

July 12, 2022

Public Utility Commission of Oregon Attn: Filing Center 201 High Street, S.E. P.O. Box 1088 Salem, OR 97308-1088

RE: UM 1728 Compliance Filing to Update Schedule 201 Qualifying Facility Information

Pursuant to Oregon Administrative Rule (OAR) 860-029-0085 and Oregon Revised Statute (ORS) 758.525, Portland General Electric Company (PGE) submitted on May 2, 2022, to revise its Schedule 201, Qualifying Facility Avoided Cost Power Purchase Information for Qualifying Facilities (QFs) 10 MW or Less. Then on May 26, 2022, PGE submitted a Supplemental filing to update the natural gas price forecast, which resulted in updated nonrenewable avoided cost prices.

Pursuant to the Commission directive from the July 12, 2022, public meeting which directed PGE to utilize only the standard update factors for updated renewable and nonrenewable avoided cost prices, PGE submits this compliance filing reflecting the updated rates.

Please direct any questions regarding this filing to Chris Pleasant at (503) 464-2555. Please direct all formal correspondence and requests to the following email address <a href="mailto:pge.opuc.filings@pgn.com">pge.opuc.filings@pgn.com</a>

Sincerely,

\s\ Robert Macfarlane

Robert Macfarlane Manager, Pricing & Tariffs

Enclosures

cc: Service List – UM 1728

# SCHEDULE 201 QUALIFYING FACILITY 10 MW or LESS AVOIDED COST POWER PURCHASE INFORMATION

### **PURPOSE**

To provide information about Standard Avoided Costs and Renewable Avoided Costs, Standard Power Purchase Agreements (PPA) and Negotiated PPAs, power purchase prices and price options for power delivered by a Qualifying Facility (QF) to the Company with nameplate capacity of 10,000 kW (10MW) or less.

## **AVAILABLE**

To owners of QFs making sales of electricity to the Company in the State of Oregon (Seller).

## **APPLICABLE**

For power purchased from small power production or cogeneration facilities that are QFs as defined in 18 Code of Federal Regulations (CFR) Section 292, that meet the eligibility requirements described herein and where the energy is delivered to the Company's system and made available for Company purchase pursuant to a Standard PPA.

## **ESTABLISHING CREDITWORTHINESS**

The Seller must establish creditworthiness prior to service under this schedule. For a Standard PPA, a Seller may establish creditworthiness with a written acknowledgment that it is current on all existing debt obligations and that it was not a debtor in a bankruptcy proceeding within the preceding 24 months. If the Seller is not able to establish creditworthiness, the Seller must provide security deemed sufficient by the Company as set forth in the Standard PPA.

#### POWER PURCHASE INFORMATION

A Seller may call the Power Production Coordinator at (503) 464-8000 to obtain more information about being a Seller or how to apply for service under this schedule.

## **PPA**

In accordance with terms set forth in this schedule and the Commission's Rules as applicable, the Company will purchase any Energy in excess of station service (power necessary to produce generation) and amounts attributable to conversion losses, which are made available from the Seller.

A Seller must execute a PPA with the Company prior to delivery of power to the Company. The agreement will have a term of up to 20 years as selected by the QF and memorialized in the PPA.

A QF with a nameplate capacity rating of 10 MW or less as defined herein may elect the option of a Standard PPA.

## PPA (Continued)

Any Seller may elect to negotiate a PPA with the Company. Such negotiation will comply with the requirements of the Federal Energy Regulatory Commission (FERC), and the Commission including the guidelines in Order No. 07-360, and Schedule 202. Negotiations for power purchase pricing will be based on either the filed Standard Avoided Costs or Renewable Avoided Costs in effect at that time.

## **STANDARD PPA (Nameplate capacity of 10 MW or less)**

A Seller choosing a Standard PPA will complete all informational and price option selection requirements in the applicable Standard PPA and submit the executed Agreement to the Company prior to service under this schedule. The Standard PPA is available at <a href="https://www.portlandgeneral.com">www.portlandgeneral.com</a>. The available Standard PPAs are:

- Standard In-System Non-Variable Power Purchase Agreement
- Standard Off-System Non-Variable Power Purchase Agreement
- Standard In-System Variable Power Purchase Agreement
- Standard Off-System Variable Power Purchase Agreement
- Standard Renewable In-System Non-Variable Power Purchase Agreement
- Standard Renewable Off-System Non-Variable Power Purchase Agreement
- Standard Renewable In-System Variable Power Purchase Agreement
- Standard Renewable Off-System Variable Power Purchase Agreement

The Standard PPAs applicable to variable resources are available only to QFs utilizing wind, solar or run of river hydro as the primary motive force.

### **GUIDELINES FOR 10 MW OR LESS FACILITIES ELECTING STANDARD PPA**

To execute the Standard PPA the Seller must complete all of the general project information requested in the applicable Standard PPA.

When all information required in the Standard PPA has been received in writing from the Seller, the Company will respond within 15 business days with a draft Standard PPA.

The Seller may request in writing that the Company prepare a final draft Standard PPA. The Company will respond to this request within 15 business days. In connection with such request, the QF must provide the Company with any additional or clarified project information that the Company reasonably determines to be necessary for the preparation of a final draft Standard PPA.

When both parties are in full agreement as to all terms and conditions of the draft Standard PPA, the Company will prepare and forward to the Seller a final executable version of the agreement within 15 business days. Following the Company's execution, an executed copy will be returned to the Seller. Prices and other terms and conditions in the PPA will not be final and binding until the Standard PPA has been executed by both parties.

### **OFF-SYSTEM PPA**

A Seller with a facility that interconnects with an electric system other than the Company's electric system may enter into a PPA with the Company after following the applicable Standard or Negotiated PPA guidelines and making the arrangements necessary for transmission of power to the Company's system.

## **BASIS FOR POWER PURCHASE PRICE**

#### AVOIDED COST SUMMARY

The power purchase prices are based on either the Company's Standard Avoided Costs or Renewable Avoided Costs in effect at the time the agreement is executed. Avoided Costs are defined in 18 CFR 292.101(6) as "the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source."

Monthly On-Peak prices are included in both the Standard Avoided Costs as listed in Tables 1a, 2a, and 3a and Renewable Avoided Costs as listed in Tables 4a, 5a, and 6a. Monthly Off-Peak prices are included in both the Standard Avoided Costs as listed in Tables 1b, 2b, and 3b and Renewable Avoided Costs as listed in Tables 4b, 5b, and 6b.

### **ON-PEAK PERIOD**

The On-Peak period is 6:00 a.m. until 10:00 p.m., Monday through Saturday.

## **OFF-PEAK PERIOD**

The Off-Peak period is 10:00 p.m. until 6:00 a.m., Monday through Saturday, and all day on Sunday.

Standard Avoided Costs are based on forward market price estimates through the Resource Sufficiency Period, the period of time during which the Company's Standard Avoided Costs are associated with incremental purchases of Energy and capacity from the market. For the Resource Deficiency Period, the Standard Avoided Costs reflect the fully allocated costs of a natural gas fueled combined cycle combustion turbine (CCCT) including fuel and capital costs. The CCCT Avoided Costs are based on the variable cost of Energy plus capitalized Energy costs at a 94.01% capacity factor based on a natural gas price forecast, with prices modified for shrinkage and transportation costs.

Renewable Avoided Costs are based on forward market price estimates through the Renewable Resource Sufficiency Period, the period of time during which the Company's Renewable Avoided Costs are associated with incremental purchases of energy and capacity from the market. For the Renewable Resource Deficiency Period, the Renewable Avoided Costs reflect the fully allocated costs of a wind plant including capital costs.

### PRICING FOR STANDARD PPA

Pricing represents the purchase price per MWh the Company will pay for electricity delivered to a Point of Delivery (POD) within the Company's service territory pursuant to a Standard PPA up to the nameplate rating of the QF in any hour.

## ELIGIBILITY REQUIREMENTS TO RECEIVE THE STANDARD FIXED PRICE OPTION OR THE RENEWABLE FIXED PRICE OPTION

The Standard PPA pricing will be based on either the Standard or Renewable Avoided Costs in effect at the time the agreement is executed. A QF will be eligible to receive either the Standard Fixed Price Option or the Renewable Fixed Price Option described below only if the nameplate capacity of the QF does not exceed 3 MW for solar QF projects or 10 MW for all other types of QF projects. A QF that does not meet these eligibility requirements must negotiate prices pursuant to the terms of Schedule 202. Solar QF projects with nameplate capacity that exceed 3 MW but do not exceed 10 MW are eligible for a Standard PPA containing negotiated prices under Schedule 202. Eligibility for the Standard Fixed Price Option or the Renewable Fixed Price Option may also be affected by the Definition of a Small Cogeneration Facility or Small Power Production Facility Eligible to Receive the Standard Fixed Price Option or the Renewable Fixed Price Option Under the Standard PPA stated below.

