



**Portland General Electric**  
121 SW Salmon Street · Portland, Ore. 97204

May 19, 2020

Public Utility Commission of Oregon  
Attn: Filing Center  
201 High Street S.E., Suite 100  
P.O. Box 1088  
Salem, OR 97308-1088

RE: UM 1728 – Compliance Filing of Portland General Electric Company’s  
Application to Update Schedule 201 Qualifying Facility Information

This Compliance Filing is made in accordance with the Commissions direction during the public meeting on May 19, 2020. Enclosed are replacement sheets to Sheet Nos. 201-1 through 201-24 reflecting the changes with an effective date of May 20, 2020.

On May 11, 2020 PGE, Staff, CREA, REC, and NewSun reached a compromise regarding PGE’s Application to Update Schedule 201. Pursuant to that agreement PGE modified the start of its proposed renewable deficiency period from 2030 to 2025. Additionally, PGE included a value of PTCs at 60%.

In support of this filing, PGE provides the following additional information:

- Attachment A provides updated Standard Energy, and Capacity Tables
- Attachment B provides updated Renewable Energy, and Capacity Tables
- Attachment C provides a list of sources for various assumptions used to calculate prices
- Redline of Sheet Nos. 201-1 through 201-24

Please direct questions or comments regarding this filing to Santiago Beltran Laborde at (503) 464-7902. Please direct all formal correspondence and requests to the following email address [pge.opuc.filings@pgn.com](mailto:pge.opuc.filings@pgn.com)

Sincerely,

*\s\ Robert Macfarlane*

Robert Macfarlane  
Manager, Pricing and 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.

**SCHEDULE 201 (Continued)**

## 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 [www.portlandgeneral.com](http://www.portlandgeneral.com). 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.

**SCHEDULE 201 (Continued)****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.

**SCHEDULE 201 (Continued)****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. Any Energy delivered in excess of the nameplate rating will be purchased at the applicable Off-Peak Prices for the selected pricing option.

**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.

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: (a) all Net Output delivered prior to the Commercial Operation Date; (b) all Net Output deliveries greater than Maximum Net Output in any PPA year; (c) any generation subject to and as adjusted by the provisions of Section 4.3 of the Standard PPA; (d) Net Output delivered in the Off-Peak Period; and (e) deliveries above the nameplate capacity in any hour. 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 all other Net Output. (See the PPA for defined terms.)

**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 3c, 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.

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

**SCHEDULE 201 (Continued)**

## PRICING OPTIONS FOR STANDARD PPA (Continued)

## Standard Fixed Price Option (Continued)

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 28.57%. The capacity contribution for Solar QF resources (Tables 3a and 3b) is assumed to be 15.78%.

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.

**SCHEDULE 201 (Continued)**

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

TABLE 1a												
Avoided Costs												
Fixed Price Option for Base Load QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44
2025	43.98	44.05	44.12	43.40	43.47	43.55	43.63	43.70	43.78	43.86	44.88	44.96
2026	47.31	47.41	47.50	46.60	46.69	46.78	46.87	46.97	47.06	47.25	48.32	48.41
2027	49.50	49.60	49.36	48.37	48.46	48.34	48.43	48.53	48.63	48.72	46.42	46.50
2028	47.44	46.64	46.62	45.69	45.77	45.84	45.92	46.00	46.08	46.16	47.27	47.36
2029	48.43	48.51	47.81	46.85	46.93	47.02	47.10	47.18	47.27	47.38	48.49	48.57
2030	49.67	49.77	49.76	48.76	48.85	48.94	49.03	49.12	49.21	49.30	50.50	50.59
2031	51.75	51.85	51.94	50.87	50.97	51.07	51.16	51.26	51.36	51.49	52.86	52.97
2032	53.99	54.10	54.20	53.11	53.22	53.33	53.43	53.54	53.65	53.79	55.12	55.24
2033	56.69	56.81	55.65	54.53	54.64	54.75	54.86	54.98	55.09	55.25	56.57	56.68
2034	58.05	58.17	56.80	55.66	55.77	55.89	56.00	56.11	56.23	56.37	57.76	57.88
2035	59.10	59.22	58.63	57.38	57.49	57.61	57.73	57.85	57.97	58.25	59.54	59.66
2036	60.89	61.03	59.84	58.64	58.75	58.88	59.00	59.12	59.25	59.55	60.85	60.98
2037	62.52	62.65	62.58	61.38	61.51	61.64	62.16	62.33	62.47	64.07	66.20	66.35
2038	67.92	68.08	66.37	65.04	65.18	65.33	65.48	65.63	65.79	67.54	69.82	69.99
2039	71.68	71.86	71.72	70.27	70.44	70.61	70.79	70.96	71.14	72.50	74.32	74.51
2040	77.27	77.47	76.20	74.68	74.86	75.06	75.24	75.44	75.63	76.70	78.60	78.80
2041	78.87	79.07	77.78	76.23	76.41	76.61	76.80	77.00	77.20	78.29	80.23	80.43
2042	80.48	80.69	79.38	77.79	77.98	78.18	78.37	78.58	78.78	79.89	81.87	82.08
2043	82.13	82.35	81.00	79.38	79.58	79.78	79.98	80.19	80.39	81.53	83.55	83.76
2044	83.70	83.92	82.54	80.89	81.09	81.30	81.50	81.71	81.92	83.08	85.14	85.36
2045	85.65	85.88	84.48	82.79	82.99	83.20	83.41	83.63	83.84	85.02	87.13	87.35

**SCHEDULE 201 (Continued)**

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

TABLE 1b												
Avoided Costs												
Fixed Price Option for Base Load QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27
2025	18.86	18.94	19.01	18.28	18.36	18.44	18.51	18.59	18.67	18.75	19.77	19.85
2026	21.68	21.78	21.87	20.97	21.06	21.16	21.25	21.34	21.43	21.62	22.69	22.79
2027	23.35	23.45	23.21	22.21	22.31	22.19	22.28	22.38	22.47	22.57	20.27	20.35
2028	20.75	19.95	19.93	19.00	19.08	19.16	19.23	19.31	19.39	19.47	20.58	20.67
2029	21.19	21.28	20.57	19.62	19.70	19.78	19.86	19.95	20.03	20.14	21.25	21.34
2030	21.88	21.97	21.96	20.97	21.06	21.15	21.23	21.33	21.42	21.51	22.70	22.80
2031	23.38	23.48	23.57	22.51	22.61	22.71	22.80	22.90	23.00	23.13	24.50	24.60
2032	25.23	25.34	25.44	24.35	24.46	24.57	24.67	24.78	24.89	25.03	26.36	26.48
2033	27.15	27.27	26.11	25.00	25.10	25.22	25.33	25.44	25.55	25.71	27.03	27.15
2034	27.81	27.94	26.56	25.42	25.53	25.65	25.76	25.87	25.99	26.13	27.53	27.64
2035	28.34	28.46	27.87	26.62	26.73	26.85	26.97	27.09	27.21	27.49	28.78	28.90
2036	29.60	29.74	28.55	27.35	27.47	27.59	27.71	27.83	27.96	28.26	29.56	29.69
2037	30.49	30.62	30.55	29.35	29.48	29.61	30.12	30.30	30.44	32.04	34.16	34.32
2038	35.23	35.40	33.68	32.35	32.49	32.64	32.79	32.94	33.10	34.85	37.13	37.30
2039	38.32	38.50	38.36	36.91	37.08	37.25	37.43	37.61	37.79	39.14	40.96	41.15
2040	43.23	43.43	42.16	40.64	40.82	41.02	41.20	41.40	41.59	42.66	44.56	44.76
2041	44.13	44.34	43.04	41.49	41.68	41.87	42.06	42.26	42.46	43.55	45.49	45.70
2042	45.03	45.24	43.92	42.34	42.53	42.73	42.92	43.13	43.33	44.44	46.42	46.63
2043	45.96	46.17	44.82	43.20	43.40	43.60	43.80	44.01	44.22	45.35	47.37	47.59
2044	46.90	47.12	45.74	44.09	44.29	44.50	44.70	44.91	45.12	46.28	48.34	48.56
2045	47.86	48.08	46.68	44.99	45.20	45.41	45.62	45.83	46.05	47.23	49.33	49.56



**SCHEDULE 201 (Continued)**

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

TABLE 2a												
Avoided Costs												
Fixed Price Option for Wind QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09
2025	35.38	35.46	35.53	34.80	34.87	34.95	35.03	35.11	35.19	35.26	36.28	36.36
2026	38.54	38.64	38.72	37.83	37.92	38.01	38.10	38.19	38.29	38.48	39.54	39.64
2027	40.55	40.65	40.40	39.41	39.51	39.39	39.48	39.58	39.67	39.77	37.47	37.55
2028	38.30	37.50	37.48	36.55	36.63	36.71	36.78	36.86	36.95	37.03	38.14	38.22
2029	39.10	39.19	38.48	37.53	37.61	37.69	37.77	37.86	37.94	38.05	39.16	39.25
2030	40.16	40.25	40.24	39.25	39.33	39.42	39.51	39.60	39.70	39.79	40.98	41.08
2031	42.04	42.14	42.23	41.16	41.26	41.36	41.45	41.55	41.65	41.78	43.15	43.26
2032	44.14	44.25	44.35	43.26	43.37	43.48	43.58	43.69	43.80	43.94	45.27	45.39
2033	46.57	46.69	45.54	44.42	44.53	44.64	44.75	44.86	44.98	45.14	46.45	46.57
2034	47.70	47.82	46.45	45.31	45.42	45.53	45.65	45.76	45.88	46.02	47.41	47.53
2035	48.57	48.69	48.10	46.85	46.96	47.08	47.20	47.32	47.44	47.72	49.00	49.13
2036	50.18	50.31	49.12	47.92	48.04	48.16	48.28	48.41	48.54	48.84	50.14	50.27
2037	51.55	51.69	51.61	50.41	50.54	50.68	51.19	51.36	51.50	53.10	55.23	55.38
2038	56.73	56.89	55.18	53.85	53.99	54.14	54.29	54.44	54.60	56.35	58.63	58.80
2039	60.26	60.44	60.30	58.85	59.02	59.19	59.37	59.54	59.72	61.08	62.90	63.09
2040	65.62	65.82	64.55	63.03	63.21	63.40	63.59	63.78	63.98	65.05	66.95	67.15
2041	66.98	67.18	65.89	64.33	64.52	64.72	64.91	65.11	65.31	66.39	68.33	68.54
2042	68.35	68.56	67.24	65.65	65.84	66.04	66.24	66.44	66.64	67.75	69.73	69.95
2043	69.75	69.96	68.62	67.00	67.19	67.40	67.59	67.80	68.01	69.14	71.16	71.38
2044	71.10	71.32	69.94	68.29	68.49	68.70	68.90	69.11	69.32	70.48	72.54	72.76
2045	72.72	72.94	71.54	69.85	70.05	70.27	70.47	70.69	70.91	72.09	74.19	74.41

**SCHEDULE 201 (Continued)**

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

TABLE 2b												
Avoided Costs												
Fixed Price Option for Wind QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92
2025	18.50	18.58	18.65	17.92	18.00	18.08	18.15	18.23	18.31	18.39	19.41	19.49
2026	21.32	21.42	21.50	20.61	20.70	20.79	20.88	20.97	21.07	21.26	22.32	22.42
2027	22.97	23.08	22.83	21.84	21.93	21.81	21.91	22.00	22.10	22.20	19.89	19.97
2028	20.36	19.57	19.55	18.62	18.70	18.77	18.85	18.93	19.01	19.09	20.20	20.28
2029	20.80	20.89	20.18	19.23	19.31	19.39	19.47	19.56	19.64	19.75	20.86	20.95
2030	21.48	21.57	21.56	20.57	20.66	20.75	20.84	20.93	21.02	21.11	22.31	22.40
2031	22.98	23.08	23.17	22.11	22.20	22.30	22.40	22.50	22.60	22.72	24.10	24.20
2032	24.82	24.93	25.03	23.94	24.04	24.15	24.26	24.37	24.48	24.61	25.95	26.06
2033	26.73	26.85	25.69	24.57	24.68	24.79	24.90	25.02	25.13	25.29	26.61	26.72
2034	27.38	27.50	26.13	24.99	25.10	25.22	25.33	25.44	25.56	25.70	27.09	27.21
2035	27.90	28.02	27.43	26.18	26.29	26.41	26.53	26.65	26.77	27.05	28.34	28.46
2036	29.16	29.29	28.10	26.90	27.02	27.14	27.26	27.38	27.51	27.81	29.11	29.24
2037	30.03	30.16	30.09	28.89	29.02	29.15	29.67	29.84	29.98	31.58	33.70	33.86
2038	34.76	34.93	33.22	31.88	32.02	32.18	32.32	32.48	32.63	34.39	36.66	36.83
2039	37.84	38.02	37.88	36.43	36.60	36.78	36.95	37.13	37.31	38.66	40.48	40.67
2040	42.74	42.94	41.67	40.15	40.33	40.53	40.71	40.91	41.10	42.17	44.07	44.27
2041	43.63	43.84	42.54	40.99	41.18	41.37	41.56	41.76	41.96	43.05	44.99	45.20
2042	44.53	44.74	43.42	41.83	42.02	42.22	42.42	42.62	42.82	43.93	45.91	46.12
2043	45.44	45.65	44.31	42.69	42.88	43.09	43.28	43.49	43.70	44.83	46.85	47.07
2044	46.37	46.59	45.21	43.56	43.76	43.97	44.17	44.38	44.59	45.75	47.81	48.03
2045	47.32	47.54	46.14	44.45	44.66	44.87	45.08	45.29	45.51	46.69	48.79	49.02

