	\$40.51	\$66.74
2034		\$97.84	\$55.60	\$2.30	\$70.01	\$167.85	\$6.67	\$42.09	\$68.89
2035		\$99.95	\$56.80	\$2.35	\$71.52	\$171.47	\$6.71	\$42.34	\$69.72
2036		\$102.10	\$58.02	\$2.40	\$73.05	\$175.15	\$6.85	\$43.22	\$71.18
2037		\$104.30	\$59.27	\$2.45	\$74.62	\$178.92	\$7.21	\$45.50	\$74.07
2038		\$106.55	\$60.55	\$2.50	\$76.21	\$182.76	\$7.58	\$47.83	\$77.01
2039		\$108.85	\$61.85	\$2.55	\$77.82	\$186.67	\$7.92	\$49.98	\$79.78
2040		\$111.20	\$63.18	\$2.60	\$79.46	\$190.66	\$8.33	\$52.56	\$83.00
2041		\$113.60	\$64.54	\$2.66	\$81.20	\$194.80	\$8.51	\$53.70	\$84.80
2042		\$116.05	\$65.93	\$2.72	\$82.97	\$199.02	\$8.69	\$54.85	\$86.63

**Table 9
Total Cost of Displaceable Resources**

Sources, Inputs and Assumptions

- Source: (a)(c)(d) Plant Costs - 2021 IRP - Table 7.1 & 7.2
 (b) = (a) x 6.886%
 (e) = (d) x (8.76 x 71.5%) + (c)
 (f) = (b) + (e)
 (g) Gas Price Forecast
 (h) = 6310 x (g) / 1000
 (i) = (f) / (8.76 x 'Capacity Factor') + (h)

645 MW - CCCT Dry "J", 1x1 - West Side Resource (1,500')

CCCT Statistics	MW	Percent	Cap Cost	Fixed
CCCT (Dry "J" 1x1)	582	90.2%	\$ 1,125	\$42.66
CCCT Duct Firing (Dry "J" 1x1)	<u>63</u>	<u>9.8%</u>	<u>\$ 397</u>	<u>\$28.24</u>
Capacity Weighted	645	100.0%	\$1,054	\$41.25

CCCT Statistics	MW	CF	aMW	Percent	Variable	Heat Rate
CCCT (Dry "J" 1x1)	582	78.0%	454	98.4%	\$1.73	6,264
CCCT Duct Firing (Dry "J" 1x1)	<u>63</u>	<u>12.0%</u>	<u>8</u>	<u>1.6%</u>	<u>\$0.06</u>	<u>8,816</u>
Energy Weighted	645	71.5%	461	100.0%	\$1.70	6,310

Rounded

Source: Plant Costs - 2021 IRP - Table 7.1 & 7.2. 2020\$
 \$19.48 \$5.07 Fixed O&M & Capitalized O&M
 \$23.17 \$23.17 Fixed Pipeline

Source: Plant Costs - 2019 IRP - Table 6.1 & 6.2. 2018\$
 18.67 4.86

6.886% Payment Factor
 100.0% Capacity Factor - On-peak 71.5% / 56.0% (percent of hours on-peak)
 2.155% Inflation: 2021 IRP

Table 10
Gas Price Forecast
\$/MMBtu

Year	Burner tip West Side Gas Fuel Cost
2023	\$4.77
2024	\$4.01
2025	\$4.43
2026	\$4.80
2027	\$5.22
2028	\$5.42
2029	\$5.59
2030	\$5.61
2031	\$5.87
2032	\$6.19
2033	\$6.42
2034	\$6.67
2035	\$6.71
2036	\$6.85
2037	\$7.21
2038	\$7.58
2039	\$7.92
2040	\$8.33
2041	\$8.51
2042	\$8.69

Source

2023-2040: Official Market Price Forecast dated March 2023

2041+: Escalated at Inflation

2.155% Inflation: 2021 IRP Volume I. Chapter 8. Pg. 226.