Except for As-Available Energy, the Company will pay the Seller either the On-Peak Standard Avoided Cost pursuant to Tables 1a, 2a, or 3a or the On-Peak Renewable Avoided Costs pursuant to Tables 4a, 5a, or 6a for Net Output delivered in the On-Peak Period. Except for As-Available Energy, the Company will pay the Seller either the Off-Peak Standard Avoided Cost pursuant to Tables 1b, 2b, or 3b or the Off-Peak Renewable Avoided Costs pursuant to Tables 4b, 5b, or 6b for Net Output delivered in the Off-Peak Period. The Company will pay the Seller the As-Available Rate for all As-Available Energy delivered during the PPA Term.

## 1) Standard Fixed Price Option

The Standard Fixed Price Option is based on Standard Avoided Costs including forecasted natural gas prices. It is available to all QFs that meet the eligibility requirements identified above.

This option is available for a maximum term of 15 years. Prices will be as established at the time the Standard PPA is executed and will be equal to the Standard Avoided Costs in Tables 1a and 1b, 2a and 2b, or 3a and 3b, depending on the type of QF, effective at execution. QFs using any resource type other than wind and solar are assumed to be Base Load QFs.

PRICING OPTIONS FOR STANDARD PPA (Continued)
Standard Fixed Price Option (Continued)

Prices paid to the Seller under the Standard Fixed Price Option include adjustments for the capacity contribution of the QF resource type relative to that of the avoided proxy resource. Both the Base Load QF resources (Tables 1a and 1b) and the avoided proxy resource, the basis used to determine Standard Avoided Costs for the Standard Fixed Price Option, are assumed to have a capacity contribution to peak of 100%. The capacity contribution for Wind QF resources (Tables 2a and 2b) is assumed to be 25.00%. The capacity contribution for Solar QF resources (Tables 3a and 3b) is assumed to be 8.50%.

Prices paid to the Seller under the Standard Fixed Price Option for Wind QFs (Tables 2a and 2b) include a reduction for the wind integration costs in Table 7. However, if the Wind QF is outside of PGE's Balancing Authority Area as contemplated in the Commission's Order No. 14-058, the Seller is paid the wind integration charges in Table 7, in addition to the prices listed in Tables 2a and 2b, for a net-zero effect.

Prices paid to the Seller under the Standard Fixed Price Option for Solar QFs (Tables 3a and 3b) include a reduction for the solar integration costs in Table 7. However, if the Solar QF is outside of PGE's Balancing Authority Area as contemplated in the Commission's Order No. 14-058, the Seller is paid the solar integration charges in Table 7, in addition to the prices listed in Tables 3a and 3b, for a net-zero effect.

Sellers with terms exceeding 15 years from the commercial operation date will receive pricing equal to the Mid-C Index Price for all years up to five in excess of the initial 15 years after the commercial operation date selected by the Seller and memorialized in the PPA.

						TABLE 1	а					
						voided C						
				Fix	ed Price (		Base Loat (\$/MWH	-				
					On-Pea	K Forecas	er (غ/ ivi vv ப	)				
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	41.43	50.86	101.57	172.92	110.74	70.99	69.97	92.39
2023	92.39	81.18	53.66	36.84	33.27	39.90	110.36	152.06	107.28	61.73	62.53	76.46
2024	73.79	66.95	48.06	35.24	31.01	39.99	94.75	130.38	92.12	55.75	56.46	68.96
2025	53.88	53.18	51.42	49.18	49.12	49.57	50.03	50.21	50.13	50.58	51.94	53.96
2026	55.68	55.00	53.54	50.97	50.97	51.40	51.80	51.92	51.92	52.28	53.58	55.52
2027	52.27	52.39	52.49	50.95	51.05	51.16	51.27	51.38	51.49	51.88	52.86	52.97
2028	51.85	51.96	51.26	49.76	49.85	49.96	50.05	50.15	50.26	50.40	51.57	51.67
2029	52.85	52.96	51.92	50.35	50.44	50.54	50.64	50.74	50.84	50.99	52.16	52.26
2030	54.22	54.35	53.04	51.66	51.76	51.88	51.99	52.08	52.19	52.30	53.58	53.69
2031	54.13	54.24	54.33	52.86	52.96	53.07	53.17	53.28	53.39	53.50	54.78	54.89
2032	55.97	56.09	56.14	54.63	54.74	54.85	54.96	55.08	55.19	55.31	56.65	56.77
2033	59.41	59.54	57.79	56.34	56.47	56.59	56.70	56.81	56.92	57.04	58.48	58.62
2034	60.21	60.34	59.40	57.91	58.03	58.17	58.28	58.42	58.54	58.64	60.20	60.31
2035	63.65	63.84	61.13	59.70	59.83	59.96	60.09	60.22	60.28	60.41	62.27	62.41
2036	64.59	65.25	62.86	61.52	61.21	61.40	61.80	61.67	61.24	61.37	60.78	60.99
2037	62.36	63.01	64.05	63.48	63.17	63.75	63.88	63.60	63.67	63.36	61.14	61.34
2038	63.66	64.34	66.50	65.60	65.74	65.97	66.57	66.26	65.82	66.44	64.58	64.79
2039	66.15	66.84	68.25	67.91	67.59	68.30	68.46	68.61	67.65	68.28	66.51	66.70
2040	69.34	70.02	70.95	70.98	71.15	70.91	71.08	71.73	70.74	70.91	65.85	66.08
2041	68.65	70.38	74.96	74.25	74.43	75.21	75.39	75.09	74.57	75.29	72.62	72.88
2042	75.65	76.44	78.54	78.03	78.23	78.00	78.79	78.99	78.36	78.05	75.72	76.50
2043	77.07	78.97	79.42	78.61	78.44	79.10	78.83	79.08	79.02	79.21	77.15	76.92
2044	78.78	82.41	80.49	79.94	80.13	80.44	80.18	80.39	79.83	80.55	78.96	79.25
2045	82.70	83.75	83.64	82.87	83.48	83.81	83.52	84.24	83.06	83.40	81.44	82.28
2046	84.94	85.76	85.59	85.13	85.35	85.68	85.42	85.70	84.90	85.82	84.12	83.88
2047	88.52	89.78	88.82	87.46	87.68	88.03	88.67	88.90	88.15	88.13	90.09	90.88

						TABLE 1						
						voided Co						
				Fixe	off Book	Option for k Forecas						
					OII-Peal	K FOIECas	PE (\$/ IVI VV IT	,				
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	32.25	34.29	51.37	75.07	73.03	61.81	60.79	77.10
2023	76.59	67.42	42.96	29.70	23.08	27.92	51.42	71.23	66.61	53.09	54.41	64.94
2024	70.38	61.08	45.12	31.51	22.62	24.59	57.08	79.14	74.00	50.61	51.88	61.86
2025	27.57	26.87	25.11	22.87	22.80	23.26	23.71	23.90	23.82	24.26	25.63	27.64
2026	28.83	28.15	26.69	24.12	24.12	24.55	24.95	25.07	25.07	25.43	26.72	28.67
2027	24.87	24.98	25.09	23.55	23.64	23.75	23.86	23.98	24.09	24.48	25.46	25.57
2028	23.88	23.99	23.30	21.79	21.89	21.99	22.09	22.19	22.29	22.44	23.60	23.71
2029	24.32	24.43	23.39	21.81	21.90	22.00	22.10	22.20	22.30	22.46	23.62	23.72
2030	25.10	25.23	23.92	22.54	22.64	22.76	22.87	22.96	23.07	23.17	24.46	24.57
2031	24.41	24.52	24.61	23.14	23.24	23.35	23.45	23.56	23.67	23.78	25.06	25.17
2032	25.83	25.95	26.00	24.49	24.60	24.72	24.83	24.94	25.06	25.17	26.52	26.63
2033	28.46	28.59	26.84	25.39	25.52	25.64	25.76	25.86	25.98	26.09	27.54	27.68
2034	28.53	28.66	27.72	26.23	26.35	26.49	26.59	26.73	26.85	26.96	28.51	28.62
2035	31.42	31.61	28.90	27.47	27.60	27.73	27.86	27.99	28.06	28.19	30.04	30.19
2036	31.81	32.46	30.08	28.74	28.42	28.62	29.01	28.88	28.45	28.59	28.00	28.21
2037	28.80	29.45	30.49	29.92	29.60	30.18	30.32	30.04	30.10	29.79	27.58	27.78
2038	29.41	30.09	32.25	31.35	31.49	31.71	32.32	32.01	31.57	32.19	30.33	30.54
2039	31.20	31.89	33.30	32.96	32.64	33.35	33.50	33.66	32.70	33.33	31.56	31.75
2040	33.67	34.35	35.28	35.31	35.48	35.24	35.41	36.06	35.07	35.24	30.19	30.41
2041	32.25	33.98	38.57	37.85	38.03	38.81	39.00	38.69	38.17	38.89	36.22	36.48
2042	38.51	39.30	41.40	40.89	41.08	40.85	41.64	41.85	41.21	40.91	38.57	39.36
2043	39.17	41.07	41.51	40.70	40.54	41.20	40.93	41.18	41.11	41.31	39.25	39.02
2044	40.22	43.85	41.93	41.38	41.57	41.88	41.62	41.84	41.27	42.00	40.40	40.69
2045	43.10	44.15	44.04	43.26	43.88	44.21	43.92	44.64	43.46	43.80	41.84	42.68
2046	44.65	45.48	45.30	44.85	45.06	45.40	45.14	45.41	44.61	45.54	43.83	43.60
2047	47.42	48.67	47.71	46.35	46.57	46.93	47.56	47.79	47.04	47.02	48.98	49.77