**SCHEDULE 201 (Continued)**PRICING OPTIONS FOR STANDARD PPA (Continued)  
Standard Fixed Price Option (Continued)

TABLE 3a												
Avoided Costs												
Fixed Price Option for Solar QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97
2025	27.47	27.54	27.61	26.89	26.96	27.04	27.11	27.19	27.27	27.35	28.37	28.45
2026	30.46	30.56	30.65	29.75	29.84	29.93	30.02	30.12	30.21	30.40	31.47	31.56
2027	32.31	32.41	32.16	31.17	31.27	31.14	31.24	31.34	31.43	31.53	29.22	29.31
2028	29.89	29.09	29.07	28.15	28.22	28.30	28.37	28.46	28.54	28.62	29.73	29.81
2029	30.52	30.61	29.90	28.95	29.03	29.11	29.19	29.28	29.36	29.47	30.58	30.67
2030	31.40	31.49	31.48	30.49	30.58	30.67	30.76	30.85	30.94	31.03	32.22	32.32
2031	33.10	33.20	33.29	32.23	32.32	32.42	32.52	32.62	32.72	32.84	34.22	34.32
2032	35.07	35.18	35.28	34.19	34.30	34.41	34.51	34.62	34.73	34.87	36.20	36.32
2033	37.27	37.39	36.23	35.11	35.22	35.33	35.44	35.56	35.67	35.83	37.15	37.26
2034	38.18	38.30	36.92	35.79	35.90	36.01	36.12	36.24	36.35	36.50	37.89	38.01
2035	38.87	39.00	38.41	37.15	37.27	37.39	37.51	37.63	37.75	38.03	39.31	39.44
2036	40.32	40.45	39.26	38.06	38.18	38.30	38.42	38.55	38.67	38.97	40.27	40.40
2037	41.46	41.59	41.52	40.32	40.45	40.58	41.10	41.27	41.41	43.01	45.14	45.29
2038	46.43	46.59	44.88	43.55	43.69	43.84	43.99	44.14	44.30	46.05	48.33	48.50
2039	49.75	49.93	49.79	48.33	48.50	48.68	48.85	49.03	49.21	50.57	52.39	52.58
2040	54.89	55.09	53.82	52.30	52.48	52.68	52.86	53.06	53.25	54.32	56.22	56.42
2041	56.03	56.23	54.94	53.39	53.57	53.77	53.96	54.16	54.36	55.45	57.39	57.59
2042	57.18	57.39	56.07	54.48	54.67	54.87	55.07	55.27	55.47	56.58	58.56	58.77
2043	58.35	58.56	57.22	55.60	55.79	56.00	56.20	56.40	56.61	57.74	59.76	59.98
2044	59.50	59.72	58.34	56.69	56.89	57.10	57.30	57.51	57.72	58.88	60.94	61.16
2045	60.81	61.04	59.63	57.95	58.15	58.36	58.57	58.79	59.00	60.18	62.29	62.51

**SCHEDULE 201 (Continued)**

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

TABLE 3b												
Avoided Costs												
Fixed Price Option for Solar QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80
2025	17.36	17.44	17.51	16.78	16.86	16.94	17.01	17.09	17.17	17.25	18.27	18.35
2026	20.15	20.25	20.34	19.44	19.53	19.62	19.72	19.81	19.90	20.09	21.16	21.25
2027	21.79	21.89	21.64	20.65	20.75	20.62	20.72	20.81	20.91	21.01	18.70	18.79
2028	19.15	18.35	18.34	17.41	17.49	17.56	17.64	17.72	17.80	17.88	18.99	19.07
2029	19.56	19.65	18.94	17.99	18.07	18.15	18.24	18.32	18.40	18.52	19.63	19.71
2030	20.22	20.31	20.30	19.31	19.40	19.49	19.57	19.67	19.76	19.85	21.04	21.14
2031	21.69	21.79	21.88	20.82	20.91	21.01	21.11	21.21	21.31	21.44	22.81	22.91
2032	23.50	23.61	23.71	22.62	22.73	22.84	22.94	23.05	23.17	23.30	24.63	24.75
2033	25.39	25.51	24.35	23.23	23.34	23.45	23.56	23.67	23.79	23.95	25.27	25.38
2034	26.01	26.14	24.76	23.62	23.73	23.85	23.96	24.07	24.19	24.33	25.72	25.84
2035	26.50	26.63	26.03	24.78	24.90	25.02	25.13	25.25	25.38	25.65	26.94	27.06
2036	27.73	27.86	26.67	25.47	25.59	25.71	25.83	25.96	26.09	26.38	27.69	27.81
2037	28.57	28.71	28.64	27.43	27.56	27.70	28.21	28.38	28.52	30.12	32.25	32.40
2038	33.28	33.44	31.73	30.40	30.54	30.69	30.84	30.99	31.15	32.90	35.18	35.35
2039	36.33	36.51	36.37	34.92	35.09	35.26	35.43	35.61	35.79	37.15	38.97	39.16
2040	41.20	41.40	40.13	38.60	38.79	38.98	39.17	39.36	39.56	40.63	42.53	42.73
2041	42.06	42.26	40.97	39.41	39.60	39.80	39.99	40.19	40.39	41.47	43.41	43.62
2042	42.92	43.13	41.81	40.22	40.41	40.61	40.81	41.01	41.21	42.32	44.30	44.51
2043	43.80	44.01	42.66	41.04	41.24	41.44	41.64	41.85	42.06	43.19	45.21	45.43
2044	44.69	44.91	43.54	41.88	42.08	42.29	42.50	42.71	42.92	44.08	46.14	46.36
2045	45.61	45.83	44.43	42.74	42.95	43.16	43.37	43.58	43.80	44.98	47.08	47.31

**SCHEDULE 201 (Continued)**

## 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 28.57%. The capacity contribution for Solar QF resources (Tables 6a and 6b) is assumed to be 15.78%. 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.



**SCHEDULE 201 (Continued)**

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 4a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Base Load QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44
2025	76.34	72.81	64.90	59.88	58.61	63.31	81.27	88.92	74.63	67.12	67.73	74.47
2026	77.91	74.30	66.23	61.11	59.81	64.60	82.93	90.74	76.16	68.50	69.12	76.00
2027	79.50	75.82	67.59	62.36	61.03	65.93	84.63	92.60	77.72	69.90	70.54	77.55
2028	80.98	77.23	68.86	63.54	62.19	67.17	86.20	94.31	79.17	71.21	71.86	79.00
2029	82.79	78.96	70.39	64.94	63.56	68.65	88.13	96.43	80.94	72.79	73.45	80.76
2030	84.49	80.58	71.83	66.27	64.86	70.06	89.94	98.41	82.60	74.29	74.96	82.42
2031	86.22	82.23	73.30	67.63	66.19	71.50	91.78	100.42	84.29	75.81	76.50	84.11
2032	87.64	83.58	74.49	68.72	67.26	72.66	93.30	102.09	85.67	77.04	77.74	85.49
2033	89.79	85.63	76.33	70.43	68.93	74.46	95.58	104.58	87.78	78.95	79.66	87.59
2034	91.73	87.48	77.99	71.97	70.44	76.08	97.63	106.82	89.67	80.66	81.39	89.48
2035	93.51	89.17	79.49	73.35	71.78	77.54	99.54	108.91	91.41	82.21	82.96	91.21
2036	95.15	90.74	80.89	74.63	73.04	78.90	101.28	110.82	93.01	83.65	84.41	92.81
2037	97.38	92.87	82.78	76.38	74.76	80.75	103.66	113.41	95.19	85.62	86.39	94.99
2038	99.37	94.77	84.48	77.95	76.29	82.40	105.78	115.74	97.14	87.37	88.16	96.94
2039	101.41	96.71	86.21	79.54	77.85	84.09	107.95	118.11	99.13	89.16	89.97	98.92
2040	103.29	98.51	87.83	81.04	79.32	85.67	109.95	120.29	100.98	90.83	91.65	100.77
2041	105.60	100.71	89.78	82.84	81.07	87.57	112.41	123.00	103.24	92.85	93.69	103.02
2042	107.77	102.78	91.62	84.53	82.73	89.36	114.72	125.52	105.35	94.75	95.61	105.13
2043	109.98	104.88	93.49	86.26	84.43	91.20	117.07	128.09	107.51	96.69	97.57	107.28
2044	111.91	106.72	95.13	87.77	85.91	92.79	119.12	130.34	109.40	98.39	99.28	109.16
2045	114.65	109.34	97.49	89.96	88.04	95.09	122.03	133.51	112.08	100.82	101.73	111.84

**SCHEDULE 201 (Continued)**

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

TABLE 4b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Base Load QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27
2025	42.18	37.65	32.01	25.04	22.29	23.24	34.04	39.46	37.76	35.12	35.76	40.08
2026	43.04	38.42	32.67	25.55	22.75	23.71	34.74	40.27	38.54	35.84	36.50	40.90
2027	43.92	39.21	33.34	26.08	23.21	24.20	35.45	41.09	39.33	36.57	37.24	41.74
2028	44.70	39.90	33.93	26.54	23.62	24.63	36.08	41.82	40.02	37.22	37.90	42.48
2029	45.74	40.83	34.72	27.16	24.17	25.20	36.92	42.79	40.95	38.09	38.78	43.47
2030	46.68	41.67	35.43	27.71	24.67	25.72	37.67	43.67	41.79	38.87	39.58	44.36
2031	47.63	42.52	36.15	28.28	25.18	26.24	38.44	44.57	42.65	39.66	40.39	45.27
2032	48.48	43.27	36.79	28.78	25.62	26.71	39.12	45.35	43.40	40.37	41.10	46.07
2033	49.60	44.28	37.65	29.45	26.22	27.33	40.03	46.41	44.42	41.31	42.06	47.14
2034	50.62	45.19	38.42	30.05	26.75	27.89	40.86	47.36	45.33	42.15	42.92	48.11
2035	51.66	46.11	39.21	30.67	27.30	28.46	41.69	48.33	46.25	43.02	43.80	49.09
2036	52.57	46.93	39.90	31.21	27.79	28.96	42.43	49.19	47.07	43.78	44.58	49.96
2037	53.80	48.02	40.83	31.94	28.43	29.64	43.42	50.33	48.17	44.80	45.62	51.12
2038	54.90	49.00	41.67	32.59	29.01	30.25	44.31	51.36	49.16	45.71	46.55	52.17
2039	56.02	50.01	42.52	33.26	29.61	30.87	45.22	52.42	50.16	46.65	47.50	53.24
2040	57.01	50.89	43.28	33.85	30.13	31.41	46.02	53.34	51.05	47.48	48.34	54.18
2041	58.34	52.08	44.28	34.64	30.83	32.14	47.09	54.58	52.24	48.58	49.47	55.44
2042	59.54	53.15	45.19	35.35	31.47	32.80	48.05	55.70	53.31	49.58	50.48	56.58
2043	60.76	54.23	46.12	36.07	32.11	33.47	49.04	56.84	54.40	50.59	51.52	57.74
2044	61.83	55.19	46.93	36.71	32.68	34.07	49.90	57.85	55.36	51.49	52.43	58.76
2045	63.27	56.48	48.03	37.56	33.44	34.86	51.07	59.20	56.65	52.69	53.65	60.13

**SCHEDULE 201 (Continued)**

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

TABLE 5a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Wind QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09
2025	67.74	64.21	56.30	51.29	50.01	54.71	72.67	80.32	66.03	58.53	59.13	65.87
2026	69.13	65.52	57.46	52.34	51.04	55.83	74.16	81.96	67.39	59.72	60.35	67.22
2027	70.55	66.87	58.63	53.41	52.08	56.97	75.68	83.64	68.77	60.95	61.58	68.60
2028	71.85	68.10	59.72	54.40	53.05	58.03	77.06	85.17	70.03	62.07	62.72	69.86
2029	73.47	69.63	61.06	55.62	54.24	59.33	78.81	87.11	71.61	63.47	64.13	71.44
2030	74.97	71.06	62.31	56.76	55.35	60.55	80.42	88.89	73.08	64.77	65.44	72.90
2031	76.51	72.52	63.59	57.92	56.48	61.79	82.07	90.71	74.58	66.10	66.79	74.40
2032	77.79	73.73	64.64	58.87	57.41	62.81	83.45	92.25	75.83	67.20	67.90	75.64
2033	79.68	75.52	66.22	60.32	58.82	64.34	85.47	94.47	77.66	68.83	69.55	77.48
2034	81.37	77.13	67.64	61.62	60.09	65.73	87.28	96.47	79.32	70.31	71.04	79.13
2035	82.98	78.64	68.96	62.82	61.25	67.01	89.00	98.38	80.88	71.68	72.43	80.68
2036	84.43	80.03	70.17	63.92	62.33	68.18	90.57	100.11	82.30	72.94	73.70	82.10
2037	86.41	81.90	71.82	65.42	63.79	69.78	92.69	102.45	84.23	74.65	75.43	84.02
2038	88.18	83.58	73.29	66.76	65.10	71.21	94.59	104.55	85.95	76.18	76.97	85.75
2039	89.99	85.29	74.79	68.12	66.43	72.67	96.53	106.69	87.71	77.74	78.55	87.50
2040	91.64	86.86	76.17	69.39	67.67	74.02	98.30	108.64	89.33	79.18	80.00	89.11
2041	93.71	88.82	77.89	70.94	69.18	75.68	100.52	111.11	91.34	80.96	81.80	91.12
2042	95.63	90.64	79.48	72.40	70.60	77.23	102.58	113.38	93.22	82.62	83.48	92.99
2043	97.59	92.50	81.11	73.88	72.04	78.81	104.68	115.70	95.12	84.31	85.19	94.90
2044	99.30	94.12	82.53	75.17	73.31	80.19	106.52	117.74	96.80	85.79	86.68	96.56
2045	101.71	96.41	84.55	77.02	75.11	82.15	109.10	120.57	99.14	87.88	88.79	98.90