**Table 11
Integration Cost**

Year	Wind Integration Cost	Solar Integration Cost
	\$/MWh	\$/MWh
2023	\$2.35	\$6.07
2024	\$2.03	\$1.92
2025	\$2.72	\$1.22
2026	\$2.88	\$0.91
2027	\$3.28	\$2.37
2028	\$3.44	\$2.32
2029	\$1.80	\$0.40
2030	\$1.65	\$0.54
2031	\$0.50	\$0.20
2032	\$0.66	\$0.27
2033	\$0.18	\$0.12
2034	\$0.13	\$0.12
2035	\$0.17	\$0.13
2036	\$0.15	\$0.12
2037	\$0.03	\$0.05
2038	\$0.03	\$0.05
2039	\$0.03	\$0.05
2040	\$0.14	\$0.35
2041	\$0.15	\$0.35
2042	\$0.15	\$0.36

Source:

2023-2040 2021 IRP - Appendix F - Flexible Reserve Study

2041+: Escalated at Inflation

2.155% Inflation: 2021 IRP Volume I. Chapter 8. Pg. 226.

**Table 12
2021 IRP West Wind Resource
37% Capacity Factor**

Year	Estimated Capital Cost	Fixed Capital Cost at Real Levelized Rate	Fixed O&M	Fixed Costs	Variable O&M	100% PTC	Avoided Cost (excluding Integration Cost)	Total Resource Costs	Integration Cost
	\$/kW	\$/kW-yr	\$/kW-yr	\$/MWh	\$/MWh	\$/MWh	\$/MWh	\$/kW-yr	\$/MWh
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(h)

2021 IRP West Wind Resource - 37% Capacity Factor

2020						(\$16.12)			
2021						(\$16.47)			
2022						(\$16.82)			
2023						(\$17.18)			
2024						(\$17.55)			
2025						(\$17.93)			
2026	\$1,485	\$103.62	\$67.89	\$52.77	\$0.00	(\$18.32)	\$34.45	\$111.96	\$2.88
2027		\$105.85	\$69.35	\$53.91	\$0.00	(\$18.71)	\$35.20	\$114.39	\$3.28
2028		\$108.13	\$70.84	\$55.07	\$0.00	(\$19.11)	\$35.96	\$116.86	\$3.44
2029		\$110.46	\$72.37	\$56.26	\$0.00	(\$19.52)	\$36.74	\$119.39	\$1.80
2030		\$112.84	\$73.93	\$57.47	\$0.00	(\$19.94)	\$37.53	\$121.97	\$1.65
2031		\$115.27	\$75.52	\$58.71	\$0.00	(\$20.37)	\$38.34	\$124.59	\$0.50
2032		\$117.75	\$77.15	\$59.97	\$0.00	(\$20.81)	\$39.16	\$127.27	\$0.66
2033		\$120.29	\$78.81	\$61.26	\$0.00	(\$21.26)	\$40.00	\$130.01	\$0.18
2034		\$122.88	\$80.51	\$62.58	\$0.00	(\$21.72)	\$40.86	\$132.80	\$0.13
2035		\$125.53	\$82.24	\$63.93	\$0.00	(\$22.19)	\$41.74	\$135.65	\$0.17
2036		\$128.24	\$84.01	\$65.31	\$0.00	(\$22.67)	\$42.64	\$138.57	\$0.15
2037		\$131.00	\$85.82	\$66.71	\$0.00	(\$23.16)	\$43.55	\$141.55	\$0.03
2038		\$133.82	\$87.67	\$68.15	\$0.00	(\$23.66)	\$44.49	\$144.60	\$0.03
2039		\$136.70	\$89.56	\$69.62	\$0.00	(\$24.17)	\$45.45	\$147.71	\$0.03
2040		\$139.65	\$91.49	\$71.12	\$0.00	(\$24.69)	\$46.43	\$150.90	\$0.14
2041		\$142.66	\$93.46	\$72.65	\$0.00	(\$25.22)	\$47.43	\$154.16	\$0.15
2042		\$145.73	\$95.47	\$74.22	\$0.00	(\$25.76)	\$48.46	\$157.48	\$0.15

Sources, Inputs and Assumptions

Source:	(c)(f)	Supply-side Resource Table
	(a)	Plant capacity cost, with resource-specific escalation
	(b)	= (a) x 6.979%
	(d)	= ((b) + (c)) / (8.76 x 37.1%)
	(g)	= (d) + (f)
	(h)	Table 11