					•	TABLE 2a	1					
						oided Co						
					xed Price	-		QF				
					On-Peak	Forecast	(\$/WWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	41.09	50.52	101.23	172.59	110.40	70.65	69.63	92.06
2023	92.05	80.84	53.31	36.49	32.93	39.55	110.01	151.71	106.93	61.39	62.18	76.12
2024	73.44	66.60	47.71	34.89	30.66	39.64	94.40	130.03	91.77	55.40	56.11	68.61
2025	42.68	41.98	40.22	37.98	37.92	38.37	38.82	39.01	38.93	39.38	40.74	42.75
2026	44.25	43.57	42.11	39.54	39.54	39.97	40.37	40.49	40.49	40.85	42.14	44.09
2027	40.61	40.72	40.82	39.28	39.38	39.49	39.60	39.71	39.83	40.21	41.19	41.31
2028	39.94	40.05	39.36	37.85	37.95	38.05	38.15	38.25	38.35	38.50	39.66	39.77
2029	40.71	40.82	39.77	38.20	38.29	38.39	38.49	38.59	38.69	38.84	40.01	40.11
2030	41.82	41.95	40.65	39.27	39.37	39.48	39.59	39.68	39.79	39.90	41.18	41.29
2031	41.48	41.59	41.68	40.21	40.31	40.42	40.52	40.63	40.74	40.84	42.13	42.24
2032	43.14	43.25	43.31	41.80	41.91	42.02	42.13	42.25	42.36	42.48	43.82	43.94
2033	46.23	46.36	44.61	43.16	43.29	43.42	43.53	43.63	43.75	43.87	45.31	45.45
2034	46.72	46.85	45.91	44.43	44.54	44.69	44.79	44.93	45.05	45.16	46.71	46.82
2035	49.93	50.12	47.41	45.98	46.11	46.24	46.37	46.50	46.56	46.69	48.55	48.69
2036	50.63	51.29	48.90	47.56	47.25	47.44	47.84	47.71	47.28	47.42	46.83	47.03
2037	48.07	48.73	49.77	49.19	48.88	49.46	49.60	49.32	49.38	49.07	46.85	47.05
2038	49.08	49.76	51.92	51.02	51.16	51.38	51.99	51.68	51.24	51.86	50.00	50.20
2039	51.27	51.96	53.37	53.03	52.71	53.42	53.58	53.73	52.77	53.40	51.63	51.82
2040	54.16	54.83	55.76	55.80	55.96	55.73	55.89	56.55	55.56	55.73	50.67	50.89
2041	53.15	54.88	59.47	58.75	58.93	59.71	59.90	59.60	59.07	59.80	57.12	57.38
2042	59.84	60.63	62.73	62.22	62.41	62.19	62.97	63.18	62.54	62.24	59.91	60.69
2043	60.94	62.84	63.28	62.47	62.30	62.97	62.70	62.95	62.88	63.07	61.02	60.78
2044	62.36	65.99	64.07	63.52	63.71	64.02	63.76	63.98	63.42	64.14	62.54	62.83
2045	65.85	66.90	66.78	66.01	66.62	66.95	66.66	67.38	66.20	66.55	64.58	65.42
2046	67.79	68.61	68.44	67.98	68.20	68.53	68.27	68.55	67.75	68.67	66.97	66.73
2047	71.02	72.28	71.32	69.96	70.18	70.53	71.17	71.40	70.65	70.63	72.59	73.38

					-	TABLE 2b	)					
						oided Co						
					xed Price			QF				
					Off-Peak	Forecast	(\$/MWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	31.91	33.95	51.03	74.73	72.69	61.47	60.46	76.77
2023	76.25	67.07	42.61	29.36	22.73	27.57	51.07	70.89	66.27	52.74	54.07	64.60
2024	70.03	60.73	44.77	31.16	22.27	24.24	56.72	78.79	73.64	50.26	51.52	61.50
2025	27.21	26.51	24.75	22.51	22.44	22.90	23.35	23.54	23.46	23.90	25.27	27.28
2026	28.46	27.78	26.32	23.76	23.76	24.18	24.59	24.70	24.70	25.06	26.36	28.30
2027	24.49	24.61	24.71	23.17	23.27	23.38	23.49	23.60	23.71	24.10	25.08	25.20
2028	23.50	23.61	22.92	21.41	21.51	21.61	21.71	21.81	21.91	22.06	23.22	23.32
2029	23.93	24.04	22.99	21.42	21.51	21.61	21.71	21.81	21.91	22.06	23.23	23.33
2030	24.70	24.83	23.53	22.14	22.24	22.36	22.47	22.56	22.67	22.78	24.06	24.17
2031	24.01	24.12	24.20	22.74	22.84	22.94	23.05	23.16	23.26	23.37	24.66	24.77
2032	25.42	25.54	25.59	24.08	24.19	24.30	24.41	24.53	24.64	24.76	26.10	26.22
2033	28.04	28.17	26.42	24.97	25.10	25.22	25.33	25.44	25.55	25.67	27.11	27.25
2034	28.09	28.22	27.28	25.80	25.92	26.06	26.16	26.30	26.42	26.53	28.08	28.19
2035	30.98	31.17	28.46	27.03	27.16	27.29	27.42	27.55	27.62	27.74	29.60	29.74
2036	31.36	32.01	29.63	28.29	27.97	28.17	28.56	28.43	28.00	28.14	27.55	27.76
2037	28.34	28.99	30.03	29.46	29.14	29.72	29.86	29.58	29.64	29.33	27.12	27.32
2038	28.95	29.62	31.78	30.88	31.02	31.25	31.86	31.55	31.10	31.72	29.86	30.07
2039	30.72	31.41	32.82	32.48	32.16	32.87	33.03	33.18	32.22	32.85	31.08	31.27
2040	33.18	33.86	34.79	34.83	34.99	34.76	34.92	35.57	34.59	34.76	29.70	29.92
2041	31.75	33.48	38.07	37.35	37.53	38.31	38.50	38.19	37.67	38.40	35.72	35.98
2042	38.00	38.79	40.89	40.38	40.57	40.35	41.13	41.34	40.70	40.40	38.07	38.85
2043	38.65	40.55	41.00	40.18	40.02	40.68	40.41	40.66	40.59	40.79	38.73	38.50
2044	39.69	43.32	41.40	40.85	41.04	41.35	41.09	41.31	40.74	41.47	39.87	40.16
2045	42.56	43.61	43.50	42.72	43.34	43.67	43.38	44.10	42.92	43.26	41.30	42.14
2046	44.10	44.93	44.75	44.30	44.51	44.85	44.59	44.86	44.06	44.98	43.28	43.05
2047	46.85	48.11	47.15	45.79	46.01	46.36	47.00	47.23	46.48	46.46	48.42	49.21