**SCHEDULE 201 (Continued)**

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

TABLE 5b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Wind QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92
2025	41.82	37.29	31.65	24.68	21.93	22.88	33.68	39.10	37.40	34.76	35.40	39.72
2026	42.67	38.05	32.30	25.19	22.38	23.35	34.37	39.90	38.17	35.47	36.13	40.53
2027	43.55	38.83	32.96	25.70	22.84	23.82	35.07	40.72	38.95	36.20	36.87	41.36
2028	44.32	39.52	33.55	26.16	23.24	24.24	35.69	41.44	39.64	36.84	37.52	42.10
2029	45.35	40.44	34.33	26.77	23.78	24.81	36.53	42.40	40.56	37.70	38.39	43.08
2030	46.28	41.27	35.03	27.31	24.27	25.32	37.27	43.27	41.40	38.47	39.18	43.96
2031	47.23	42.11	35.75	27.87	24.77	25.84	38.04	44.16	42.24	39.26	39.98	44.86
2032	48.06	42.86	36.38	28.37	25.21	26.29	38.71	44.94	42.99	39.95	40.69	45.65
2033	49.18	43.86	37.23	29.03	25.79	26.91	39.61	45.99	43.99	40.88	41.64	46.72
2034	50.19	44.75	37.99	29.62	26.32	27.46	40.42	46.93	44.89	41.72	42.49	47.67
2035	51.22	45.67	38.77	30.23	26.86	28.02	41.25	47.89	45.81	42.57	43.36	48.65
2036	52.12	46.48	39.45	30.76	27.34	28.51	41.98	48.74	46.62	43.33	44.13	49.51
2037	53.34	47.56	40.37	31.48	27.97	29.18	42.96	49.87	47.71	44.34	45.16	50.66
2038	54.43	48.54	41.20	32.12	28.55	29.78	43.84	50.89	48.69	45.25	46.08	51.70
2039	55.55	49.53	42.04	32.78	29.13	30.39	44.74	51.94	49.68	46.17	47.03	52.76
2040	56.53	50.41	42.79	33.36	29.65	30.92	45.53	52.85	50.56	46.99	47.86	53.69
2041	57.84	51.58	43.79	34.14	30.34	31.65	46.59	54.09	51.74	48.08	48.97	54.94
2042	59.03	52.64	44.68	34.84	30.96	32.29	47.54	55.19	52.80	49.07	49.98	56.07
2043	60.24	53.72	45.60	35.55	31.59	32.95	48.52	56.33	53.88	50.07	51.00	57.22
2044	61.30	54.66	46.40	36.18	32.15	33.54	49.37	57.32	54.83	50.96	51.90	58.23
2045	62.73	55.94	47.48	37.02	32.90	34.32	50.53	58.66	56.11	52.15	53.11	59.59

**SCHEDULE 201 (Continued)**

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

TABLE 6a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Solar QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97
2025	59.83	56.30	48.39	43.37	42.10	46.79	64.75	72.41	58.12	50.61	51.22	57.96
2026	61.06	57.45	49.38	44.26	42.96	47.75	66.08	73.89	59.31	51.65	52.27	59.15
2027	62.31	58.63	50.39	45.17	43.84	48.73	67.43	75.40	60.53	52.71	53.34	60.36
2028	63.44	59.69	51.31	45.99	44.64	49.62	68.65	76.76	61.62	53.66	54.31	61.45
2029	64.89	61.05	52.48	47.04	45.65	50.75	70.23	78.52	63.03	54.89	55.55	62.86
2030	66.22	62.30	53.56	48.00	46.59	51.79	71.66	80.13	64.32	56.01	56.69	64.15
2031	67.57	63.58	54.65	48.98	47.54	52.85	73.13	81.77	65.64	57.16	57.85	65.46
2032	68.72	64.66	55.57	49.80	48.34	53.74	74.38	83.17	66.76	58.13	58.83	66.57
2033	70.37	66.21	56.91	51.01	49.51	55.04	76.16	85.16	68.36	59.53	60.24	68.17
2034	71.85	67.61	58.12	52.10	50.57	56.20	77.76	86.94	69.80	60.79	61.52	69.61
2035	73.28	68.95	59.27	53.12	51.56	57.32	79.31	88.68	71.19	61.99	62.74	70.99
2036	74.57	70.16	60.31	54.05	52.46	58.32	80.71	90.24	72.44	63.08	63.84	72.24
2037	76.32	71.81	61.72	55.32	53.70	59.69	82.60	92.35	74.13	64.56	65.33	73.93
2038	77.88	73.28	62.99	56.46	54.80	60.91	84.29	94.25	75.65	65.88	66.67	75.45
2039	79.48	74.78	64.28	57.61	55.92	62.16	86.01	96.18	77.20	67.23	68.04	76.99
2040	80.91	76.13	65.45	58.66	56.94	63.29	87.57	97.91	78.60	68.45	69.27	78.39
2041	82.76	77.87	66.94	60.00	58.23	64.73	89.57	100.16	80.40	70.01	70.85	80.18
2042	84.46	79.47	68.31	61.23	59.43	66.06	91.41	102.21	82.04	71.45	72.31	81.82
2043	86.19	81.10	69.71	62.48	60.64	67.41	93.28	104.30	83.73	72.91	73.79	83.50
2044	87.70	82.52	70.93	63.57	61.70	68.59	94.92	106.14	85.19	74.19	75.08	84.96
2045	89.81	84.50	72.64	65.11	63.20	70.25	97.19	108.67	87.24	75.98	76.89	87.00

**SCHEDULE 201 (Continued)**

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

TABLE 6b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Solar QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80
2025	40.68	36.15	30.51	23.54	20.79	21.74	32.54	37.96	36.26	33.62	34.26	38.58
2026	41.51	36.89	31.14	24.02	21.22	22.18	33.21	38.74	37.01	34.31	34.96	39.37
2027	42.36	37.64	31.78	24.51	21.65	22.64	33.89	39.53	37.76	35.01	35.68	40.18
2028	43.11	38.31	32.33	24.94	22.03	23.03	34.48	40.23	38.43	35.63	36.31	40.88
2029	44.11	39.20	33.09	25.53	22.55	23.57	35.29	41.17	39.33	36.46	37.16	41.84
2030	45.02	40.01	33.77	26.05	23.01	24.06	36.01	42.01	40.13	37.21	37.92	42.70
2031	45.94	40.82	34.46	26.59	23.48	24.55	36.75	42.87	40.96	37.97	38.70	43.57
2032	46.75	41.54	35.07	27.05	23.89	24.98	37.40	43.63	41.68	38.64	39.38	44.34
2033	47.84	42.51	35.89	27.69	24.45	25.57	38.27	44.65	42.65	39.54	40.30	45.38
2034	48.82	43.39	36.62	28.25	24.95	26.09	39.05	45.56	43.52	40.35	41.12	46.30
2035	49.82	44.27	37.37	28.83	25.47	26.62	39.85	46.49	44.42	41.18	41.97	47.25
2036	50.70	45.05	38.03	29.34	25.91	27.09	40.56	47.31	45.20	41.90	42.70	48.08
2037	51.88	46.11	38.92	30.03	26.52	27.73	41.50	48.42	46.26	42.88	43.70	49.21
2038	52.95	47.05	39.72	30.64	27.06	28.29	42.35	49.41	47.20	43.76	44.60	50.22
2039	54.03	48.02	40.53	31.27	27.62	28.87	43.22	50.42	48.17	44.66	45.51	51.25
2040	54.98	48.86	41.24	31.82	28.10	29.38	43.98	51.31	49.02	45.44	46.31	52.15
2041	56.27	50.00	42.21	32.56	28.76	30.07	45.01	52.51	50.16	46.51	47.40	53.37
2042	57.42	51.03	43.07	33.23	29.35	30.68	45.93	53.59	51.19	47.46	48.37	54.46
2043	58.60	52.07	43.96	33.91	29.95	31.31	46.87	54.68	52.24	48.43	49.36	55.58
2044	59.63	52.99	44.73	34.50	30.47	31.86	47.70	55.65	53.16	49.28	50.22	56.55
2045	61.02	54.23	45.77	35.31	31.19	32.61	48.82	56.95	54.40	50.44	51.40	57.88

## SCHEDULE 201 (Continued)

## WIND INTEGRATION

TABLE 7		
Integration Costs		
Year	Wind	Solar
2020	0.33	1.36
2021	0.33	1.38
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

**SCHEDULE 201 (Continued)****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.
- 2) 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.

**SCHEDULE 201 (Continued)****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

**SCHEDULE 201 (Continued)****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.



**SCHEDULE 201 (Continued)****OTHER DEFINITIONS****Mid-C Index Price**

As used in this schedule, the daily Mid-C Index Price shall be the Day Ahead Intercontinental Exchange (“ICE”) for the bilateral OTC market for energy at the Mid-C Physical for Average On-Peak Power and Average Off-Peak Power found on the following website: <https://www.theice.com/products/OTC/Physical-Energy/Electricity>. 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.

**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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), 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.



**SCHEDULE 201 (Concluded)****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.

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.

UM 1728 Compliance Filing

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Attachment A  
Standard Avoided Costs Tables

## **Standard Energy Tables**

PGE's 2020 Standard AVOIDED COST UPDATE  
SUMMARY TABLES – Page 2

Portland General Electric Avoided Cost Study On-Peak Energy, Base Load													
Table S.1a												Nominal \$/MWh	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59	
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48	37.13
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78	37.76
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59	36.90
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44	40.29
2025	18.86	18.94	19.01	18.28	18.36	18.44	18.51	18.59	18.67	18.75	19.77	19.85	18.83
2026	21.68	21.78	21.87	20.97	21.06	21.16	21.25	21.34	21.43	21.62	22.69	22.79	21.64
2027	23.35	23.45	23.21	22.21	22.31	22.19	22.28	22.38	22.47	22.57	20.27	20.35	22.24
2028	20.75	19.95	19.93	19.00	19.08	19.16	19.23	19.31	19.39	19.47	20.58	20.67	19.71
2029	21.19	21.28	20.57	19.62	19.70	19.78	19.86	19.95	20.03	20.14	21.25	21.34	20.39
2030	21.88	21.97	21.96	20.97	21.06	21.15	21.23	21.33	21.42	21.51	22.70	22.80	21.66
2031	23.38	23.48	23.57	22.51	22.61	22.71	22.80	22.90	23.00	23.13	24.50	24.60	23.26
2032	25.23	25.34	25.44	24.35	24.46	24.57	24.67	24.78	24.89	25.03	26.36	26.48	25.14
2033	27.15	27.27	26.11	25.00	25.10	25.22	25.33	25.44	25.55	25.71	27.03	27.15	26.00
2034	27.81	27.94	26.56	25.42	25.53	25.65	25.76	25.87	25.99	26.13	27.53	27.64	26.48
2035	28.34	28.46	27.87	26.62	26.73	26.85	26.97	27.09	27.21	27.49	28.78	28.90	27.61
2036	29.60	29.74	28.55	27.35	27.47	27.59	27.71	27.83	27.96	28.26	29.56	29.69	28.44
2037	30.49	30.62	30.55	29.35	29.48	29.61	30.12	30.30	30.44	32.04	34.16	34.32	30.96
2038	35.23	35.40	33.68	32.35	32.49	32.64	32.79	32.94	33.10	34.85	37.13	37.30	34.16
2039	38.32	38.50	38.36	36.91	37.08	37.25	37.43	37.61	37.79	39.14	40.96	41.15	38.38
2040	43.23	43.43	42.16	40.64	40.82	41.02	41.20	41.40	41.59	42.66	44.56	44.76	42.29
2041	44.13	44.34	43.04	41.49	41.68	41.87	42.06	42.26	42.46	43.55	45.49	45.70	43.17
2042	45.03	45.24	43.92	42.34	42.53	42.73	42.92	43.13	43.33	44.44	46.42	46.63	44.05
2043	45.96	46.17	44.82	43.20	43.40	43.60	43.80	44.01	44.22	45.35	47.37	47.59	44.95
2044	46.90	47.12	45.74	44.09	44.29	44.50	44.70	44.91	45.12	46.28	48.34	48.56	45.88
2045	47.86	48.08	46.68	44.99	45.20	45.41	45.62	45.83	46.05	47.23	49.33	49.56	46.81