2021 IRP West Wind Resource - 37% Capacity Factor					
Wind		Cost and Input Assumptions			
		130	615		MW
2026\$	\$1,485	\$1,418	\$1,499		Plant capacity cost \$/kW-yr
2026\$	\$67.89	\$67.89	\$67.89		Fixed O&M, plus on-g \$/kW-yr
		17%	83%		Variable O&M \$/MWh
2020 \$	\$	(16.12)			\$/MWh (100% PTC)
		41.2%			Capacity Contribution
		6.979%			Payment Factor
		37%			Capacity Factor
		2.155%			Inflation: 2021 IRP

Table 13
2021 IRP Wind Resource
Adjusted to On-Peak / Off-Peak Prices

Year	Renewable Avoided Resource Cost	On-Peak / Off-Peak Factors		On-Peak Renewable Avoided Resource Cost	Off-Peak Renewable Avoided Resource Cost
	\$/MWH	On-Peak	Off-Peak	On-Peak	Off-Peak
	(a)	(b)	(c)	(d) (a) x (b)	(e) (a) x (c)
2024	\$0.00	1.1741	0.7788	\$0.00	\$0.00
2025	\$0.00	1.1534	0.8057	\$0.00	\$0.00
2026	\$34.45	1.1310	0.8329	\$38.96	\$28.70
2027	\$35.20	1.0658	0.9162	\$37.51	\$32.25
2028	\$35.96	1.0459	0.9426	\$37.61	\$33.90
2029	\$36.74	1.0329	0.9592	\$37.94	\$35.24
2030	\$37.53	1.0223	0.9716	\$38.36	\$36.46
2031	\$38.34	1.0277	0.9658	\$39.40	\$37.02
2032	\$39.16	1.0077	0.9916	\$39.46	\$38.83
2033	\$40.00	0.9873	1.0170	\$39.49	\$40.68
2034	\$40.86	0.9872	1.0165	\$40.34	\$41.54
2035	\$41.74	1.0041	0.9968	\$41.91	\$41.61
2036	\$42.64	1.0393	0.9517	\$44.31	\$40.58
2037	\$43.55	1.0119	0.9869	\$44.07	\$42.98
2038	\$44.49	1.0067	0.9930	\$44.79	\$44.18
2039	\$45.45	1.0044	0.9955	\$45.65	\$45.25
2040	\$46.43	1.0290	0.9654	\$47.78	\$44.83
2041	\$47.43	1.0147	0.9809	\$48.13	\$46.53
2042	\$48.46	1.0790	0.9007	\$52.29	\$43.64

Columns

- (a) Table 12 Column (g)
- (b) Ratio blended market On-Peak to annual prices
- (c) Ratio blended market Off-Peak to annual prices

Table 14
2021 IRP Capacity Contribution Values

	Capacity Factor (%)	Capacity Contribution (%)		
	Annual	Summer	Winter	Annual
Tracking Solar				
Idaho Falls, ID	28%	14%	7%	13%
Lakeview, OR	29%	13%	18%	14%
Milford, UT	32%	15%	7%	14%
Yakima, WA	25%	9%	4%	8%
Rock Springs, WY	30%	14%	13%	14%
Wind				
Pocatello, ID	37%	33%	39%	34%
Arlington, OR	37%	46%	17%	41%
Monticello, UT	29%	14%	42%	19%
Goldendale, WA	37%	47%	21%	43%
Medicine Bow, WY	44%	30%	32%	31%

Source: 2021 IRP, Table K.1 – Final CF Method Capacity Contribution Values for Wind, Solar, and Storage

Fixed Tilt Solar				
Oregon	25%	11%	14%	11%

Source: 2021 IRP, Final CF Method inputs applied to OR Fixed-Tilt Solar Profile

	Capacity Factor (%)	Capacity Contribution (%)		
	Annual	S	W	Annual
Solar & Storage				
Idaho Falls, ID	28%	81%	92%	83%
Lakeview, OR	29%	82%	93%	84%
Milford, UT	32%	80%	95%	83%
Yakima, WA	25%	79%	91%	81%
Rock Springs, WY	30%	80%	94%	83%

Source: 2021 IRP, Table K.2 – Final CF Method Capacity Contribution Values for Wind, Solar, and Storage

Seasonal Contribution Weighting	83%	17%
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Source: 2021 IRP, Appendix K workpapers