					7	TABLE 3a	1					
					Av	oided Co	sts					
							or Solar					
					On-Peak	Forecast	(\$/MWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	40.01	49.44	100.16	171.51	109.33	69.58	68.56	90.98
2023	90.95	79.74	52.22	35.40	31.83	38.46	108.92	150.62	105.84	60.29	61.09	75.02
2024	72.32	65.48	46.59	33.77	29.54	38.52	93.28	128.91	90.65	54.28	54.99	67.49
2025	31.77	31.07	29.31	27.07	27.01	27.46	27.92	28.10	28.02	28.47	29.83	31.85
2026	33.12	32.44	30.98	28.41	28.41	28.84	29.24	29.36	29.36	29.72	31.01	32.96
2027	29.25	29.36	29.46	27.92	28.02	28.13	28.24	28.35	28.47	28.85	29.83	29.95
2028	28.35	28.46	27.77	26.26	26.36	26.46	26.56	26.66	26.76	26.91	28.07	28.17
2029	28.88	28.99	27.94	26.37	26.46	26.56	26.66	26.76	26.86	27.01	28.18	28.28
2030	29.75	29.88	28.58	27.19	27.29	27.41	27.52	27.61	27.72	27.83	29.11	29.22
2031	29.16	29.27	29.36	27.89	27.99	28.10	28.20	28.31	28.42	28.52	29.81	29.92
2032	30.64	30.75	30.81	29.30	29.41	29.52	29.63	29.75	29.86	29.98	31.32	31.44
2033	33.40	33.53	31.78	30.34	30.46	30.59	30.70	30.80	30.92	31.04	32.48	32.62
2034	33.59	33.72	32.78	31.30	31.41	31.56	31.66	31.80	31.92	32.03	33.58	33.69
2035	36.57	36.76	34.05	32.62	32.75	32.88	33.01	33.14	33.20	33.33	35.19	35.33
2036	37.04	37.69	35.31	33.97	33.65	33.85	34.24	34.12	33.68	33.82	33.23	33.44
2037	34.16	34.81	35.85	35.28	34.96	35.54	35.68	35.40	35.46	35.15	32.94	33.14
2038	34.89	35.56	37.72	36.82	36.96	37.19	37.79	37.49	37.04	37.66	35.80	36.01
2039	36.78	37.47	38.89	38.55	38.22	38.93	39.09	39.24	38.28	38.91	37.14	37.33
2040	39.37	40.05	40.98	41.01	41.18	40.94	41.11	41.76	40.77	40.94	35.88	36.11
2041	38.06	39.79	44.38	43.66	43.85	44.62	44.81	44.51	43.98	44.71	42.03	42.30
2042	44.44	45.23	47.33	46.82	47.01	46.79	47.58	47.78	47.15	46.84	44.51	45.29
2043	45.22	47.12	47.57	46.76	46.59	47.25	46.98	47.23	47.17	47.36	45.30	45.07
2044	46.37	50.00	48.08	47.53	47.72	48.03	47.77	47.99	47.43	48.15	46.55	46.84
2045	49.43	50.49	50.37	49.60	50.21	50.54	50.25	50.97	49.79	50.13	48.17	49.01
2046	51.09	51.91	51.74	51.28	51.50	51.84	51.57	51.85	51.05	51.97	50.27	50.03
2047	53.98	55.24	54.27	52.92	53.14	53.49	54.12	54.36	53.60	53.59	55.54	56.34

					7	TABLE 3b	)					
					Ave	oided Co	sts					
						Option for						
					Эп-Реак	Forecast	(\$/MWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	30.84	32.88	49.95	73.65	71.62	60.40	59.38	75.69
2023	75.15	65.98	41.51	28.26	21.64	26.48	49.98	69.79	65.17	51.65	52.97	63.50
2024	68.91	59.61	43.65	30.04	21.15	23.12	55.61	77.67	72.53	49.14	50.41	60.39
2025	26.07	25.37	23.61	21.37	21.30	21.76	22.21	22.40	22.32	22.76	24.13	26.14
2026	27.30	26.62	25.16	22.59	22.59	23.02	23.42	23.54	23.54	23.90	25.19	27.14
2027	23.31	23.42	23.52	21.98	22.08	22.19	22.30	22.41	22.53	22.92	23.89	24.01
2028	22.29	22.40	21.71	20.20	20.30	20.40	20.49	20.60	20.70	20.85	22.01	22.11
2029	22.69	22.80	21.76	20.18	20.28	20.38	20.47	20.57	20.68	20.83	21.99	22.10
2030	23.44	23.57	22.26	20.88	20.98	21.10	21.21	21.30	21.41	21.51	22.80	22.91
2031	22.72	22.83	22.92	21.45	21.55	21.66	21.76	21.87	21.98	22.08	23.37	23.48
2032	24.11	24.22	24.27	22.76	22.87	22.99	23.10	23.21	23.33	23.44	24.79	24.91
2033	26.69	26.83	25.08	23.63	23.76	23.88	23.99	24.10	24.21	24.33	25.77	25.91
2034	26.73	26.86	25.92	24.43	24.55	24.69	24.79	24.93	25.05	25.16	26.71	26.82
2035	29.58	29.78	27.06	25.64	25.76	25.90	26.02	26.15	26.22	26.35	28.21	28.35
2036	29.93	30.59	28.20	26.86	26.55	26.74	27.14	27.01	26.58	26.71	26.13	26.33
2037	26.89	27.54	28.58	28.01	27.69	28.27	28.41	28.13	28.19	27.88	25.66	25.87
2038	27.46	28.14	30.30	29.39	29.54	29.76	30.37	30.06	29.62	30.24	28.37	28.58
2039	29.20	29.90	31.31	30.97	30.65	31.36	31.51	31.67	30.71	31.33	29.56	29.76
2040	31.64	32.32	33.25	33.28	33.44	33.21	33.38	34.03	33.04	33.21	28.15	28.38
2041	30.18	31.90	36.49	35.78	35.96	36.73	36.92	36.62	36.10	36.82	34.15	34.41
2042	36.39	37.18	39.28	38.77	38.96	38.74	39.53	39.73	39.10	38.79	36.46	37.24
2043	37.01	38.91	39.35	38.54	38.38	39.04	38.77	39.02	38.95	39.15	37.09	36.86
2044	38.01	41.65	39.72	39.17	39.37	39.68	39.41	39.63	39.07	39.79	38.20	38.49
2045	40.85	41.90	41.79	41.01	41.63	41.96	41.67	42.39	41.21	41.55	39.59	40.43
2046	42.36	43.18	43.01	42.55	42.77	43.10	42.84	43.12	42.32	43.24	41.54	41.30
2047	45.07	46.33	45.37	44.01	44.23	44.58	45.21	45.45	44.69	44.68	46.63	47.43

PRICING OPTIONS FOR STANDARD PPA (Continued)

## 2) Renewable Fixed Price Option

The Renewable Fixed Price Option is based on Renewable Avoided Costs. It is available only to Renewable QFs that generate electricity from a renewable energy source that may be used by the Company to comply with the Oregon Renewable Portfolio Standard as set forth in ORS 469A.005 to 469A.210 and that satisfy the eligibility requirements identified above.

This option is available for a maximum term of 15 years. Prices will be as established at the time the Standard PPA is executed and will be equal to the Renewable Avoided Costs in Tables 4a and 4b, 5a and 5b, or 6a and 6b, depending on the type of QF, effective at execution. QFs using any resource type other than wind and solar are assumed to be Base Load QFs.

Sellers will retain all Environmental Attributes generated by the facility during the Renewable Resource Sufficiency Period. A Renewable QF choosing the Renewable Fixed Price Option must cede all RPS Attributes generated by the facility to the Company from the start of the Renewable Resource Deficiency Period through the remainder of the PPA term.

Prices paid to the Seller under the Renewable Fixed Price Option include adjustments for the capacity contribution of the QF resource type relative to that of the avoided proxy resource. Both Wind QF resources (Tables 5a and 5b) and the avoided proxy resource, the basis used to determine Renewable Avoided Costs for the Renewable Fixed Price Option, are assumed to have a capacity contribution to peak of 25.00%. The capacity contribution for Solar QF resources (Tables 6a and 6b) is assumed to be 8.50%. The capacity contribution for Base Load QF resources (Tables 4a and 4b) is assumed to be 100%.

The Renewable Avoided Costs during the Renewable Resource Deficiency Period reflect an increase for avoided wind integration costs, shown in Table 7.

Prices paid to the Seller under the Renewable Fixed Price Option for Wind QFs (Tables 5a and 5b) include a reduction for the wind integration costs in Table 7, which cancels out wind integration costs included in the Renewable Avoided Costs during the Renewable Resource Deficiency Period. However, if the Wind QF is outside of PGE's Balancing Authority Area as contemplated in the Commission's Order No. 14-058, the Seller is paid the wind integration charges in Table 7, in addition to the prices listed in Tables 5a and 5b.