Portland General Electric Avoided Cost Study Off-Peak Energy, Base Load													
Table S.1b												Nominal \$/MWh	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45	
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12	25.48
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94	27.18
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25	27.18
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27	29.68
2025	18.86	18.94	19.01	18.28	18.36	18.44	18.51	18.59	18.67	18.75	19.77	19.85	18.84
2026	21.68	21.78	21.87	20.97	21.06	21.16	21.25	21.34	21.43	21.62	22.69	22.79	21.64
2027	23.35	23.45	23.21	22.21	22.31	22.19	22.28	22.38	22.47	22.57	20.27	20.35	22.26
2028	20.75	19.95	19.93	19.00	19.08	19.16	19.23	19.31	19.39	19.47	20.58	20.67	19.71
2029	21.19	21.28	20.57	19.62	19.70	19.78	19.86	19.95	20.03	20.14	21.25	21.34	20.39
2030	21.88	21.97	21.96	20.97	21.06	21.15	21.23	21.33	21.42	21.51	22.70	22.80	21.67
2031	23.38	23.48	23.57	22.51	22.61	22.71	22.80	22.90	23.00	23.13	24.50	24.60	23.27
2032	25.23	25.34	25.44	24.35	24.46	24.57	24.67	24.78	24.89	25.03	26.36	26.48	25.13
2033	27.15	27.27	26.11	25.00	25.10	25.22	25.33	25.44	25.55	25.71	27.03	27.15	26.00
2034	27.81	27.94	26.56	25.42	25.53	25.65	25.76	25.87	25.99	26.13	27.53	27.64	26.48
2035	28.34	28.46	27.87	26.62	26.73	26.85	26.97	27.09	27.21	27.49	28.78	28.90	27.60
2036	29.60	29.74	28.55	27.35	27.47	27.59	27.71	27.83	27.96	28.26	29.56	29.69	28.44
2037	30.49	30.62	30.55	29.35	29.48	29.61	30.12	30.30	30.44	32.04	34.16	34.32	30.96
2038	35.23	35.40	33.68	32.35	32.49	32.64	32.79	32.94	33.10	34.85	37.13	37.30	34.15
2039	38.32	38.50	38.36	36.91	37.08	37.25	37.43	37.61	37.79	39.14	40.96	41.15	38.37
2040	43.23	43.43	42.16	40.64	40.82	41.02	41.20	41.40	41.59	42.66	44.56	44.76	42.29
2041	44.13	44.34	43.04	41.49	41.68	41.87	42.06	42.26	42.46	43.55	45.49	45.70	43.17
2042	45.03	45.24	43.92	42.34	42.53	42.73	42.92	43.13	43.33	44.44	46.42	46.63	44.05
2043	45.96	46.17	44.82	43.20	43.40	43.60	43.80	44.01	44.22	45.35	47.37	47.59	44.95
2044	46.90	47.12	45.74	44.09	44.29	44.50	44.70	44.91	45.12	46.28	48.34	48.56	45.87
2045	47.86	48.08	46.68	44.99	45.20	45.41	45.62	45.83	46.05	47.23	49.33	49.56	46.82

PGE's 2020 Standard AVOIDED COST UPDATE  
SUMMARY TABLES – Page 3

Portland General Electric Avoided Cost Study On-Peak Energy, Wind													
Table S.2a												Nominal \$/MWh	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26	
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15	36.79
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44	37.42
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24	36.56
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09	39.94
2025	18.50	18.58	18.65	17.92	18.00	18.08	18.15	18.23	18.31	18.39	19.41	19.49	18.47
2026	21.32	21.42	21.50	20.61	20.70	20.79	20.88	20.97	21.07	21.26	22.32	22.42	21.27
2027	22.97	23.08	22.83	21.84	21.93	21.81	21.91	22.00	22.10	22.20	19.89	19.97	21.87
2028	20.36	19.57	19.55	18.62	18.70	18.77	18.85	18.93	19.01	19.09	20.20	20.28	19.33
2029	20.80	20.89	20.18	19.23	19.31	19.39	19.47	19.56	19.64	19.75	20.86	20.95	20.00
2030	21.48	21.57	21.56	20.57	20.66	20.75	20.84	20.93	21.02	21.11	22.31	22.40	21.26
2031	22.98	23.08	23.17	22.11	22.20	22.30	22.40	22.50	22.60	22.72	24.10	24.20	22.86
2032	24.82	24.93	25.03	23.94	24.04	24.15	24.26	24.37	24.48	24.61	25.95	26.06	24.72
2033	26.73	26.85	25.69	24.57	24.68	24.79	24.90	25.02	25.13	25.29	26.61	26.72	25.58
2034	27.38	27.50	26.13	24.99	25.10	25.22	25.33	25.44	25.56	25.70	27.09	27.21	26.04
2035	27.90	28.02	27.43	26.18	26.29	26.41	26.53	26.65	26.77	27.05	28.34	28.46	27.17
2036	29.16	29.29	28.10	26.90	27.02	27.14	27.26	27.38	27.51	27.81	29.11	29.24	27.99
2037	30.03	30.16	30.09	28.89	29.02	29.15	29.67	29.84	29.98	31.58	33.70	33.86	30.50
2038	34.76	34.93	33.22	31.88	32.02	32.18	32.32	32.48	32.63	34.39	36.66	36.83	33.69
2039	37.84	38.02	37.88	36.43	36.60	36.78	36.95	37.13	37.31	38.66	40.48	40.67	37.90
2040	42.74	42.94	41.67	40.15	40.33	40.53	40.71	40.91	41.10	42.17	44.07	44.27	41.80
2041	43.63	43.84	42.54	40.99	41.18	41.37	41.56	41.76	41.96	43.05	44.99	45.20	42.67
2042	44.53	44.74	43.42	41.83	42.02	42.22	42.42	42.62	42.82	43.93	45.91	46.12	43.54
2043	45.44	45.65	44.31	42.69	42.88	43.09	43.28	43.49	43.70	44.83	46.85	47.07	44.43
2044	46.37	46.59	45.21	43.56	43.76	43.97	44.17	44.38	44.59	45.75	47.81	48.03	45.35
2045	47.32	47.54	46.14	44.45	44.66	44.87	45.08	45.29	45.51	46.69	48.79	49.02	46.27

Portland General Electric Avoided Cost Study Off-Peak Energy, Wind													
Table S.2b												Nominal \$/MWh	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13	
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79	25.15
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60	26.85
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90	26.84
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92	29.33
2025	18.50	18.58	18.65	17.92	18.00	18.08	18.15	18.23	18.31	18.39	19.41	19.49	18.48
2026	21.32	21.42	21.50	20.61	20.70	20.79	20.88	20.97	21.07	21.26	22.32	22.42	21.27
2027	22.97	23.08	22.83	21.84	21.93	21.81	21.91	22.00	22.10	22.20	19.89	19.97	21.88
2028	20.36	19.57	19.55	18.62	18.70	18.77	18.85	18.93	19.01	19.09	20.20	20.28	19.33
2029	20.80	20.89	20.18	19.23	19.31	19.39	19.47	19.56	19.64	19.75	20.86	20.95	20.00
2030	21.48	21.57	21.56	20.57	20.66	20.75	20.84	20.93	21.02	21.11	22.31	22.40	21.27
2031	22.98	23.08	23.17	22.11	22.20	22.30	22.40	22.50	22.60	22.72	24.10	24.20	22.86
2032	24.82	24.93	25.03	23.94	24.04	24.15	24.26	24.37	24.48	24.61	25.95	26.06	24.71
2033	26.73	26.85	25.69	24.57	24.68	24.79	24.90	25.02	25.13	25.29	26.61	26.72	25.57
2034	27.38	27.50	26.13	24.99	25.10	25.22	25.33	25.44	25.56	25.70	27.09	27.21	26.05
2035	27.90	28.02	27.43	26.18	26.29	26.41	26.53	26.65	26.77	27.05	28.34	28.46	27.16
2036	29.16	29.29	28.10	26.90	27.02	27.14	27.26	27.38	27.51	27.81	29.11	29.24	27.99
2037	30.03	30.16	30.09	28.89	29.02	29.15	29.67	29.84	29.98	31.58	33.70	33.86	30.50
2038	34.76	34.93	33.22	31.88	32.02	32.18	32.32	32.48	32.63	34.39	36.66	36.83	33.68
2039	37.84	38.02	37.88	36.43	36.60	36.78	36.95	37.13	37.31	38.66	40.48	40.67	37.89
2040	42.74	42.94	41.67	40.15	40.33	40.53	40.71	40.91	41.10	42.17	44.07	44.27	41.80
2041	43.63	43.84	42.54	40.99	41.18	41.37	41.56	41.76	41.96	43.05	44.99	45.20	42.67
2042	44.53	44.74	43.42	41.83	42.02	42.22	42.42	42.62	42.82	43.93	45.91	46.12	43.54
2043	45.44	45.65	44.31	42.69	42.88	43.09	43.28	43.49	43.70	44.83	46.85	47.07	44.43
2044	46.37	46.59	45.21	43.56	43.76	43.97	44.17	44.38	44.59	45.75	47.81	48.03	45.34
2045	47.32	47.54	46.14	44.45	44.66	44.87	45.08	45.29	45.51	46.69	48.79	49.02	46.28

PGE's 2020 Standard AVOIDED COST UPDATE  
SUMMARY TABLES – Page 4

Portland General Electric Avoided Cost Study On-Peak Energy, Solar													
Table S.3a												Nominal \$/MWh	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23	
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10	35.74
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37	36.35
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15	35.46
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97	38.82
2025	17.36	17.44	17.51	16.78	16.86	16.94	17.01	17.09	17.17	17.25	18.27	18.35	17.33
2026	20.15	20.25	20.34	19.44	19.53	19.62	19.72	19.81	19.90	20.09	21.16	21.25	20.10
2027	21.79	21.89	21.64	20.65	20.75	20.62	20.72	20.81	20.91	21.01	18.70	18.79	20.68
2028	19.15	18.35	18.34	17.41	17.49	17.56	17.64	17.72	17.80	17.88	18.99	19.07	18.12
2029	19.56	19.65	18.94	17.99	18.07	18.15	18.24	18.32	18.40	18.52	19.63	19.71	18.76
2030	20.22	20.31	20.30	19.31	19.40	19.49	19.57	19.67	19.76	19.85	21.04	21.14	20.00
2031	21.69	21.79	21.88	20.82	20.91	21.01	21.11	21.21	21.31	21.44	22.81	22.91	21.57
2032	23.50	23.61	23.71	22.62	22.73	22.84	22.94	23.05	23.17	23.30	24.63	24.75	23.41
2033	25.39	25.51	24.35	23.23	23.34	23.45	23.56	23.67	23.79	23.95	25.27	25.38	24.23
2034	26.01	26.14	24.76	23.62	23.73	23.85	23.96	24.07	24.19	24.33	25.72	25.84	24.68
2035	26.50	26.63	26.03	24.78	24.90	25.02	25.13	25.25	25.38	25.65	26.94	27.06	25.77
2036	27.73	27.86	26.67	25.47	25.59	25.71	25.83	25.96	26.09	26.38	27.69	27.81	26.56
2037	28.57	28.71	28.64	27.43	27.56	27.70	28.21	28.38	28.52	30.12	32.25	32.40	29.04
2038	33.28	33.44	31.73	30.40	30.54	30.69	30.84	30.99	31.15	32.90	35.18	35.35	32.20
2039	36.33	36.51	36.37	34.92	35.09	35.26	35.43	35.61	35.79	37.15	38.97	39.16	36.39
2040	41.20	41.40	40.13	38.60	38.79	38.98	39.17	39.36	39.56	40.63	42.53	42.73	40.25
2041	42.06	42.26	40.97	39.41	39.60	39.80	39.99	40.19	40.39	41.47	43.41	43.62	41.09
2042	42.92	43.13	41.81	40.22	40.41	40.61	40.81	41.01	41.21	42.32	44.30	44.51	41.93
2043	43.80	44.01	42.66	41.04	41.24	41.44	41.64	41.85	42.06	43.19	45.21	45.43	42.79
2044	44.69	44.91	43.54	41.88	42.08	42.29	42.50	42.71	42.92	44.08	46.14	46.36	43.68
2045	45.61	45.83	44.43	42.74	42.95	43.16	43.37	43.58	43.80	44.98	47.08	47.31	44.56

  