PACIFIC POWER
AVOIDED COST CALCULATION

STANDARD RATES FOR AVOIDED COST PURCHASES FROM
ELIGIBLE QUALIFYING FACILITIES

OREGON – APRIL 2023

**PACIFIC POWER
AVOIDED COST CALCULATION**

**STANDARD RATES FOR AVOIDED COST PURCHASES FROM ELIGIBLE
QUALIFYING FACILITIES**

OREGON – APRIL 2023

Standard avoided cost rates are paid to eligible small qualifying facilities (QFs). Oregon avoided cost filing requirements as listed in OAR 860-029-0040 and 860-029-0080 require the Company to file updated avoided costs at least every two years. The Commission Order No. 14-058 requires the Oregon investor owned utilities to update avoided cost prices annually on May 1 of each year and within 30-days of Integrated Resource Plan (IRP) acknowledgment. Annual updates, filed on May 1 of each year, are required to update the following data inputs: (1) natural gas prices; (2) on-peak and off-peak forward looking electricity market prices; (3) production tax credit status; and (4) any other action or change in an acknowledged IRP relevant to the calculation of avoided costs.

The last Oregon avoided costs were approved effective on July 1, 2022. This filing reflects an annual update to forecasted prices for natural gas and electricity and changes production tax credit amounts resulting from the Inflation Reduction Act of 2022.

Sufficiency and Deficiency Periods

In Docket UM 1396 Order No. 10-488, the Commission directed that the start date of the first “major resource acquisition” in the action plan of the IRP determines the resource “sufficiency” and “deficiency” periods to be used in calculations of standard avoided cost prices. The sufficiency and deficiency periods used in this filing are based on the 2021 IRP filing.

Table 1 presents the 2021 IRP Preferred Portfolio. Table 1 shows that the first “major resource acquisition” is a utility scale renewable wind and solar resources in 2026 and there is no acquisition of non-renewable Simple Cycle Combustion Turbine (SCCT) or Combine Cycle Combustion Turbine (CCCT). Therefore, the resource sufficiency period for the standard avoided cost rates is from 2022-2025 and the non-renewable and renewable resource deficiency period starts in 2026.

Avoided Cost Calculation

Based on the 2021 IRP preferred portfolio shown in **Table 1**, the standard avoided cost calculation is separated into two distinct periods: (1) Standard non-renewable resource sufficiency period (2022 through 2025); and (2) Standard non-renewable resource deficiency period (2026 and beyond). During the non-renewable resource sufficiency period (2022 through 2025), standard avoided energy costs are based on blended market

prices. Market prices from the Company's Official Forward Price Curve are weighted by market transactions required to support the addition of an assumed 50 MW Oregon Qualified Facility. To calculate the weighting, two production cost studies are prepared. The only difference between the two studies is an assumed 50 aMW, zero running cost resource. System balancing sales and purchase volumes are extracted from both studies and the change between the two studies is calculated for each market hub. This volume impact is used to weight the Company's Official Market Price Forecast on-peak and off-peak market prices for California-Oregon Border (COB), Mid-Columbia, and Palo Verde for each month. **Table 2** shows the result of this calculation.

The sufficiency period for standard renewable rates is 2023-2025 and the standard renewable resource deficiency period starts in 2026. During the renewable resource sufficiency period (2023-2025), the renewable avoided energy costs are based on blended market prices.

During the non-renewable resource deficiency period, the avoided costs are based on the fixed and variable costs of a CCCT proxy resource that could be avoided or deferred. The capacity and fixed costs of CCCT proxy resource used to set standard avoided cost rates is the west side CCCT from the 2021 IRP Supply Side Table.¹

Since CCCTs are built as base load units that provide both capacity and energy, it is appropriate to split the fixed costs of this unit into capacity and energy components. The fixed cost of a simple cycle combustion turbine (SCCT), which is usually acquired as a capacity resource, defines the portion of the fixed cost of the CCCT that is assigned to capacity.² Fixed costs associated with the construction of a CCCT which are in excess of SCCT costs are assigned to energy and are added to the variable production (fuel) cost of the CCCT to determine the total avoided energy costs. **Table 3** shows the capitalized energy costs, which are calculated based on the difference between fixed costs of CCCT and SCCT. The fuel cost of the CCCT defines the avoided variable energy costs. The gas price forecast used as the basis for the CCCT fuel cost is discussed later in this document.