Prices paid to the Seller under the Renewable Fixed Price Option for Solar QFs (Tables 6a and 6b) include a reduction for the Solar integration costs in Table 7. However, if the Solar QF is outside of PGE's Balancing Authority Area as contemplated in the Commission's Order No. 14-058, the Seller is paid the solar integration charges in Table 7, in addition to the prices listed in Tables 6a and 6b.

PRICING OPTIONS FOR STANDARD PPA (Continued)
Renewable Fixed Price Option (Continued)

Sellers with terms exceeding 15 years from the commercial operation date will receive pricing equal to the Mid-C Index Price for all years up to five in excess of the initial 15 years following the commercial operation date selected by the Seller and memorialized in the PPA.

						TABLE 4	a					
					Renewa	able Avoi	ded Costs					
			l	Renewab	le Fixed I				QF			
					On-Pea	k Forecas	st (\$/MWH	)				
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	41.43	50.86	101.57	172.92	110.74	70.99	69.97	92.39
2023	92.39	81.18	53.66	36.84	33.27	39.90	110.36	152.06	107.28	61.73	62.53	76.46
2024	73.79	66.95	48.06	35.24	31.01	39.99	94.75	130.38	92.12	55.75	56.46	68.96
2025	76.87	72.19	59.24	50.46	47.56	53.71	91.23	115.64	89.43	64.51	65.00	73.56
2026	78.45	73.66	60.46	51.49	48.53	54.81	93.10	118.01	91.26	65.83	66.33	75.07
2027	80.05	75.17	61.70	52.55	49.53	55.94	95.01	120.43	93.13	67.18	67.69	76.61
2028	81.55	76.58	62.86	53.55	50.48	57.00	96.76	122.63	94.86	68.45	68.96	78.04
2029	83.37	78.28	64.25	54.72	51.58	58.25	98.94	125.41	96.99	69.96	70.49	79.78
2030	85.07	79.89	65.57	55.84	52.63	59.44	100.97	127.98	98.97	71.39	71.93	81.41
2031	86.82	81.52	66.91	56.99	53.71	60.66	103.03	130.60	101.00	72.86	73.41	83.08
2032	88.24	82.86	67.98	57.89	54.55	61.63	104.75	132.80	102.68	74.04	74.60	84.44
2033	90.41	84.90	69.68	59.34	55.94	63.17	107.30	136.01	105.18	75.87	76.45	86.52
2034	92.36	86.74	71.21	60.66	57.18	64.57	109.60	138.90	107.44	77.53	78.11	88.39
2035	94.15	88.41	72.56	61.80	58.25	65.79	111.74	141.64	109.53	79.01	79.61	90.10
2036	95.81	89.96	73.83	62.88	59.27	66.94	113.70	144.13	111.46	80.40	81.01	91.68
2037	98.05	92.07	75.57	64.36	60.66	68.51	116.37	147.50	114.07	82.28	82.91	93.83
2038	100.06	93.96	77.11	65.68	61.91	69.91	118.75	150.52	116.41	83.97	84.61	95.75
2039	102.11	95.88	78.69	67.02	63.17	71.35	121.18	153.61	118.79	85.69	86.34	97.71
2040	104.01	97.68	80.18	68.31	64.39	72.71	123.43	156.42	120.99	87.30	87.96	99.54
2041	106.34	99.85	81.95	69.80	65.79	74.30	126.20	159.96	123.71	89.24	89.91	101.76
2042	108.51	101.90	83.63	71.23	67.14	75.82	128.78	163.24	126.24	91.06	91.75	103.84
2043	110.74	103.99	85.34	72.69	68.51	77.38	131.42	166.59	128.83	92.93	93.63	105.97
2044	112.68	105.81	86.84	73.96	69.71	78.73	133.73	169.52	131.09	94.56	95.27	107.83
2045	115.45	108.42	89.00	75.82	71.47	80.70	136.99	173.61	134.29	96.90	97.64	110.48
2046	117.68	110.51	90.70	77.25	72.81	82.23	139.67	177.04	136.91	98.76	99.51	112.62
2047	120.09	112.77	92.56	78.83	74.30	83.91	142.53	180.66	139.71	100.78	101.55	114.92

						TABLE 4	b					
					Renewa	able Avoi	ded Costs	;				
			l	Renewab	le Fixed I	Price Opti	on for Ba	se Load (	QF			
					Off-Pea	k Forecas	t (\$/MWH	)				
									,			
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	32.25	34.29	51.37	75.07	73.03	61.81	60.79	77.10
2023	76.59	67.42	42.96	29.70	23.08	27.92	51.42	71.23	66.61	53.09	54.41	64.94
2024	70.38	61.08	45.12	31.51	22.62	24.59	57.08	79.14	74.00	50.61	51.88	61.86
2025	48.22	41.85	30.91	21.59	15.50	16.85	39.10	54.23	50.70	34.68	35.54	42.38
2026	49.21	42.71	31.55	22.03	15.82	17.19	39.91	55.34	51.74	35.39	36.27	43.25
2027	50.21	43.58	32.19	22.48	16.14	17.54	40.72	56.47	52.80	36.11	37.01	44.13
2028	51.10	44.35	32.76	22.88	16.43	17.85	41.44	57.47	53.73	36.75	37.67	44.92
2029	52.29	45.39	33.52	23.41	16.81	18.27	42.41	58.81	54.98	37.61	38.55	45.96
2030	53.36	46.32	34.21	23.89	17.15	18.64	43.28	60.01	56.11	38.38	39.34	46.90
2031	54.46	47.26	34.91	24.38	17.50	19.03	44.16	61.24	57.26	39.16	40.14	47.86
2032	55.42	48.10	35.53	24.81	17.81	19.36	44.95	62.33	58.27	39.86	40.85	48.71
2033	56.71	49.22	36.36	25.39	18.23	19.81	45.99	63.78	59.63	40.78	41.80	49.84
2034	57.87	50.23	37.10	25.91	18.60	20.22	46.93	65.08	60.85	41.62	42.66	50.87
2035	59.06	51.26	37.86	26.44	18.98	20.63	47.90	66.42	62.10	42.47	43.53	51.91
2036	60.10	52.17	38.53	26.91	19.32	21.00	48.74	67.59	63.20	43.22	44.30	52.83
2037	61.50	53.38	39.43	27.54	19.77	21.49	49.88	69.17	64.67	44.23	45.34	54.06
2038	62.76	54.47	40.24	28.10	20.17	21.93	50.90	70.58	65.99	45.14	46.26	55.16
2039	64.05	55.59	41.06	28.68	20.59	22.38	51.94	72.03	67.34	46.06	47.21	56.29
2040	65.18	56.57	41.79	29.18	20.95	22.77	52.86	73.30	68.54	46.88	48.05	57.29
2041	66.70	57.89	42.76	29.86	21.44	23.30	54.09	75.01	70.13	47.97	49.17	58.62
2042	68.07	59.08	43.64	30.48	21.88	23.78	55.20	76.55	71.57	48.95	50.17	59.83
2043	69.46	60.29	44.53	31.10	22.33	24.27	56.33	78.11	73.03	49.95	51.20	61.05
2044	70.69	61.35	45.32	31.65	22.72	24.70	57.33	79.50	74.33	50.84	52.11	62.13
2045	72.34	62.78	46.37	32.39	23.25	25.27	58.66	81.35	76.06	52.02	53.32	63.58
2046	73.82	64.07	47.32	33.05	23.73	25.79	59.87	83.01	77.61	53.09	54.41	64.88
2047	75.33	65.38	48.29	33.73	24.21	26.32	61.09	84.71	79.20	54.17	55.53	66.21