Portland General Electric Avoided Cost Study Off-Peak Energy, Solar													
Table S.3b												Nominal \$/MWh	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10	
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74	24.10
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53	25.77
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81	25.74
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80	28.21
2025	17.36	17.44	17.51	16.78	16.86	16.94	17.01	17.09	17.17	17.25	18.27	18.35	17.34
2026	20.15	20.25	20.34	19.44	19.53	19.62	19.72	19.81	19.90	20.09	21.16	21.25	20.11
2027	21.79	21.89	21.64	20.65	20.75	20.62	20.72	20.81	20.91	21.01	18.70	18.79	20.69
2028	19.15	18.35	18.34	17.41	17.49	17.56	17.64	17.72	17.80	17.88	18.99	19.07	18.12
2029	19.56	19.65	18.94	17.99	18.07	18.15	18.24	18.32	18.40	18.52	19.63	19.71	18.76
2030	20.22	20.31	20.30	19.31	19.40	19.49	19.57	19.67	19.76	19.85	21.04	21.14	20.01
2031	21.69	21.79	21.88	20.82	20.91	21.01	21.11	21.21	21.31	21.44	22.81	22.91	21.58
2032	23.50	23.61	23.71	22.62	22.73	22.84	22.94	23.05	23.17	23.30	24.63	24.75	23.40
2033	25.39	25.51	24.35	23.23	23.34	23.45	23.56	23.67	23.79	23.95	25.27	25.38	24.23
2034	26.01	26.14	24.76	23.62	23.73	23.85	23.96	24.07	24.19	24.33	25.72	25.84	24.68
2035	26.50	26.63	26.03	24.78	24.90	25.02	25.13	25.25	25.38	25.65	26.94	27.06	25.77
2036	27.73	27.86	26.67	25.47	25.59	25.71	25.83	25.96	26.09	26.38	27.69	27.81	26.56
2037	28.57	28.71	28.64	27.43	27.56	27.70	28.21	28.38	28.52	30.12	32.25	32.40	29.05
2038	33.28	33.44	31.73	30.40	30.54	30.69	30.84	30.99	31.15	32.90	35.18	35.35	32.20
2039	36.33	36.51	36.37	34.92	35.09	35.26	35.43	35.61	35.79	37.15	38.97	39.16	36.38
2040	41.20	41.40	40.13	38.60	38.79	38.98	39.17	39.36	39.56	40.63	42.53	42.73	40.25
2041	42.06	42.26	40.97	39.41	39.60	39.80	39.99	40.19	40.39	41.47	43.41	43.62	41.09
2042	42.92	43.13	41.81	40.22	40.41	40.61	40.81	41.01	41.21	42.32	44.30	44.51	41.93
2043	43.80	44.01	42.66	41.04	41.24	41.44	41.64	41.85	42.06	43.19	45.21	45.43	42.79
2044	44.69	44.91	43.54	41.88	42.08	42.29	42.50	42.71	42.92	44.08	46.14	46.36	43.67
2045	45.61	45.83	44.43	42.74	42.95	43.16	43.37	43.58	43.80	44.98	47.08	47.31	44.57











PGE's 2020 Standard AVOIDED COST UPDATE  
SUMMARY TABLES – Page 8

Portland General Electric													
Avoided Cost Study													
Forecasted Gas Price - GPf (\$/MMBtu - including transportation)													
Table S.9b												Nominal \$/MMBtu	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-	-
2025													2.10
2026													2.52
2027													2.60
2028													2.19
2029													2.28
2030													2.46
2031													2.68
2032													2.96
2033													3.07
2034													3.12
2035													3.28
2036													3.39
2037													3.75
2038													4.23
2039													4.85
2040													5.44
2041													5.55
2042	5.66												
2043	5.78												
2044	5.90												
2045	6.02												

## **Standard Capacity Tables**







UM 1728 Compliance Filing

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Attachment B  
Renewable Standard Avoided Costs Tables

## **Renewable Energy Tables**



PGE's 2020 Renewable AVOIDED COST UPDATE  
SUMMARY TABLES – Page 2

Portland General Electric Renewable Avoided Cost Study On-Peak Energy, Base Load													
Table R.1a	Nominal \$/MWh												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59	
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48	37.13
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78	37.76
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59	36.90
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44	40.29
2025	51.23	47.69	39.79	34.77	33.50	38.19	56.15	63.80	49.52	42.01	42.62	49.36	45.75
2026	52.28	48.67	40.60	35.48	34.18	38.97	57.30	65.11	50.53	42.87	43.49	50.37	46.70
2027	53.35	49.67	41.44	36.21	34.88	39.77	58.48	66.44	51.57	43.75	44.38	51.40	47.63
2028	54.29	50.55	42.17	36.85	35.50	40.48	59.51	67.62	52.48	44.52	45.17	52.31	48.48
2029	55.56	51.72	43.15	37.71	36.33	41.42	60.90	69.19	53.70	45.56	46.22	53.53	49.60
2030	56.70	52.78	44.03	38.48	37.07	42.27	62.14	70.61	54.80	46.49	47.17	54.63	50.66
2031	57.86	53.86	44.94	39.27	37.83	43.13	63.42	72.06	55.92	47.45	48.13	55.75	51.67
2032	58.88	54.82	45.73	39.96	38.50	43.90	64.54	73.33	56.91	48.29	48.98	56.73	52.59
2033	60.25	56.09	46.80	40.89	39.40	44.92	66.04	75.04	58.24	49.41	50.13	58.05	53.82
2034	61.49	57.24	47.76	41.73	40.20	45.84	67.40	76.58	59.43	50.42	51.15	59.24	54.90
2035	62.75	58.42	48.73	42.59	41.03	46.78	68.78	78.15	60.65	51.45	52.20	60.46	56.02
2036	63.86	59.45	49.60	43.34	41.75	47.61	69.99	79.53	61.72	52.37	53.12	61.53	57.04
2037	65.34	60.83	50.75	44.35	42.72	48.72	71.62	81.38	63.16	53.58	54.36	62.96	58.38
2038	66.68	62.08	51.79	45.26	43.60	49.71	73.09	83.05	64.45	54.68	55.47	64.25	59.53
2039	68.05	63.35	52.85	46.19	44.49	50.73	74.59	84.75	65.78	55.80	56.61	65.56	60.78
2040	69.25	64.47	53.79	47.00	45.28	51.63	75.91	86.25	66.94	56.79	57.61	66.72	61.81
2041	70.87	65.97	55.04	48.10	46.33	52.83	77.68	88.26	68.50	58.11	58.95	68.28	63.32
2042	72.32	67.33	56.17	49.08	47.28	53.91	79.27	90.07	69.90	59.30	60.16	69.68	64.59
2043	73.80	68.70	57.32	50.09	48.25	55.02	80.89	91.91	71.33	60.52	61.39	71.10	65.93
2044	75.10	69.92	58.33	50.97	49.11	55.99	82.32	93.54	72.60	61.59	62.48	72.36	67.09
2045	76.85	71.55	59.69	52.16	50.25	57.30	84.24	95.72	74.29	63.02	63.94	74.05	68.62
<i>Capacity Removed, Aurora Shaping</i>													
Portland General Electric Renewable Avoided Cost Study Off-Peak Energy, Base Load													
Table R.1b	Nominal \$/MWh												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45	
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12	25.48
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94	27.18
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25	27.18
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27	29.68
2025	42.18	37.65	32.01	25.04	22.29	23.24	34.04	39.46	37.76	35.12	35.76	40.08	33.70
2026	43.04	38.42	32.67	25.55	22.75	23.71	34.74	40.27	38.54	35.84	36.50	40.90	34.39
2027	43.92	39.21	33.34	26.08	23.21	24.20	35.45	41.09	39.33	36.57	37.24	41.74	35.14
2028	44.70	39.90	33.93	26.54	23.62	24.63	36.08	41.82	40.02	37.22	37.90	42.48	35.78
2029	45.74	40.83	34.72	27.16	24.17	25.20	36.92	42.79	40.95	38.09	38.78	43.47	36.58
2030	46.68	41.67	35.43	27.71	24.67	25.72	37.67	43.67	41.79	38.87	39.58	44.36	37.31
2031	47.63	42.52	36.15	28.28	25.18	26.24	38.44	44.57	42.65	39.66	40.39	45.27	38.06
2032	48.48	43.27	36.79	28.78	25.62	26.71	39.12	45.35	43.40	40.37	41.10	46.07	38.75
2033	49.60	44.28	37.65	29.45	26.22	27.33	40.03	46.41	44.42	41.31	42.06	47.14	39.66
2034	50.62	45.19	38.42	30.05	26.75	27.89	40.86	47.36	45.33	42.15	42.92	48.11	40.51
2035	51.66	46.11	39.21	30.67	27.30	28.46	41.69	48.33	46.25	43.02	43.80	49.09	41.31
2036	52.57	46.93	39.90	31.21	27.79	28.96	42.43	49.19	47.07	43.78	44.58	49.96	42.02
2037	53.80	48.02	40.83	31.94	28.43	29.64	43.42	50.33	48.17	44.80	45.62	51.12	42.98
2038	54.90	49.00	41.67	32.59	29.01	30.25	44.31	51.36	49.16	45.71	46.55	52.17	43.92
2039	56.02	50.01	42.52	33.26	29.61	30.87	45.22	52.42	50.16	46.65	47.50	53.24	44.79
2040	57.01	50.89	43.28	33.85	30.13	31.41	46.02	53.34	51.05	47.48	48.34	54.18	45.66
2041	58.34	52.08	44.28	34.64	30.83	32.14	47.09	54.58	52.24	48.58	49.47	55.44	46.64
2042	59.54	53.15	45.19	35.35	31.47	32.80	48.05	55.70	53.31	49.58	50.48	56.58	47.58
2043	60.76	54.23	46.12	36.07	32.11	33.47	49.04	56.84	54.40	50.59	51.52	57.74	48.55
2044	61.83	55.19	46.93	36.71	32.68	34.07	49.90	57.85	55.36	51.49	52.43	58.76	49.44
2045	63.27	56.48	48.03	37.56	33.44	34.86	51.07	59.20	56.65	52.69	53.65	60.13	50.64
<i>Capacity Removed, Aurora Shaping</i>													

PGE's 2020 Renewable AVOIDED COST UPDATE  
SUMMARY TABLES – Page 3

Portland General Electric Renewable Avoided Cost Study On-Peak Energy, Wind													
Table R.2a													Nominal \$/MWh
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26	
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15	36.79
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44	37.42
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24	36.56
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09	39.94
2025	50.87	47.33	39.43	34.41	33.14	37.83	55.79	63.44	49.16	41.65	42.26	49.00	45.39
2026	51.91	48.30	40.24	35.11	33.81	38.61	56.94	64.74	50.16	42.50	43.12	50.00	46.34
2027	52.97	49.29	41.06	35.83	34.51	39.40	58.10	66.07	51.19	43.37	44.01	51.03	47.25
2028	53.91	50.16	41.79	36.47	35.12	40.09	59.13	67.24	52.10	44.14	44.79	51.93	48.10
2029	55.17	51.33	42.76	37.32	35.94	41.03	60.51	68.80	53.31	45.17	45.83	53.14	49.21
2030	56.30	52.38	43.64	38.08	36.67	41.87	61.75	70.21	54.40	46.09	46.77	54.23	50.26
2031	57.45	53.46	44.53	38.86	37.42	42.73	63.01	71.65	55.52	47.04	47.73	55.34	51.27
2032	58.47	54.40	45.32	39.55	38.08	43.48	64.13	72.92	56.50	47.87	48.57	56.32	52.18
2033	59.83	55.67	46.37	40.47	38.97	44.50	65.62	74.62	57.82	48.99	49.70	57.63	53.39
2034	61.05	56.81	47.32	41.30	39.77	45.41	66.96	76.15	59.00	49.99	50.72	58.81	54.47
2035	62.31	57.97	48.29	42.15	40.58	46.34	68.34	77.71	60.21	51.01	51.76	60.01	55.58
2036	63.41	59.00	49.15	42.89	41.30	47.16	69.54	79.08	61.27	51.92	52.67	61.08	56.59
2037	64.88	60.37	50.29	43.89	42.26	48.26	71.16	80.92	62.70	53.13	53.90	62.50	57.92
2038	66.21	61.61	51.32	44.79	43.13	49.24	72.62	82.58	63.99	54.21	55.01	63.78	59.06
2039	67.57	62.87	52.37	45.71	44.01	50.25	74.11	84.27	65.30	55.32	56.13	65.09	60.30
2040	68.76	63.98	53.30	46.51	44.79	51.14	75.42	85.76	66.45	56.30	57.12	66.24	61.32
2041	70.37	65.48	54.54	47.60	45.84	52.33	77.18	87.76	68.00	57.61	58.46	67.78	62.82
2042	71.81	66.82	55.66	48.57	46.78	53.41	78.76	89.56	69.39	58.79	59.65	69.17	64.08
2043	73.28	68.19	56.80	49.57	47.73	54.50	80.37	91.39	70.81	60.00	60.88	70.59	65.41
2044	74.58	69.39	57.80	50.45	48.58	55.46	81.79	93.01	72.07	61.06	61.95	71.83	66.56
2045	76.31	71.01	59.15	51.62	49.71	56.76	83.70	95.18	73.75	62.48	63.40	73.51	68.08
<i>Capacity Removed, Aurora Shaping, Integration Removed</i>													
Portland General Electric Renewable Avoided Cost Study Off-Peak Energy, Wind													
Table R.2b													Nominal \$/MWh
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13	
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79	25.15
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60	26.85
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90	26.84
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92	29.33
2025	41.82	37.29	31.65	24.68	21.93	22.88	33.68	39.10	37.40	34.76	35.40	39.72	33.34
2026	42.67	38.05	32.30	25.19	22.38	23.35	34.37	39.90	38.17	35.47	36.13	40.53	34.02
2027	43.55	38.83	32.96	25.70	22.84	23.82	35.07	40.72	38.95	36.20	36.87	41.36	34.76
2028	44.32	39.52	33.55	26.16	23.24	24.24	35.69	41.44	39.64	36.84	37.52	42.10	35.40
2029	45.35	40.44	34.33	26.77	23.78	24.81	36.53	42.40	40.56	37.70	38.39	43.08	36.19
2030	46.28	41.27	35.03	27.31	24.27	25.32	37.27	43.27	41.40	38.47	39.18	43.96	36.91
2031	47.23	42.11	35.75	27.87	24.77	25.84	38.04	44.16	42.24	39.26	39.98	44.86	37.66
2032	48.06	42.86	36.38	28.37	25.21	26.29	38.71	44.94	42.99	39.95	40.69	45.65	38.33
2033	49.18	43.86	37.23	29.03	25.79	26.91	39.61	45.99	43.99	40.88	41.64	46.72	39.23
2034	50.19	44.75	37.99	29.62	26.32	27.46	40.42	46.93	44.89	41.72	42.49	47.67	40.08
2035	51.22	45.67	38.77	30.23	26.86	28.02	41.25	47.89	45.81	42.57	43.36	48.65	40.87
2036	52.12	46.48	39.45	30.76	27.34	28.51	41.98	48.74	46.62	43.33	44.13	49.51	41.57
2037	53.34	47.56	40.37	31.48	27.97	29.18	42.96	49.87	47.71	44.34	45.16	50.66	42.52
2038	54.43	48.54	41.20	32.12	28.55	29.78	43.84	50.89	48.69	45.25	46.08	51.70	43.45
2039	55.55	49.53	42.04	32.78	29.13	30.39	44.74	51.94	49.68	46.17	47.03	52.76	44.31
2040	56.53	50.41	42.79	33.36	29.65	30.92	45.53	52.85	50.56	46.99	47.86	53.69	45.17
2041	57.84	51.58	43.79	34.14	30.34	31.65	46.59	54.09	51.74	48.08	48.97	54.94	46.14
2042	59.03	52.64	44.68	34.84	30.96	32.29	47.54	55.19	52.80	49.07	49.98	56.07	47.07
2043	60.24	53.72	45.60	35.55	31.59	32.95	48.52	56.33	53.88	50.07	51.00	57.22	48.03
2044	61.30	54.66	46.40	36.18	32.15	33.54	49.37	57.32	54.83	50.96	51.90	58.23	48.91
2045	62.73	55.94	47.48	37.02	32.90	34.32	50.53	58.66	56.11	52.15	53.11	59.59	50.10
<i>Capacity Removed, Aurora Shaping, Integration Removed</i>													