During the standard renewable resource deficiency period, the standard renewable avoided cost prices are based on resource costs of a renewable West side proxy wind resource from 2021 IRP Supply Side Table.³ The standard renewable on-peak price also includes a capacity adder calculated based on the fixed costs of the SCCT adjusted by the incremental capacity contribution of the QF resource relative to the avoided renewable proxy resource. The capacity adder is allocated to on peak hours by using the on peak capacity factor of the QF resource.

¹ 645 MW CCCT (Dry "J" 1x1 and associated Duct Firing (DF) capability) - West Side Resource (1500') – as listed in Tables 7.1 and 7.2 of the 2021 IRP. Fuel costs are from the Company's March 2022 Official Forward Price Curve (2203 OFPC).

² SCCT Frame ("F"x1) – West Side (1,500'), as listed in Tables 7.1 and 7.2 of the 2021 IRP.

³ West Side Wind turbine 37% CF, as listed in Tables 7.1 and 7.2 of the 2021 IRP. This resource is selected in 2026 in the 2021 IRP preferred portfolio.

Table 4 shows the CCCT fuel cost, the addition of capitalized energy costs at an assumed 70.5% capacity factor, and the total avoided energy costs.

Because energy generated by a QF may vary, total standard avoided costs are calculated at 75%, 85% and 90% capacity factor to illustrate the impact of differing generation levels. This calculation is shown in **Table 5**.

Standard avoided costs are differentiated between on-peak and off-peak periods, with capacity costs allocated to on-peak periods. On an annual basis, approximately 56% of all hours are on-peak and 44% are off-peak. **Table 6** shows the calculation of on-peak and off-peak avoided energy prices.

For informational purposes, **Tables 7 and 8** show a comparison between the current approved avoided costs and the proposed avoided costs after incorporating updates.

Table 9 shows the calculation of the total fixed costs and fuel costs of the CCCT and SCCT that are used in **Table 3** and **Table 4**. In this filing, the Company's thermal proxy resource is a CCCT located on the west side of the Company's system. Current Commission approved standard non-renewable avoided costs are also based upon a CCCT located on the west side of the Company's system. The costs of SCCT and CCCT resources are based on the 2021 Supply Side Table⁴.

Gas Price Forecast

Gas prices used in this filing utilize the Company's March 2023 Official Forward Price Curve (2303 OFPC). **Table 10** shows the natural gas price used in this avoided cost calculation.

Table 11 shows wind and solar integration costs used in 2021 IRP.

Table 12 shows the calculation of total resource cost of the renewable proxy wind plant in Wyoming. The capacity costs, fixed O&M plus on-going capital costs, variable O&M, and capacity factor values of the West Wind resource reflect assumptions from the 2021 IRP Supply Side Table.⁴ At the time the 2021 IRP was prepared, this resource was expected to qualify for a 60% production tax credit (PTC), with its expected in-service date by 2026. As a result of the Inflation Reduction Act of 2022, the proxy renewable proxy wind resource is now assumed to be eligible for a 100% PTC for the purpose of determining avoided cost prices. The total cost of the proxy wind resource is used in the calculation of standard renewable avoided cost rates as shown in "**Exhibits 5 through 8**".

⁴ 2021 IRP Supply side Resource Options, PacifiCorp 2021 IRP, Volume I, Chapter 7, Table 7.1 and Table 7.2.

Table 13 shows the calculation of on-peak and off-peak standard renewable avoided cost prices by applying on-peak and off-peak factors. On-peak and off-peak factors are calculated as a ratio of the average annual on-peak Mid-C market price to the flat Mid-C market price.

Exhibit 1- Std Base Load QF tab shows the calculation of proposed standard avoided cost rates for a base load QF. On and off-peak avoided cost rates are based on blended market rates for 2023-2025. For 2026 and beyond, the off-peak price is based on the fuel and capitalized energy cost of the CCCT proxy. The on-peak price also includes a capacity adder based on the fixed costs of the SCCT proxy (in \$/kW-yr). The adjusted capacity adder in \$/kW-yr is allocated to on peak hours by using the on peak capacity factor of the base load QF resource, which is assumed to be equal to on peak capacity factor of the CCCT proxy resource.