					-	TABLE 5a	1					
							led Costs					
					ble Fixed							
					On-Peak	Forecast	(\$/MWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	41.09	50.52	101.23	172.59	110.40	70.65	69.63	92.06
2023	92.05	80.84	53.31	36.49	32.93	39.55	110.01	151.71	106.93	61.39	62.18	76.12
2024	73.44	66.60	47.71	34.89	30.66	39.64	94.40	130.03	91.77	55.40	56.11	68.61
2025	65.67	60.98	48.04	39.26	36.36	42.51	80.03	104.44	78.23	53.31	53.80	62.36
2026	67.01	62.23	49.03	40.06	37.10	43.38	81.67	106.58	79.83	54.40	54.90	63.64
2027	68.39	63.51	50.03	40.88	37.86	44.27	83.34	108.76	81.47	55.51	56.02	64.94
2028	69.64	64.68	50.96	41.65	38.58	45.10	84.86	110.73	82.95	56.54	57.06	66.13
2029	71.22	66.14	52.10	42.57	39.43	46.10	86.79	113.26	84.84	57.81	58.34	67.63
2030	72.68	67.49	53.17	43.44	40.24	47.05	88.57	115.58	86.58	59.00	59.54	69.01
2031	74.17	68.87	54.26	44.34	41.06	48.01	90.38	117.95	88.35	60.21	60.76	70.43
2032	75.41	70.03	55.15	45.05	41.72	48.79	91.92	119.97	89.85	61.21	61.77	71.61
2033	77.24	71.72	56.50	46.17	42.76	50.00	94.12	122.83	92.01	62.70	63.27	73.34
2034	78.88	73.25	57.72	47.18	43.70	51.08	96.11	125.41	93.95	64.04	64.63	74.90
2035	80.43	74.69	58.84	48.08	44.53	52.07	98.02	127.92	95.81	65.29	65.89	76.38
2036	81.85	76.01	59.87	48.92	45.31	52.98	99.75	130.17	97.50	66.44	67.05	77.72
2037	83.76	77.79	61.28	50.07	46.37	54.22	102.08	133.21	99.78	68.00	68.62	79.54
2038	85.48	79.38	62.53	51.10	47.32	55.33	104.17	135.94	101.82	69.39	70.02	81.17
2039	87.23	81.01	63.81	52.14	48.29	56.47	106.30	138.73	103.91	70.81	71.46	82.83
2040	88.83	82.49	65.00	53.12	49.20	57.52	108.24	141.24	105.81	72.12	72.78	84.35
2041	90.84	84.36	66.46	54.30	50.29	58.80	110.70	144.47	108.21	73.74	74.42	86.26
2042	92.70	86.09	67.82	55.41	51.32	60.01	112.97	147.43	110.43	75.25	75.94	88.03
2043	94.60	87.85	69.21	56.55	52.37	61.24	115.29	150.45	112.69	76.79	77.50	89.83
2044	96.26	89.39	70.42	57.54	53.29	62.31	117.31	153.10	114.67	78.14	78.86	91.41
2045	98.59	91.56	72.15	58.97	54.62	63.85	120.13	156.75	117.43	80.05	80.78	93.62
2046	100.53	93.36	73.55	60.10	55.66	65.08	122.52	159.89	119.76	81.61	82.36	95.47
2047	102.59	95.27	75.05	61.33	56.80	66.41	125.03	163.16	122.21	83.28	84.05	97.42

					-	TABLE 5b	)					
					Renewal	ble Avoid	ed Costs					
				Renewa	ble Fixed	l Price O <sub>l</sub>	otion for \	Wind QF				
					Off-Peak	Forecast	(\$/MWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	31.91	33.95	51.03	74.73	72.69	61.47	60.46	76.77
2023	76.25	67.07	42.61	29.36	22.73	27.57	51.07	70.89	66.27	52.74	54.07	64.60
2024	70.03	60.73	44.77	31.16	22.27	24.24	56.72	78.79	73.64	50.26	51.52	61.50
2025	47.86	41.49	30.55	21.23	15.14	16.49	38.74	53.87	50.34	34.32	35.18	42.02
2026	48.84	42.34	31.18	21.66	15.45	16.82	39.54	54.97	51.37	35.02	35.90	42.88
2027	49.84	43.21	31.82	22.11	15.76	17.17	40.35	56.09	52.42	35.74	36.64	43.76
2028	50.72	43.97	32.38	22.50	16.04	17.47	41.06	57.09	53.35	36.37	37.29	44.53
2029	51.90	45.00	33.13	23.02	16.42	17.88	42.02	58.42	54.59	37.22	38.16	45.57
2030	52.97	45.92	33.81	23.49	16.75	18.25	42.88	59.61	55.71	37.98	38.94	46.50
2031	54.05	46.86	34.51	23.98	17.10	18.62	43.76	60.83	56.85	38.76	39.73	47.46
2032	55.01	47.69	35.11	24.40	17.40	18.95	44.53	61.91	57.86	39.44	40.44	48.30
2033	56.29	48.80	35.93	24.97	17.80	19.39	45.57	63.35	59.20	40.36	41.38	49.42
2034	57.44	49.80	36.67	25.48	18.17	19.79	46.50	64.65	60.42	41.19	42.23	50.43
2035	58.62	50.82	37.42	26.00	18.54	20.19	47.46	65.98	61.66	42.03	43.09	51.47
2036	59.65	51.72	38.08	26.46	18.87	20.55	48.29	67.14	62.75	42.77	43.85	52.38
2037	61.04	52.92	38.97	27.08	19.31	21.03	49.42	68.71	64.21	43.77	44.88	53.60
2038	62.30	54.00	39.77	27.63	19.70	21.46	50.43	70.11	65.52	44.67	45.80	54.70
2039	63.57	55.11	40.58	28.20	20.11	21.90	51.47	71.55	66.87	45.58	46.73	55.82
2040	64.70	56.08	41.30	28.70	20.46	22.29	52.37	72.81	68.05	46.39	47.56	56.80
2041	66.20	57.39	42.26	29.37	20.94	22.81	53.60	74.51	69.63	47.47	48.67	58.13
2042	67.56	58.57	43.13	29.97	21.37	23.27	54.69	76.04	71.06	48.44	49.67	59.32
2043	68.94	59.77	44.01	30.58	21.81	23.75	55.81	77.60	72.52	49.44	50.68	60.53
2044	70.16	60.82	44.79	31.12	22.19	24.17	56.80	78.97	73.80	50.31	51.58	61.60
2045	71.80	62.24	45.83	31.85	22.71	24.73	58.12	80.81	75.52	51.48	52.78	63.04
2046	73.27	63.52	46.77	32.50	23.18	25.24	59.31	82.46	77.06	52.54	53.86	64.33
2047	74.77	64.82	47.73	33.16	23.65	25.76	60.53	84.15	78.64	53.61	54.97	65.65

					7	TABLE 6a	l					
							led Costs					
				Renewab								
					on-Peak	Forecast	(\$/MWH)	1				
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	40.01	49.44	100.16	171.51	109.33	69.58	68.56	90.98
2023	90.95	79.74	52.22	35.40	31.83	38.46	108.92	150.62	105.84	60.29	61.09	75.02
2024	72.32	65.48	46.59	33.77	29.54	38.52	93.28	128.91	90.65	54.28	54.99	67.49
2025	54.76	50.08	37.13	28.35	25.45	31.60	69.12	93.53	67.32	42.40	42.89	51.45
2026	55.88	51.10	37.89	28.93	25.97	32.25	70.54	95.45	68.70	43.27	43.77	52.51
2027	57.03	52.15	38.67	29.52	26.50	32.91	71.98	97.40	70.11	44.15	44.66	53.58
2028	58.05	53.08	39.37	30.06	26.98	33.51	73.27	99.14	71.36	44.95	45.47	54.54
2029	59.39	54.31	40.27	30.74	27.60	34.27	74.96	101.43	73.01	45.98	46.51	55.80
2030	60.61	55.42	41.10	31.37	28.17	34.97	76.50	103.51	74.50	46.92	47.47	56.94
2031	61.85	56.55	41.94	32.02	28.74	35.69	78.06	105.63	76.03	47.89	48.44	58.11
2032	62.91	57.53	42.65	32.55	29.22	36.29	79.42	107.47	77.35	48.70	49.27	59.11
2033	64.41	58.90	43.67	33.34	29.93	37.17	81.30	110.00	79.18	49.87	50.44	60.51
2034	65.75	60.12	44.59	34.05	30.57	37.95	82.98	112.28	80.82	50.91	51.50	61.78
2035	67.07	61.33	45.48	34.72	31.17	38.71	84.66	114.56	82.45	51.93	52.53	63.02
2036	68.25	62.41	46.28	35.33	31.71	39.38	86.15	116.58	83.90	52.84	53.45	64.13
2037	69.85	63.87	47.36	36.16	32.46	40.31	88.17	119.30	85.87	54.08	54.71	65.63
2038	71.28	65.18	48.34	36.90	33.13	41.14	89.97	121.74	87.63	55.19	55.83	66.97
2039	72.74	66.52	49.33	37.65	33.80	41.98	91.81	124.24	89.42	56.32	56.97	68.34
2040	74.04	67.71	50.21	38.34	34.42	42.74	93.45	126.45	91.02	57.33	57.99	69.57
2041	75.75	69.27	51.37	39.21	35.20	43.72	95.61	129.38	93.12	58.65	59.33	71.17
2042	77.30	70.69	52.42	40.02	35.93	44.61	97.57	132.03	95.03	59.85	60.54	72.63
2043	78.89	72.14	53.49	40.84	36.66	45.52	99.57	134.74	96.98	61.08	61.78	74.12
2044	80.27	73.40	54.43	41.55	37.30	46.32	101.33	137.11	98.68	62.15	62.87	75.42
2045	82.18	75.15	55.73	42.55	38.21	47.44	103.72	140.34	101.02	63.63	64.37	77.21
2046	83.84	76.66	56.85	43.40	38.96	48.38	105.82	143.19	103.06	64.91	65.66	78.77
2047	85.55	78.23	58.01	44.29	39.76	49.37	107.99	146.12	105.17	66.24	67.00	80.38