PGE's 2020 Renewable AVOIDED COST UPDATE  
SUMMARY TABLES – Page 4

Portland General Electric Renewable Avoided Cost Study On-Peak Energy, Solar													
Table R.3a													Nominal \$/MWh
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23	
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10	35.74
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37	36.35
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15	35.46
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97	38.82
2025	49.73	46.19	38.29	33.27	32.00	36.69	54.65	62.30	48.02	40.51	41.12	47.86	44.25
2026	50.75	47.14	39.07	33.95	32.65	37.44	55.77	63.58	49.00	41.34	41.96	48.84	45.17
2027	51.79	48.11	39.87	34.65	33.32	38.21	56.91	64.88	50.01	42.19	42.82	49.84	46.06
2028	52.70	48.95	40.57	35.26	33.91	38.88	57.92	66.03	50.89	42.93	43.57	50.72	46.89
2029	53.93	50.10	41.52	36.08	34.70	39.79	59.27	67.57	52.08	43.93	44.59	51.90	47.97
2030	55.04	51.12	42.37	36.82	35.41	40.61	60.48	68.95	53.14	44.83	45.51	52.97	49.00
2031	56.16	52.17	43.24	37.57	36.14	41.44	61.72	70.36	54.23	45.75	46.44	54.05	49.98
2032	57.15	53.09	44.00	38.23	36.77	42.17	62.81	71.61	55.19	46.56	47.26	55.00	50.86
2033	58.49	54.33	45.03	39.13	37.63	43.16	64.28	73.28	56.48	47.65	48.36	56.29	52.05
2034	59.69	55.44	45.96	39.93	38.40	44.04	65.60	74.78	57.63	48.62	49.35	57.44	53.10
2035	60.91	56.58	46.90	40.75	39.19	44.94	66.94	76.31	58.81	49.62	50.36	58.62	54.18
2036	61.98	57.57	47.72	41.47	39.88	45.73	68.12	77.66	59.85	50.49	51.25	59.65	55.16
2037	63.43	58.92	48.84	42.44	40.81	46.80	69.71	79.47	61.25	51.67	52.45	61.04	56.46
2038	64.73	60.13	49.84	43.31	41.65	47.76	71.14	81.10	62.50	52.73	53.52	62.30	57.58
2039	66.06	61.36	50.86	44.19	42.50	48.74	72.60	82.76	63.78	53.81	54.62	63.57	58.79
2040	67.22	62.44	51.75	44.97	43.25	49.60	73.87	84.22	64.91	54.76	55.58	64.69	59.78
2041	68.79	63.90	52.96	46.02	44.26	50.76	75.60	86.18	66.42	56.04	56.88	66.20	61.25
2042	70.20	65.21	54.05	46.96	45.17	51.80	77.15	87.95	67.78	57.19	58.04	67.56	62.47
2043	71.64	66.54	55.16	47.93	46.09	52.86	78.73	89.75	69.17	58.36	59.23	68.94	63.77
2044	72.90	67.72	56.13	48.77	46.90	53.79	80.12	91.33	70.39	59.38	60.28	70.16	64.89
2045	74.60	69.30	57.44	49.91	48.00	55.05	81.99	93.47	72.04	60.77	61.69	71.80	66.37
<i>Capacity Removed, Aurora Shaping, Integration Removed</i>													
Portland General Electric Renewable Avoided Cost Study Off-Peak Energy, Solar													
Table R.3b													Nominal \$/MWh
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10	
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74	24.10
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53	25.77
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81	25.74
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80	28.21
2025	40.68	36.15	30.51	23.54	20.79	21.74	32.54	37.96	36.26	33.62	34.26	38.58	32.20
2026	41.51	36.89	31.14	24.02	21.22	22.18	33.21	38.74	37.01	34.31	34.96	39.37	32.86
2027	42.36	37.64	31.78	24.51	21.65	22.64	33.89	39.53	37.76	35.01	35.68	40.18	33.57
2028	43.11	38.31	32.33	24.94	22.03	23.03	34.48	40.23	38.43	35.63	36.31	40.88	34.19
2029	44.11	39.20	33.09	25.53	22.55	23.57	35.29	41.17	39.33	36.46	37.16	41.84	34.95
2030	45.02	40.01	33.77	26.05	23.01	24.06	36.01	42.01	40.13	37.21	37.92	42.70	35.65
2031	45.94	40.82	34.46	26.59	23.48	24.55	36.75	42.87	40.96	37.97	38.70	43.57	36.37
2032	46.75	41.54	35.07	27.05	23.89	24.98	37.40	43.63	41.68	38.64	39.38	44.34	37.02
2033	47.84	42.51	35.89	27.69	24.45	25.57	38.27	44.65	42.65	39.54	40.30	45.38	37.89
2034	48.82	43.39	36.62	28.25	24.95	26.09	39.05	45.56	43.52	40.35	41.12	46.30	38.71
2035	49.82	44.27	37.37	28.83	25.47	26.62	39.85	46.49	44.42	41.18	41.97	47.25	39.48
2036	50.70	45.05	38.03	29.34	25.91	27.09	40.56	47.31	45.20	41.90	42.70	48.08	40.15
2037	51.88	46.11	38.92	30.03	26.52	27.73	41.50	48.42	46.26	42.88	43.70	49.21	41.07
2038	52.95	47.05	39.72	30.64	27.06	28.29	42.35	49.41	47.20	43.76	44.60	50.22	41.96
2039	54.03	48.02	40.53	31.27	27.62	28.87	43.22	50.42	48.17	44.66	45.51	51.25	42.79
2040	54.98	48.86	41.24	31.82	28.10	29.38	43.98	51.31	49.02	45.44	46.31	52.15	43.62
2041	56.27	50.00	42.21	32.56	28.76	30.07	45.01	52.51	50.16	46.51	47.40	53.37	44.56
2042	57.42	51.03	43.07	33.23	29.35	30.68	45.93	53.59	51.19	47.46	48.37	54.46	45.46
2043	58.60	52.07	43.96	33.91	29.95	31.31	46.87	54.68	52.24	48.43	49.36	55.58	46.38
2044	59.63	52.99	44.73	34.50	30.47	31.86	47.70	55.65	53.16	49.28	50.22	56.55	47.24
2045	61.02	54.23	45.77	35.31	31.19	32.61	48.82	56.95	54.40	50.44	51.40	57.88	48.39
<i>Capacity Removed, Aurora Shaping, Integration Removed</i>													

PGE's 2020 Renewable AVOIDED COST UPDATE  
 SUMMARY TABLES – Page 5

<b>Portland General Electric Renewable Avoided Cost Study Integration Costs</b>		
<b>Table R.4</b>	Nominal \$/MWh	
Year	Wind	Solar
2020	0.33	1.36
2021	0.33	1.38
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







## **Renewable Capacity Tables**









UM 1728 Compliance Filing

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Attachment C

Workbook tab: Plant Capital Cost Inputs						
	5-19-20 Filing				3-11-19 Filing	
	Value	Units	\$ Year	Source	Value	\$ Year
<b>SCCT (1x0 GE 7HA.02):</b>						
Clean Capacity	356	MW		2019 IRP - Supply-Side Resource Study - Spring 2018	231	
Degraded Capacity	347	MW		2019 IRP - Supply-Side Resource Study - Spring 2018	218	
Overnight capital cost	181,044	(\$000s)	2018	2019 IRP LUCSA model	122,770	2018
CO2 offset	3,674	(\$000s)	2017	2019 IRP revenue requirement model	3,172	2017
Economic life	38	yrs.		2019 IRP - Supply-Side Resource Study - Spring 2018	38	
Tax life	15	yrs.		no change	15	
Decommissioning cost	1,533	(\$000s)	2018	2019 IRP LUCSA model	1,379	2017
In-service date	2025				2021	
Start construction date	2023				2019	
EPC period	20	months		2019 IRP - Supply-Side Resource Study - Spring 2018	24	
Capacity contribution	99.7%	%		2019 IRP Figure 6-6		
Interconnection Facilities	6,160	(\$000s)	2013	Customer and Transmission Provider Costs (excluding Network Upgrades) based on Tucannon River Wind Farm costs.		
Network Upgrades	3,556	(\$000s)	2013	TRWF LGIA Appendix A, Rev 1		
Interconnection and Network Upgrades	10,973	(\$000s)	2019			
<b>CCCT Production Equipment (1x1 GE 7HA.02):</b>						
Clean Capacity	517	MW		2019 IRP - Supply-Side Resource Study - Spring 2018	424	
Degraded Capacity	503	MW		2019 IRP - Supply-Side Resource Study - Spring 2018	400	
Overnight capital cost	459,128	(\$000s)	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	384,312	2018
CO2 offset	9,277	(\$000s)	2017	2019 IRP LUCSA model	6,755	2017
Economic life	38	yrs.		2019 IRP PGE Zone Model	38	
Tax life	20			no change	20	
Decommissioning cost	2,450	(\$000s)	2018	2019 IRP LUCSA model	9,798	2017
In-service date	2025				2021	
Start construction date	2022				2018	
EPC period	30	months		2019 IRP - Supply-Side Resource Study - Spring 2018	30	
Interconnection Facilities	8,313	(\$000s)	2013	Customer and Transmission Provider Costs (excluding Network Upgrades) based on Tucannon River Wind Farm costs.		
Network Upgrades	3,556	(\$000s)	2013	TRWF LGIA Appendix A, Rev 1		
Interconnection and Network Upgrades	13,405	(\$000s)	2019			
<b>Wind Equipment (Gorge wind):</b>						
Capacity	245	MW		2019 IRP - Supply-Side Resource Study - Spring 2018	332	
Turbines	68	turbines		2019 IRP - Supply-Side Resource Study - Spring 2018	166	
Overnight capital cost	369,222	(\$000s)	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	496,174	2018
Annual capital reinvestment		\$s/MW			12,500	2017
PTC Application	60%					
Economic life	30			2019 IRP - Supply-Side Resource Study - Spring 2018	30	
Tax life	5			no change	5	
Decommissioning cost	8428	(\$000s)	2018	2019 IRP LUCSA model	0	
In-service date	2025				2025	
Start construction date	2022				2023	
EPC period	27	months		2019 IRP - Supply-Side Resource Study - Spring 2018	16	
Plant retirement					2054	
Capacity contribution	28.6%	%		2019 IRP Figure 6-3, 100 MW incremental addition		
Interconnection Facilities	15,061	(\$000s)	2013	Customer and Transmission Provider Costs (excluding Network Upgrades) based on Tucannon River Wind Farm costs.		
Network Upgrades	3,556	(\$000s)	2013	TRWF LGIA Appendix A, Rev 1		
Interconnection and Network Upgrades	21,025	(\$000s)	2019			