Exhibit 2- Std Wind QF tab shows the calculation of proposed standard avoided cost rates for a wind QF. On and off-peak avoided cost rates are based on blended market rates for 2023-2026. For 2026 and beyond, the off-peak price is based on the fuel and capitalized energy cost of the CCCT proxy. The on-peak price also includes a capacity adder calculated based on fixed costs of a SCCT (in \$/kW-yr) adjusted by the expected capacity contribution of a wind QF from the 2021 IRP (Oregon Wind: 41.2%), as shown in **Table 14**. The adjusted capacity adder (in \$/kW-yr) is allocated to on-peak hours using the on-peak capacity factor of a west side wind QF resource. Standard avoided cost rates for a wind QF are reduced by the annual wind integration charges from **Table 11**.

Exhibits 3 & 4- Std Solar QF tab shows the calculation of proposed standard avoided cost rates for a solar QF. On and off-peak avoided cost rates are based on blended market rates for 2023-2025. For 2026 and beyond, the off-peak price is based on the fuel and capitalized energy cost of the CCCT proxy. The on-peak price also includes a capacity adder calculated based on the fixed costs of a SCCT (in \$/kW-yr) adjusted by expected capacity contribution of a solar QF based on the 2021 IRP (Oregon fixed solar: 11.4%, Oregon tracking solar: 14.2%), as shown in **Table 14**. The adjusted capacity adder (in \$/kW-yr) is allocated to on peak hours by using the on peak capacity factor of a solar QF resource. Standard avoided cost rates for a solar QF are reduced by the annual solar integration charges from **Table 11**.

Exhibit 5- Renewable Base Load tab shows the calculation of proposed standard renewable avoided cost rates for renewable base load QF. For 2023-2025, on- and off-peak renewable avoided cost rates are based on blended market rates. For 2026 and beyond, on- and off-peak prices are based on on-peak and off-peak prices of the renewable wind proxy resource as calculated in **Table 12 and Table 13** with resource costs from the 2021 IRP Supply Side Table. Starting in 2026, the standard renewable on-peak price also includes a capacity adjustment based on the fixed costs of the SCCT (in \$/kW-yr) and the incremental capacity contribution of a renewable Base Load QF relative to the avoided renewable proxy resource, as shown in **Table 14**. The fixed costs of the

SCCT are based on the 2021 IRP Supply Side Table. The adjusted capacity adder in \$/kW-yr is allocated to on-peak hours by using the on-peak capacity factor of a base load QF resource. Rates are increased during the renewable resource deficiency period by the avoided wind integration charge from **Table 11**.

Exhibit 6- Renewable Wind tab shows the calculation of proposed standard renewable avoided cost rates for a wind QF. On- and off-peak renewable avoided cost rates are based on blended market rates for 2023-2025. For 2026 and beyond, on- and off-peak prices are based on on-peak and off-peak prices of the renewable wind proxy resource as calculated in **Table 12 and Table 13** reflecting resource costs from the 2021 IRP Supply Side Table. Starting in 2026, the standard renewable on-peak price also includes a capacity adjustment based on the fixed costs of the SCCT (in \$/kW-yr) and the incremental capacity contribution of an Oregon Wind QF relative to the capacity contribution of the avoided renewable proxy resource, as shown in **Table 14**. The fixed costs of the SCCT are based on the 2021 IRP Supply Side Table. The adjusted capacity adder in \$/kW-yr is allocated to on-peak hours using the on-peak capacity factor of an Oregon wind QF resource. During the renewable resource sufficiency period of 2023-2025, the standard renewable avoided cost rates for a wind QF are reduced by the wind integration charge from **Table 11**.

Exhibits 7 & 8- Renewable Solar tab shows the calculation of proposed standard renewable avoided cost rates for a solar QFs. On- and off-peak renewable avoided cost rates are based on blended market rates for 2023-2025. For 2026 and beyond, on- and off-peak prices are based on on-peak and off-peak prices of the renewable wind proxy resource as calculated in **Table 12 and Table 13** reflecting resource costs from the 2021 IRP Supply Side Table. Starting in 2026, the standard renewable on-peak price also includes a capacity adjustment based on the fixed costs of the SCCT (in \$/kW-yr) and the incremental capacity contribution of Oregon Fixed and Tracking Solar QFs relative to the avoided renewable proxy resource, as shown in **Table 14**. The fixed costs of the SCCT are based on the 2021 IRP Supply Side Table. The adjusted capacity adder in \$/kW-yr is allocated to on-peak hours by using the on-peak capacity factors of the solar QF resource. During the renewable resource sufficiency period, the standard renewable avoided costs rates for fixed and tracking solar QF resources are reduced by solar integration charge from **Table 11**. During renewable resource deficiency period, the rates are adjusted by the difference in the avoided wind and incremental solar integration charges from **Table 11**.