					-	TABLE 6b	)					
					Renewal	ole Avoid	ed Costs	i				
			1	Renewak	le Fixed	Price Op	otion for	Solar QF				
				(	Off-Peak	Forecast	(\$/MWH)	)				
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.00	0.00	0.00	0.00	30.84	32.88	49.95	73.65	71.62	60.40	59.38	75.69
2023	75.15	65.98	41.51	28.26	21.64	26.48	49.98	69.79	65.17	51.65	52.97	63.50
2024	68.91	59.61	43.65	30.04	21.15	23.12	55.61	77.67	72.53	49.14	50.41	60.39
2025	46.72	40.35	29.41	20.09	14.00	15.35	37.60	52.73	49.20	33.18	34.04	40.88
2026	47.68	41.18	30.01	20.50	14.29	15.66	38.37	53.81	50.21	33.86	34.74	41.72
2027	48.65	42.02	30.63	20.92	14.58	15.98	39.16	54.91	51.23	34.55	35.45	42.57
2028	49.51	42.76	31.17	21.29	14.83	16.26	39.85	55.87	52.14	35.16	36.07	43.32
2029	50.67	43.76	31.90	21.79	15.18	16.64	40.78	57.18	53.36	35.98	36.92	44.33
2030	51.70	44.66	32.55	22.23	15.49	16.98	41.62	58.35	54.45	36.72	37.68	45.24
2031	52.76	45.57	33.22	22.69	15.81	17.33	42.47	59.55	55.56	37.47	38.45	46.17
2032	53.69	46.37	33.80	23.08	16.08	17.63	43.22	60.60	56.54	38.13	39.12	46.98
2033	54.95	47.46	34.59	23.63	16.46	18.05	44.23	62.01	57.86	39.02	40.04	48.08
2034	56.07	48.43	35.30	24.11	16.80	18.42	45.13	63.28	59.05	39.82	40.86	49.07
2035	57.22	49.42	36.02	24.60	17.15	18.80	46.06	64.58	60.26	40.64	41.70	50.07
2036	58.23	50.29	36.66	25.04	17.44	19.12	46.87	65.72	61.32	41.35	42.43	50.95
2037	59.59	51.47	37.52	25.62	17.86	19.57	47.97	67.25	62.75	42.32	43.42	52.14
2038	60.81	52.52	38.28	26.15	18.22	19.98	48.95	68.63	64.04	43.18	44.31	53.21
2039	62.06	53.60	39.07	26.68	18.59	20.38	49.95	70.04	65.35	44.07	45.22	54.30
2040	63.15	54.54	39.75	27.15	18.92	20.74	50.83	71.27	66.50	44.84	46.01	55.26
2041	64.63	55.82	40.69	27.79	19.36	21.23	52.02	72.93	68.06	45.89	47.09	56.55
2042	65.95	56.96	41.52	28.36	19.76	21.66	53.08	74.43	69.45	46.83	48.06	57.71
2043	67.30	58.13	42.37	28.94	20.17	22.11	54.17	75.95	70.87	47.79	49.04	58.89
2044	68.49	59.15	43.11	29.44	20.52	22.49	55.12	77.29	72.12	48.63	49.90	59.93
2045	70.09	60.53	44.12	30.14	21.00	23.02	56.41	79.10	73.81	49.77	51.07	61.33
2046	71.52	61.77	45.03	30.75	21.43	23.49	57.57	80.72	75.32	50.79	52.12	62.58
2047	72.99	63.04	45.95	31.38	21.87	23.98	58.75	82.37	76.86	51.83	53.18	63.87

## WIND INTEGRATION

TABLE 7		
Integration Costs		
Year	Wind	Solar
2022	0.34	1.41
2023	0.35	1.44
2024	0.35	1.47
2025	0.36	1.50
2026	0.37	1.53
2027	0.37	1.56
2028	0.38	1.59
2029	0.39	1.63
2030	0.40	1.66
2031	0.41	1.69
2032	0.41	1.73
2033	0.42	1.76
2034	0.43	1.80
2035	0.44	1.84
2036	0.45	1.87
2037	0.46	1.91
2038	0.47	1.95
2039	0.48	1.99
2040	0.49	2.03
2041	0.50	2.07
2042	0.51	2.12
2043	0.52	2.16
2044	0.53	2.21
2045	0.54	2.25
2046	0.55	2.30
2047	0.56	2.34

## 3. As-Available Rate

The As-Available Rate is based on the Avoided Energy Cost for surplus energy at the time of delivery. The As-Available Rate is equal to the Avoided Energy Cost. The Company will purchase As-Available Energy at the As-Available Rate.

### MONTHLY SERVICE CHARGE

Each separately metered QF not associated with a retail Customer account will be charged \$10.00 per month.

#### **INSURANCE REQUIREMENTS**

The following insurance requirements are applicable to Sellers with a Standard PPA:

- 1) QFs with nameplate capacity ratings greater than 200 kW are required to secure and maintain a prudent amount of general liability insurance. The Seller must certify to the Company that it is maintaining general liability insurance coverage for each QF at prudent amounts. A prudent amount will be deemed to mean liability insurance coverage for both bodily injury and property damage liability in the amount of not less than \$1,000,000 each occurrence combined single limit, which limits may be required to be increased or decreased by the Company as the Company determines in its reasonable judgment, that economic conditions or claims experience may warrant.
- Such insurance will include an endorsement naming the Company as an additional insured insofar as liability arising out of operations under this schedule and a provision that such liability policies will not be canceled or their limits reduced without 30 days' written notice to the Company. The Seller will furnish the Company with certificates of insurance together with the endorsements required herein. The Company will have the right to inspect the original policies of such insurance.
- 3) QFs with a design capacity of 200 kW or less are encouraged to pursue liability insurance on their own. The Oregon Public Utility Commission in Order No. 05-584 determined that it is inappropriate to require QFs that have a design capacity of 200 kW or less to obtain general liability insurance.

## TRANSMISSION AGREEMENTS

If the QF is located outside the Company's service territory, the Seller is responsible for the transmission of power at its cost to the Company's service territory.

#### INTERCONNECTION REQUIREMENTS

Except as otherwise provided in a generation Interconnection Agreement between the Company and Seller, if the QF is located within the Company's service territory, switching equipment capable of isolating the QF from the Company's system will be accessible to the Company at all times. At the Company's option, the Company may operate the switching equipment described above if, in the sole opinion of the Company, continued operation of the QF in connection with the utility's system may create or contribute to a system emergency.

## INTERCONNECTION REQUIREMENTS (Continued)

The QF owner interconnecting with the Company's distribution system must comply with all requirements for interconnection as established pursuant to Commission rule, in the Company's Rules and Regulations (Rule C) or the Company's Interconnection Procedures contained in its FERC Open Access Transmission Tariff (OATT), as applicable. The Seller will bear full responsibility for the installation and safe operation of the interconnection facilities.

# DEFINITION OF A SMALL COGENERATION FACILITY OR SMALL POWER PRODUCTION FACILITY ELIGIBLE TO RECEIVE THE STANDARD FIXED PRICE OPTION OR THE RENEWABLE FIXED PRICE OPTION UNDER THE STANDARD PPA

A QF will be eligible to receive the Standard Fixed Price Option or the Renewable Fixed Price Option (as appropriate) under the Standard PPA if the nameplate capacity of the QF, together with any other electric generating facility using the same motive force, owned or controlled by the Same Person(s) or Affiliated Person(s), and located at the Same Site, does not exceed 3 MW for solar QF projects or 10 MW for all other types of QF projects. Solar QF projects with nameplate capacity (as calculated in this paragraph) that exceed 3 MW but do not exceed 10 MW are eligible for a Standard PPA containing negotiated prices under Schedule 202. A Community-Based or Family-Owned QF is exempt from these restrictions.