Workbook tab: Plant Operating Parameters						
	Value	Units	5-19-20 Filing		3-11-19 Filing	
			\$ Year	Source	Value	\$ Year
<b>SCCT 1x0 GE 7HA.02</b>						
Heat Rate (Degraded)	9,298	Btu/kWh		2019 IRP - Supply-Side Resource Study - Spring 2018	10,170	
Fixed O&M	2.10	\$/kW-yr	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	2.10	2018
Variable O&M	9.69	\$/MWh	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	7.31	2017
<b>CCCT 1x1 GE 7HA.02</b>						
Heat Rate (Degraded)	6,362	Btu/kWh		2019 IRP - Supply-Side Resource Study - Spring 2018	6,450	
Fixed O&M	6.57	\$/kW-yr	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	6.57	2018
Variable O&M	0.72	\$/MWh	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	3.50	2017
Availability factor	94.01%	%		2019 IRP - Supply-Side Resource Study - Spring 2018	90.43%	
Start up costs	1,453	MMBtu/start			950	
<b>Gorge Wind</b>						
Fixed O&M	37.00	\$/kW-yr	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	37.00	2018
Capacity factor (flat)	40.80%			2019 IRP - Supply-Side Resource Study - Spring 2018	40.80%	
Capacity factor (peak)	39.97%			2019 IRP - Supply-Side Resource Study - Spring 2018	35.24%	
Annual output	874,935	MWh			1,186,595	
Land royalties	1.70	\$/MWh	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	5.50	2017
Capacity contribution	28.57%				16.73%	
<b>Solar</b>						
Capacity factor (peak)	36.87%			2019 IRP New Solar profile	35.61%	
Capacity contribution	15.78%			2019 IRP Figure 6-4	11.20%	
<b>BPA Line Loss</b>						
BPA line loss	1.9%			No change	1.9%	
<b>Workbook tab: Financial and Tax Parameters</b>						
	Value	5-19-20 Filing		3-11-19 Filing		
			Source	Value		
Federal Income Tax Rate					21.00%	
State Income Tax Rate					7.69%	
Composite Income Tax Rate	27.35%			2019 IRP - Appendix I Table I-1	27.08%	
Debt Portion of Capitalization	50.00%			2019 IRP - Appendix I Table I-1	50.00%	
Common Stock Portion of Capitalization	50.00%			2019 IRP - Appendix I Table I-1	50.00%	
Property Tax Rate	1.45%			2016 IRP Update, Section 7	1.45%	
Inflation Rate	2.05%			2019 IRP - Appendix I Table I-1	2.00%	
Common Return	9.50%			2019 IRP - Appendix I Table I-1	9.50%	
Debt Return	4.94%			2019 IRP - Appendix I Table I-1	4.97%	
Pre-Tax Nominal Cost of Capital	7.22%			calculation	7.24%	
Equityportion	65.79%			calculation	65.64%	
After-Tax Nominal Cost of Capital	6.54%			calculation	6.56%	
After-Tax Real Cost of Capital	4.41%			calculation	4.48%	

**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.



**SCHEDULE 201 (Continued)**

## 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 [www.portlandgeneral.com](http://www.portlandgeneral.com). 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.

**SCHEDULE 201 (Continued)****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.

**SCHEDULE 201 (Continued)****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. Any Energy delivered in excess of the nameplate rating will be purchased at the applicable Off-Peak Prices for the selected pricing option.

**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.

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: (a) all Net Output delivered prior to the Commercial Operation Date; (b) all Net Output deliveries greater than Maximum Net Output in any PPA year; (c) any generation subject to and as adjusted by the provisions of Section 4.3 of the Standard PPA; (d) Net Output delivered in the Off-Peak Period; and (e) deliveries above the nameplate capacity in any hour. 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 all other Net Output. (See the PPA for defined terms.)

**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 3c, 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.

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

**SCHEDULE 201 (Continued)**

## PRICING OPTIONS FOR STANDARD PPA (Continued)

## Standard Fixed Price Option (Continued)

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 28.57%. The capacity contribution for Solar QF resources (Tables 3a and 3b) is assumed to be 15.78%.

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.

**SCHEDULE 201 (Continued)**

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

TABLE 1a												
Avoided Costs												
Fixed Price Option for Base Load QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44
2025	43.98	44.05	44.12	43.40	43.47	43.55	43.63	43.70	43.78	43.86	44.88	44.96
2026	47.31	47.41	47.50	46.60	46.69	46.78	46.87	46.97	47.06	47.25	48.32	48.41
2027	49.50	49.60	49.36	48.37	48.46	48.34	48.43	48.53	48.63	48.72	46.42	46.50
2028	47.44	46.64	46.62	45.69	45.77	45.84	45.92	46.00	46.08	46.16	47.27	47.36
2029	48.43	48.51	47.81	46.85	46.93	47.02	47.10	47.18	47.27	47.38	48.49	48.57
2030	49.67	49.77	49.76	48.76	48.85	48.94	49.03	49.12	49.21	49.30	50.50	50.59
2031	51.75	51.85	51.94	50.87	50.97	51.07	51.16	51.26	51.36	51.49	52.86	52.97
2032	53.99	54.10	54.20	53.11	53.22	53.33	53.43	53.54	53.65	53.79	55.12	55.24
2033	56.69	56.81	55.65	54.53	54.64	54.75	54.86	54.98	55.09	55.25	56.57	56.68
2034	58.05	58.17	56.80	55.66	55.77	55.89	56.00	56.11	56.23	56.37	57.76	57.88
2035	59.10	59.22	58.63	57.38	57.49	57.61	57.73	57.85	57.97	58.25	59.54	59.66
2036	60.89	61.03	59.84	58.64	58.75	58.88	59.00	59.12	59.25	59.55	60.85	60.98
2037	62.52	62.65	62.58	61.38	61.51	61.64	62.16	62.33	62.47	64.07	66.20	66.35
2038	67.92	68.08	66.37	65.04	65.18	65.33	65.48	65.63	65.79	67.54	69.82	69.99
2039	71.68	71.86	71.72	70.27	70.44	70.61	70.79	70.96	71.14	72.50	74.32	74.51
2040	77.27	77.47	76.20	74.68	74.86	75.06	75.24	75.44	75.63	76.70	78.60	78.80
2041	78.87	79.07	77.78	76.23	76.41	76.61	76.80	77.00	77.20	78.29	80.23	80.43
2042	80.48	80.69	79.38	77.79	77.98	78.18	78.37	78.58	78.78	79.89	81.87	82.08
2043	82.13	82.35	81.00	79.38	79.58	79.78	79.98	80.19	80.39	81.53	83.55	83.76
2044	83.70	83.92	82.54	80.89	81.09	81.30	81.50	81.71	81.92	83.08	85.14	85.36
2045	85.65	85.88	84.48	82.79	82.99	83.20	83.41	83.63	83.84	85.02	87.13	87.35

**SCHEDULE 201 (Continued)**

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

TABLE 1b												
Avoided Costs												
Fixed Price Option for Base Load QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27
2025	18.86	18.94	19.01	18.28	18.36	18.44	18.51	18.59	18.67	18.75	19.77	19.85
2026	21.68	21.78	21.87	20.97	21.06	21.16	21.25	21.34	21.43	21.62	22.69	22.79
2027	23.35	23.45	23.21	22.21	22.31	22.19	22.28	22.38	22.47	22.57	20.27	20.35
2028	20.75	19.95	19.93	19.00	19.08	19.16	19.23	19.31	19.39	19.47	20.58	20.67
2029	21.19	21.28	20.57	19.62	19.70	19.78	19.86	19.95	20.03	20.14	21.25	21.34
2030	21.88	21.97	21.96	20.97	21.06	21.15	21.23	21.33	21.42	21.51	22.70	22.80
2031	23.38	23.48	23.57	22.51	22.61	22.71	22.80	22.90	23.00	23.13	24.50	24.60
2032	25.23	25.34	25.44	24.35	24.46	24.57	24.67	24.78	24.89	25.03	26.36	26.48
2033	27.15	27.27	26.11	25.00	25.10	25.22	25.33	25.44	25.55	25.71	27.03	27.15
2034	27.81	27.94	26.56	25.42	25.53	25.65	25.76	25.87	25.99	26.13	27.53	27.64
2035	28.34	28.46	27.87	26.62	26.73	26.85	26.97	27.09	27.21	27.49	28.78	28.90
2036	29.60	29.74	28.55	27.35	27.47	27.59	27.71	27.83	27.96	28.26	29.56	29.69
2037	30.49	30.62	30.55	29.35	29.48	29.61	30.12	30.30	30.44	32.04	34.16	34.32
2038	35.23	35.40	33.68	32.35	32.49	32.64	32.79	32.94	33.10	34.85	37.13	37.30
2039	38.32	38.50	38.36	36.91	37.08	37.25	37.43	37.61	37.79	39.14	40.96	41.15
2040	43.23	43.43	42.16	40.64	40.82	41.02	41.20	41.40	41.59	42.66	44.56	44.76
2041	44.13	44.34	43.04	41.49	41.68	41.87	42.06	42.26	42.46	43.55	45.49	45.70
2042	45.03	45.24	43.92	42.34	42.53	42.73	42.92	43.13	43.33	44.44	46.42	46.63
2043	45.96	46.17	44.82	43.20	43.40	43.60	43.80	44.01	44.22	45.35	47.37	47.59
2044	46.90	47.12	45.74	44.09	44.29	44.50	44.70	44.91	45.12	46.28	48.34	48.56
2045	47.86	48.08	46.68	44.99	45.20	45.41	45.62	45.83	46.05	47.23	49.33	49.56

**SCHEDULE 201 (Continued)**

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

TABLE 2a												
Avoided Costs												
Fixed Price Option for Wind QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09
2025	35.38	35.46	35.53	34.80	34.87	34.95	35.03	35.11	35.19	35.26	36.28	36.36
2026	38.54	38.64	38.72	37.83	37.92	38.01	38.10	38.19	38.29	38.48	39.54	39.64
2027	40.55	40.65	40.40	39.41	39.51	39.39	39.48	39.58	39.67	39.77	37.47	37.55
2028	38.30	37.50	37.48	36.55	36.63	36.71	36.78	36.86	36.95	37.03	38.14	38.22
2029	39.10	39.19	38.48	37.53	37.61	37.69	37.77	37.86	37.94	38.05	39.16	39.25
2030	40.16	40.25	40.24	39.25	39.33	39.42	39.51	39.60	39.70	39.79	40.98	41.08
2031	42.04	42.14	42.23	41.16	41.26	41.36	41.45	41.55	41.65	41.78	43.15	43.26
2032	44.14	44.25	44.35	43.26	43.37	43.48	43.58	43.69	43.80	43.94	45.27	45.39
2033	46.57	46.69	45.54	44.42	44.53	44.64	44.75	44.86	44.98	45.14	46.45	46.57
2034	47.70	47.82	46.45	45.31	45.42	45.53	45.65	45.76	45.88	46.02	47.41	47.53
2035	48.57	48.69	48.10	46.85	46.96	47.08	47.20	47.32	47.44	47.72	49.00	49.13
2036	50.18	50.31	49.12	47.92	48.04	48.16	48.28	48.41	48.54	48.84	50.14	50.27
2037	51.55	51.69	51.61	50.41	50.54	50.68	51.19	51.36	51.50	53.10	55.23	55.38
2038	56.73	56.89	55.18	53.85	53.99	54.14	54.29	54.44	54.60	56.35	58.63	58.80
2039	60.26	60.44	60.30	58.85	59.02	59.19	59.37	59.54	59.72	61.08	62.90	63.09
2040	65.62	65.82	64.55	63.03	63.21	63.40	63.59	63.78	63.98	65.05	66.95	67.15
2041	66.98	67.18	65.89	64.33	64.52	64.72	64.91	65.11	65.31	66.39	68.33	68.54
2042	68.35	68.56	67.24	65.65	65.84	66.04	66.24	66.44	66.64	67.75	69.73	69.95
2043	69.75	69.96	68.62	67.00	67.19	67.40	67.59	67.80	68.01	69.14	71.16	71.38
2044	71.10	71.32	69.94	68.29	68.49	68.70	68.90	69.11	69.32	70.48	72.54	72.76
2045	72.72	72.94	71.54	69.85	70.05	70.27	70.47	70.69	70.91	72.09	74.19	74.41