Exhibit 9– Blending tab shows the market blending used to weight the Company’s Official Forward Price Curve on-peak and off-peak market prices at COB, Palo Verde and Mid-Columbia by month, which are used in the calculation of rates shown in **Table 2**.

**Docket UM 1729 / Compliance Filing
Minimum Filing Requirements
Public Utility Commission of Oregon (OPUC) Order No. 16-174 dated May 13, 2016**

I. Resource Sufficiency / Deficiency Demarcation

		Explanation	IRP Reference
1.	Non-renewable: Identify the demarcation year for the end of sufficiency period / start of deficiency period.	Deficiency starting in 2026.	Table 9.17 – 2021 IRP Preferred Portfolio, page 307
2.	Non-renewable: Identify the major resource to be acquired (>100 megawatts (MW) and longer than five years) at end of sufficiency period.		2021 IRP Supply Side Table 7.1 and 7.2, pages 169-183
3.	Renewable: Identify the demarcation year for the end of sufficiency period / start of deficiency period.	Deficiency starting in 2026	Table 9.17 – 2021 IRP Preferred Portfolio, page 307
4.	Renewable: Identify the major resource to be acquired (>100 MW and longer than five years) at end of sufficiency period.	West Side wind resource starting in 2026	2021 IRP Supply Side Table 7.1 and 7.2

**Docket UM 1729 / Compliance Filing
Minimum Filing Requirements
Public Utility Commission of Oregon (OPUC) Order No. 16-174 dated May 13, 2016**

II. Gas Price Forecast

		Explanation	IRP Reference
1.	Identify the source of the gas price forecast.	Official forward price curve (OFPC) dated March 2023	-
2.	If the forecast source differs from that used in the most recent approved avoided cost filing / explain the reason(s) for the change.	The Company updates its OFPC every quarter. The March 2023 OFPC was the most recent curve available at the time of this filing.	-
3.	Provide the yearly forecast price by year / and identify any rounding that has been applied.	Refer to the tabs entitled "Table 10" and "OFPC Source" of the "1_OR Standard QF AC Study_2023 04 24.xlsx"	-
4.	Quantify and describe the extent to which the gas price forecast differs from the most recent approved avoided cost filing, include a description of carbon cost / tax assumption(s).	<p>The Company updates its OFPC every quarter. The March 2023 OFPC was the most recent curve available at the time of this filing.</p> <p>Refer to the spreadsheet entitled "2_MFR - II.Gas Price Forecast_2023 04 25.xlsx" for the comparison of the gas price forecast.</p> <p>The current OFPC does not assume a federal carbon dioxide (CO₂) policy. This assumption is unchanged from the most recent approved avoided cost filing.</p>	<p>-</p> <p>-</p> <p>OFPC CO₂ policy: 2021 IRP, page 41</p>

Docket UM 1729 / Compliance Filing
Minimum Filing Requirements
Public Utility Commission of Oregon (OPUC) Order No. 16-174 dated May 13, 2016

III. Sufficiency Period Prices

		Explanation	IRP Reference
1.	List the market hub(s) used for market price projections, the source for the forward price curves, and any adjustments or blending used in deriving the sufficiency period prices.	Market prices for California-Oregon Border (COB), Mid-Columbia (Mid-C) and Palo Verde (PV) from the March 2023 OFPC are blended based on the change in system balancing purchases and sales using two the Generation and Regulation Initiative Decision Tool (GRID) runs - with and without a 50 MW qualifying facility (QF) resource.	-
2.	Provide the transmission costs assumed used in sufficiency period prices.	No transmission costs are incorporated in standard sufficiency period avoided cost pricing.	-
3.	Provide all other component(s) used to calculate sufficiency period prices.	Prices for wind and solar resources are adjusted to account for integration costs from the 2021 IRP. For the complete calculation of sufficiency period prices, refer to "1_OR Standard QF AC Study_2023 04 24.xlsx".	2021 IRP: Volume I: Table 7.1 and 7.2 on Page 169-183, Volume II: Figure F.11 on Page 145.