## **Definition of Community-Based**

- a. A community project (or a community sponsored project) must have a recognized and established organization located within the county of the project or within 50 miles of the project that has a genuine role in helping the project be developed and must have some not insignificant continuing role with or interest in the project after it is completed and placed in service.
- b. After excluding the passive investor whose ownership interests are primarily related to green tag values and tax benefits as the primary ownership benefit, the equity (ownership) interests in a community sponsored project must be owned in substantial percentage (80 percent or more) by the following persons (individuals and entities): (i) the sponsoring organization, or its controlled affiliates; (ii) members of the sponsoring organization (if it is a membership organization) or owners of the sponsorship organization (if it is privately owned); (iii) persons who live in the county in which the project is located or who live a county adjoining the county in which the project is located; or (iv) units of local government, charities, or other established nonprofit organizations active either in the county in which the project is located or active in a county adjoining the county in which the project is located.

## **Definition of Family-Owned**

After excluding the ownership interest of the passive investor whose ownership interests are primarily related to green tag values and tax benefits as the primary ownership benefit, five or fewer individuals own 50 percent or more of the equity of the project entity, or fifteen or fewer individuals own 90 percent or more of the project entity. A "look through" rule applies to closely held entities that hold the project entity, so that equity held by LLCs, trusts, estates, corporations, partnerships or other similar entities is considered

DEFINITION OF A SMALL COGENERATION FACILITY OR SMALL POWER PRODUCTION FACILITY ELIGIBLE TO RECEIVE THE STANDARD FIXED PRICE OPTION OR THE RENEWABLE FIXED PRICE OPTION UNDER THE STANDARD PPA (Continued)

held by the equity owners of the look through entity. An individual is a natural person. In counting to five or fifteen, spouses or children of an equity owner of the project owner who also have an equity interest are aggregated and counted as a single individual.

## **Definition of Person(s) or Affiliated Person(s)**

As used above, the term "Same Person(s)" or "Affiliated Person(s)" means a natural person or persons or any legal entity or entities sharing common ownership, management or acting jointly or in concert with or exercising influence over the policies or actions of another person or entity. However, two facilities will not be held to be owned or controlled by the Same Person(s) or Affiliated Person(s) solely because they are developed by a single entity.

Furthermore, two facilities will not be held to be owned or controlled by the Same Person(s) or Affiliated Person(s) if such common person or persons is a "passive investor" whose ownership interest in the QF is primarily related to utilizing production tax credits, green tag values and MACRS depreciation as the primary ownership benefit and the facilities at issue are independent family-owned or community-based projects. A unit of Oregon local government may also be a "passive investor" in a community-based project if the local governmental unit demonstrates that it will not have an equity ownership interest in or exercise any control over the management of the QF and that its only interest is a share of the cash flow from the QF, which share will not exceed 20%. The 20% cash flow share limit may only be exceeded for good cause shown and only with the prior approval of the Commission.

## **Definition of Same Site**

For purposes of the foregoing, generating facilities are considered to be located at the same site as the QF for which qualification for standard pricing or negotiated pricing under the Standard PPA is sought if they are located within a five-mile radius of any generating facilities or equipment providing fuel or motive force associated with the QF for which qualification for standard pricing or negotiated pricing under the Standard PPA is sought.

### **Definition of Shared Interconnection and Infrastructure**

QFs otherwise meeting the above-described separate ownership test and thereby qualified for entitlement to standard pricing or negotiated pricing under the Standard PPA will not be disqualified by utilizing an interconnection or other infrastructure not providing motive force or fuel that is shared with other QFs qualifying for standard pricing or negotiated pricing under the Standard PPA so long as the use of the shared interconnection complies with the interconnecting utility's safety and reliability standards, interconnection agreement requirements and Prudent Electrical Practices as that term is defined in the interconnecting utility's approved Standard PPA.

### OTHER DEFINITIONS

## As-Available Energy

As-Available Energy means 1) all Net Output delivered to PGE if Seller elected the As-Available Rate option within a Standard PPA, or 2) (a) all Net Output delivered prior to the Commercial Operation Date; (b) all Net Output deliveries greater than Maximum Net Output in any Contract Year as defined under the Standard PPA year; and (c) for deliveries above the nameplate capacity in any hour.

Deliveries pursuant to an Off-System PPA that are above the nameplate capacity in any hour solely for the purpose of accommodating hourly scheduling in whole megawatts by a third-party transmission provider will not be subject to the As-Available Rate.

### **Mid-C Index Price**

As used in this schedule, the daily Mid-C Index Price shall be the applicable day-ahead Intercontinental Exchange ("ICE") Mid-C Physical Peak (bilateral) or Mid-C Physical Off-Peak (bilateral) indices representative of the OTC market for WSPP Schedule-C physical Firm Energy transactions at the Mid-C trading hub. Product details for the Mid-C Physical Peak (bilateral) or Mid-C Physical Off-Peak (bilateral) are found on the following website: <a href="https://www.theice.com/products/OTC/Physical-Energy/Electricity">https://www.theice.com/products/OTC/Physical-Energy/Electricity</a>. In the event ICE no longer publishes this index, PGE and the Seller agree to select an alternative successor index representative of the Mid-C trading hub.

## **Avoided Energy Cost:**

The Avoided Energy Cost means eighty-two and four tenths percent (82.4%) of the monthly arithmetic average of each day's ICE Mid-C Physical Peak (bilateral) and Mid-C Physical Off-Peak (bilateral) average index prices. Each day's index prices will reflect the relative proportions of peak hours and off-peak hours in the month as follows:

.824 \* ( 
$$\sum_{X=1}^{n}$$
 {(ICE Mid-C Physical Peak (bilateral) Avg<sub>X</sub> \* applicable peak index hours for day) + (ICE Mid-C Physical Off-Peak (bilateral) Avg<sub>X</sub> \* applicable off-peak index hours for day)} / (n\*24)) where n = number of days in the month

OTHER DEFINITIONS (Continued)

### **Definition of RPS Attributes**

As used in this schedule, RPS Attributes means all attributes related to the Net Output generated by the Facility that are required in order to provide PGE with "qualifying electricity," as that term is defined in Oregon's Renewable Portfolio Standard Act, Ore. Rev. Stat. 469A.010, in effect at the time of execution of this Agreement. RPS Attributes do not include Environmental Attributes that are greenhouse gas offsets from methane capture not associated with the generation of electricity and not needed to ensure that there are zero net emissions associated with the generation of electricity.

#### **Definition of Environmental Attributes**

As used in this schedule, Environmental Attributes shall mean any and all claims, credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, resulting from the avoidance of the emission of any gas, chemical, or other substance to the air, soil or water. Environmental Attributes include but are not limited to: (1) any avoided emissions of pollutants to the air, soil, or water such as (subject to the foregoing) sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), and other pollutants; and (2) any avoided emissions of carbon dioxide (CO2), methane (CH4), and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere.

## **Definition of Resource Sufficiency Period**

This is the period from the current year through 2024.

## **Definition of Resource Deficiency Period**

This is the period from 2025.

## **Definition of Renewable Resource Sufficiency Period**

This is the period from the current year through 2024.

## **Definition of Renewable Resource Deficiency Period**

This is the period from 2025.

## **DISPUTE RESOLUTION**

Upon request, the QF will provide the purchasing utility with documentation verifying the ownership, management and financial structure of the QF in reasonably sufficient detail to allow the utility to make an initial determination of whether or not the QF meets the above-described criteria for entitlement to standard pricing or negotiated pricing under the Standard PPA.

## SCHEDULE 201 (Concluded)

DISPUTE RESOLUTION (Continued)

The QF may present disputes to the Commission for resolution using the following process:

The QF may file a complaint asking the Commission to adjudicate disputes regarding the formation of the standard contract. The QF may not file such a complaint during any 15-day period in which the utility has the obligation to respond, but must wait until the 15-day period has passed.

The utility may respond to the complaint within ten days of service.

The Commission will limit its review to the issues identified in the complaint and response, and utilize a process similar to the arbitration process adopted to facilitate the execution of interconnection agreements among telecommunications carriers. See OAR 860, Division 016. The administrative law judge will not act as an arbitrator.

## **SPECIAL CONDITIONS**

- 1. Delivery of energy by Seller will be at a voltage, phase, frequency, and power factor as specified by the Company.
- 2. If the Seller also receives retail Electricity Service from the Company at the same location, any payments under this schedule will be credited to the Seller's retail Electricity Service bill. At the option of the Customer, any net credit over \$10.00 will be paid by check to the Customer.
- 3. Unless required by state or federal law, if the 1978 Public Utility Regulatory Policies Act (PURPA) is repealed, PPAs entered into pursuant to this schedule will not terminate prior to the Standard or Negotiated PPA's termination date.

## **TERM OF AGREEMENT**

Not less than one year and not to exceed 20 years from the commercial operation date selected by the Seller and memorialized in the PPA.