**Docket UM 1729 / Compliance Filing
Minimum Filing Requirements
Public Utility Commission of Oregon (OPUC) Order No. 16-174 dated May 13, 2016**

IV. Standard Rates Deficiency Period Resource

		Explanation	IRP Reference
1.	Provide the resource type, geographic location, nameplate capacity, and annual capacity factor.	CCCT (Dry "J" 1X1) West Side Resource (1,500') with Duct Firing available in 2026, Annual energy-weighted CF is 70.5 percent. Refer to Table 9 of "1_OR Standard QF AC Study_2023 04 24.xlsx"	2021 IRP Supply Side Table 7.1 and 7.2
2.	Provide the source of natural gas supply / and the costs assumed for interconnection / infrastructure upgrades, transmission, storage, and any other costs necessary to deliver gas.	Burner Tip West Side Gas, refer to Table 10 of "1_OR Standard QF AC Study_2023 04 24.xlsx"	-
3.	Provide the assumed heat rate. Include assumptions to account for elevation / temperature, and cooling method.	Refer to Table 9 of "1_OR Standard QF AC Study_2023 04 24.xlsx"	2021 IRP Supply Side Table 7.1 and 7.2
4.	List the costs assumed for interconnection facilities.	-	2021 IRP Supply Side Table 7.1 and 7.2
5.	List the components of transmission costs used and their respective values.	-	2021 IRP Supply Side Table 7.1 and 7.2
6.	List the tax assumptions used.	-	2021 IRP Supply Side Table 7.1 and 7.2

**Docket UM 1729 / Compliance Filing
Minimum Filing Requirements
Public Utility Commission of Oregon (OPUC) Order No. 16-174 dated May 13, 2016**

V. Renewable Rates Deficiency Period Resource

		Explanation	IRP Reference
1.	Provide the resource type, geographic location / nameplate capacity, and annual capacity factor.	West wind resource with 37% CF from the 2021 IRP Supply Side Table. Refer to Table 12 of “1_OR Standard QF AC Study_2023 04 24.xlsx ”	2021 IRP Supply Side Table 7.1 and 7.2
2.	Provide assumptions used for mechanical availability, annual hours of curtailment / and annual megawatt-hours (MWh) of energy curtailed.	None.	
3.	List the costs assumed for interconnection facilities.	-	2021 IRP Supply Side Table 7.1 and 7.2
4.	List the components of transmission costs used and their respective values.	-	2021 IRP Supply Side Table 7.1 and 7.2
5.	List the tax assumptions used. This includes assumed taxes paid (federal, state / local), and assumed tax benefits (e.g. PTC / investment tax credits (ITC) / grants in lieu of credits).	100% PTC. Refer to Table 12 of “1_OR Standard QF AC Study_2023 04 24.xlsx”	Updated to reflect the Inflation Reduction Act of 2022
6.	Provide the capacity contribution value, and the method used to derive the capacity contribution value / for solar and wind resource types.	QF Capacity Contribution values - Wind: 41.2 percent, Fixed Solar: 11.4 percent, and Tracking Solar: 14.2 percent.	2021 IRP, Volume II, Table K.1, pages 220-221
7.	Provide the wind integration cost used / and the method used to derive the wind integration cost.	Prices are adjusted to account for integration costs from the 2021 IRP.	2021 IRP: Volume I: Table 7.1 and 7.2 on Page 169-183, Volume II: Figure F.11 on Page 145.

Gas Price Forecast Comparison

	OFPC Mar 2023	OFPC Mar 2022		
	West Side Gas	West Side Gas	Change	% Change
	\$/MMBTU	\$/MMBTU	\$/MMBTU	%
2026	4.80	3.80	1.00	26%
2027	5.22	3.84	1.38	36%
2028	5.42	3.94	1.48	38%
2029	5.59	4.01	1.58	39%
2030	5.61	3.98	1.63	41%
2031	5.87	4.14	1.73	42%
2032	6.19	4.25	1.94	46%
2033	6.42	4.43	1.99	45%
2034	6.67	4.62	2.05	44%
2035	6.71	4.71	2.00	42%
2036	6.85	4.88	1.97	40%
2037	7.21	5.14	2.07	40%
2038	7.58	5.47	2.11	39%
2039	7.92	5.81	2.11	36%
2040	8.33	6.14	2.19	36%