**SCHEDULE 201 (Continued)**

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

TABLE 2b												
Avoided Costs												
Fixed Price Option for Wind QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92
2025	18.50	18.58	18.65	17.92	18.00	18.08	18.15	18.23	18.31	18.39	19.41	19.49
2026	21.32	21.42	21.50	20.61	20.70	20.79	20.88	20.97	21.07	21.26	22.32	22.42
2027	22.97	23.08	22.83	21.84	21.93	21.81	21.91	22.00	22.10	22.20	19.89	19.97
2028	20.36	19.57	19.55	18.62	18.70	18.77	18.85	18.93	19.01	19.09	20.20	20.28
2029	20.80	20.89	20.18	19.23	19.31	19.39	19.47	19.56	19.64	19.75	20.86	20.95
2030	21.48	21.57	21.56	20.57	20.66	20.75	20.84	20.93	21.02	21.11	22.31	22.40
2031	22.98	23.08	23.17	22.11	22.20	22.30	22.40	22.50	22.60	22.72	24.10	24.20
2032	24.82	24.93	25.03	23.94	24.04	24.15	24.26	24.37	24.48	24.61	25.95	26.06
2033	26.73	26.85	25.69	24.57	24.68	24.79	24.90	25.02	25.13	25.29	26.61	26.72
2034	27.38	27.50	26.13	24.99	25.10	25.22	25.33	25.44	25.56	25.70	27.09	27.21
2035	27.90	28.02	27.43	26.18	26.29	26.41	26.53	26.65	26.77	27.05	28.34	28.46
2036	29.16	29.29	28.10	26.90	27.02	27.14	27.26	27.38	27.51	27.81	29.11	29.24
2037	30.03	30.16	30.09	28.89	29.02	29.15	29.67	29.84	29.98	31.58	33.70	33.86
2038	34.76	34.93	33.22	31.88	32.02	32.18	32.32	32.48	32.63	34.39	36.66	36.83
2039	37.84	38.02	37.88	36.43	36.60	36.78	36.95	37.13	37.31	38.66	40.48	40.67
2040	42.74	42.94	41.67	40.15	40.33	40.53	40.71	40.91	41.10	42.17	44.07	44.27
2041	43.63	43.84	42.54	40.99	41.18	41.37	41.56	41.76	41.96	43.05	44.99	45.20
2042	44.53	44.74	43.42	41.83	42.02	42.22	42.42	42.62	42.82	43.93	45.91	46.12
2043	45.44	45.65	44.31	42.69	42.88	43.09	43.28	43.49	43.70	44.83	46.85	47.07
2044	46.37	46.59	45.21	43.56	43.76	43.97	44.17	44.38	44.59	45.75	47.81	48.03
2045	47.32	47.54	46.14	44.45	44.66	44.87	45.08	45.29	45.51	46.69	48.79	49.02

**SCHEDULE 201 (Continued)**PRICING OPTIONS FOR STANDARD PPA (Continued)  
Standard Fixed Price Option (Continued)

TABLE 3a												
Avoided Costs												
Fixed Price Option for Solar QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97
2025	27.47	27.54	27.61	26.89	26.96	27.04	27.11	27.19	27.27	27.35	28.37	28.45
2026	30.46	30.56	30.65	29.75	29.84	29.93	30.02	30.12	30.21	30.40	31.47	31.56
2027	32.31	32.41	32.16	31.17	31.27	31.14	31.24	31.34	31.43	31.53	29.22	29.31
2028	29.89	29.09	29.07	28.15	28.22	28.30	28.37	28.46	28.54	28.62	29.73	29.81
2029	30.52	30.61	29.90	28.95	29.03	29.11	29.19	29.28	29.36	29.47	30.58	30.67
2030	31.40	31.49	31.48	30.49	30.58	30.67	30.76	30.85	30.94	31.03	32.22	32.32
2031	33.10	33.20	33.29	32.23	32.32	32.42	32.52	32.62	32.72	32.84	34.22	34.32
2032	35.07	35.18	35.28	34.19	34.30	34.41	34.51	34.62	34.73	34.87	36.20	36.32
2033	37.27	37.39	36.23	35.11	35.22	35.33	35.44	35.56	35.67	35.83	37.15	37.26
2034	38.18	38.30	36.92	35.79	35.90	36.01	36.12	36.24	36.35	36.50	37.89	38.01
2035	38.87	39.00	38.41	37.15	37.27	37.39	37.51	37.63	37.75	38.03	39.31	39.44
2036	40.32	40.45	39.26	38.06	38.18	38.30	38.42	38.55	38.67	38.97	40.27	40.40
2037	41.46	41.59	41.52	40.32	40.45	40.58	41.10	41.27	41.41	43.01	45.14	45.29
2038	46.43	46.59	44.88	43.55	43.69	43.84	43.99	44.14	44.30	46.05	48.33	48.50
2039	49.75	49.93	49.79	48.33	48.50	48.68	48.85	49.03	49.21	50.57	52.39	52.58
2040	54.89	55.09	53.82	52.30	52.48	52.68	52.86	53.06	53.25	54.32	56.22	56.42
2041	56.03	56.23	54.94	53.39	53.57	53.77	53.96	54.16	54.36	55.45	57.39	57.59
2042	57.18	57.39	56.07	54.48	54.67	54.87	55.07	55.27	55.47	56.58	58.56	58.77
2043	58.35	58.56	57.22	55.60	55.79	56.00	56.20	56.40	56.61	57.74	59.76	59.98
2044	59.50	59.72	58.34	56.69	56.89	57.10	57.30	57.51	57.72	58.88	60.94	61.16
2045	60.81	61.04	59.63	57.95	58.15	58.36	58.57	58.79	59.00	60.18	62.29	62.51

**SCHEDULE 201 (Continued)**

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

TABLE 3b												
Avoided Costs												
Fixed Price Option for Solar QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80
2025	17.36	17.44	17.51	16.78	16.86	16.94	17.01	17.09	17.17	17.25	18.27	18.35
2026	20.15	20.25	20.34	19.44	19.53	19.62	19.72	19.81	19.90	20.09	21.16	21.25
2027	21.79	21.89	21.64	20.65	20.75	20.62	20.72	20.81	20.91	21.01	18.70	18.79
2028	19.15	18.35	18.34	17.41	17.49	17.56	17.64	17.72	17.80	17.88	18.99	19.07
2029	19.56	19.65	18.94	17.99	18.07	18.15	18.24	18.32	18.40	18.52	19.63	19.71
2030	20.22	20.31	20.30	19.31	19.40	19.49	19.57	19.67	19.76	19.85	21.04	21.14
2031	21.69	21.79	21.88	20.82	20.91	21.01	21.11	21.21	21.31	21.44	22.81	22.91
2032	23.50	23.61	23.71	22.62	22.73	22.84	22.94	23.05	23.17	23.30	24.63	24.75
2033	25.39	25.51	24.35	23.23	23.34	23.45	23.56	23.67	23.79	23.95	25.27	25.38
2034	26.01	26.14	24.76	23.62	23.73	23.85	23.96	24.07	24.19	24.33	25.72	25.84
2035	26.50	26.63	26.03	24.78	24.90	25.02	25.13	25.25	25.38	25.65	26.94	27.06
2036	27.73	27.86	26.67	25.47	25.59	25.71	25.83	25.96	26.09	26.38	27.69	27.81
2037	28.57	28.71	28.64	27.43	27.56	27.70	28.21	28.38	28.52	30.12	32.25	32.40
2038	33.28	33.44	31.73	30.40	30.54	30.69	30.84	30.99	31.15	32.90	35.18	35.35
2039	36.33	36.51	36.37	34.92	35.09	35.26	35.43	35.61	35.79	37.15	38.97	39.16
2040	41.20	41.40	40.13	38.60	38.79	38.98	39.17	39.36	39.56	40.63	42.53	42.73
2041	42.06	42.26	40.97	39.41	39.60	39.80	39.99	40.19	40.39	41.47	43.41	43.62
2042	42.92	43.13	41.81	40.22	40.41	40.61	40.81	41.01	41.21	42.32	44.30	44.51
2043	43.80	44.01	42.66	41.04	41.24	41.44	41.64	41.85	42.06	43.19	45.21	45.43
2044	44.69	44.91	43.54	41.88	42.08	42.29	42.50	42.71	42.92	44.08	46.14	46.36
2045	45.61	45.83	44.43	42.74	42.95	43.16	43.37	43.58	43.80	44.98	47.08	47.31

**SCHEDULE 201 (Continued)**

## 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 28.57%. The capacity contribution for Solar QF resources (Tables 6a and 6b) is assumed to be 15.78%. 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.

**SCHEDULE 201 (Continued)**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 4a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Base Load QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44
2025	32.08	30.58	27.28	22.29	22.39	20.09	26.79	30.73	31.27	30.03	33.71	35.96
2026	36.06	34.54	31.12	24.98	23.44	20.96	30.11	33.25	34.30	33.91	37.38	37.74
2027	38.03	35.93	31.74	25.81	25.68	22.88	31.44	34.12	36.52	34.14	36.40	37.29
2028	36.98	33.95	32.18	25.49	25.23	21.52	30.73	35.05	35.57	34.20	37.46	38.16
2029	39.28	37.48	33.24	27.40	27.39	25.08	31.87	37.37	36.88	35.80	39.54	40.23
2030	92.81	89.85	82.82	73.15	73.13	69.31	80.56	89.65	88.85	87.06	93.25	94.40
2031	94.72	91.69	84.52	74.65	74.63	70.73	82.21	91.49	90.67	88.85	95.16	96.33
2032	96.29	93.20	85.91	75.87	75.85	71.87	83.56	93.00	92.17	90.32	96.74	97.93
2033	98.64	95.48	88.02	77.74	77.72	73.65	85.61	95.28	94.42	92.53	99.10	100.32
2034	100.75	97.53	89.92	79.43	79.41	75.26	87.46	97.32	96.45	94.52	101.23	102.47
2035	102.72	99.43	91.66	80.96	80.94	76.70	89.15	99.22	98.33	96.36	103.21	104.47
2036	104.52	101.18	93.27	82.38	82.35	78.05	90.72	100.96	100.06	98.05	105.02	106.30
2037	106.97	103.55	95.46	84.31	84.29	79.88	92.84	103.33	102.40	100.34	107.48	108.79
2038	109.16	105.67	97.41	86.04	86.01	81.51	94.74	105.44	104.50	102.40	109.68	111.02
2039	111.40	107.84	99.41	87.80	87.78	83.18	96.69	107.60	106.64	104.50	111.93	113.30
2040	113.46	109.84	101.26	89.45	89.42	84.75	98.49	109.60	108.62	106.44	114.00	115.39
2041	116.01	112.30	103.52	91.43	91.41	86.63	100.69	112.06	111.05	108.82	116.56	117.99
2042	118.39	114.60	105.64	93.31	93.28	88.40	102.75	114.35	113.33	111.05	118.95	120.40
2043	120.81	116.95	107.81	95.22	95.19	90.21	104.85	116.70	115.65	113.33	121.38	122.87
2044	122.93	119.00	109.70	96.89	96.86	91.79	106.69	118.74	117.68	115.32	123.52	125.03
2045	125.93	121.91	112.39	99.28	99.25	94.07	109.32	121.65	120.56	118.14	126.53	128.08



TABLE 4a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Base Load QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.73	23.47	18.89	16.59	14.55	19.40	42.59	53.29	36.47	29.08	30.10	42.59
2021	41.32	38.29	28.90	19.56	17.79	22.39	53.86	64.43	45.21	33.93	34.84	44.48
2022	44.63	38.76	30.62	25.68	23.21	27.98	48.39	57.17	41.77	34.23	35.20	44.78
2023	43.46	38.76	30.62	25.68	23.21	31.43	46.17	52.44	40.72	34.56	35.06	40.59
2024	45.08	41.97	35.02	30.60	29.48	33.61	49.42	56.15	43.58	36.97	37.51	43.44
2025	76.34	72.81	64.90	59.88	58.61	63.31	81.27	88.92	74.63	67.12	67.73	74.47
2026	77.91	74.30	66.23	61.11	59.81	64.60	82.93	90.74	76.16	68.50	69.12	76.00
2027	79.50	75.82	67.59	62.36	61.03	65.93	84.63	92.60	77.72	69.90	70.54	77.55
2028	80.98	77.23	68.86	63.54	62.19	67.17	86.20	94.31	79.17	71.21	71.86	79.00
2029	82.79	78.96	70.39	64.94	63.56	68.65	88.13	96.43	80.94	72.79	73.45	80.76
2030	84.49	80.58	71.83	66.27	64.86	70.06	89.94	98.41	82.60	74.29	74.96	82.42
2031	86.22	82.23	73.30	67.63	66.19	71.50	91.78	100.42	84.29	75.81	76.50	84.11
2032	87.64	83.58	74.49	68.72	67.26	72.66	93.30	102.09	85.67	77.04	77.74	85.49
2033	89.79	85.63	76.33	70.43	68.93	74.46	95.58	104.58	87.78	78.95	79.66	87.59
2034	91.73	87.48	77.99	71.97	70.44	76.08	97.63	106.82	89.67	80.66	81.39	89.48
2035	93.51	89.17	79.49	73.35	71.78	77.54	99.54	108.91	91.41	82.21	82.96	91.21
2036	95.15	90.74	80.89	74.63	73.04	78.90	101.28	110.82	93.01	83.65	84.41	92.81
2037	97.38	92.87	82.78	76.38	74.76	80.75	103.66	113.41	95.19	85.62	86.39	94.99
2038	99.37	94.77	84.48	77.95	76.29	82.40	105.78	115.74	97.14	87.37	88.16	96.94
2039	101.41	96.71	86.21	79.54	77.85	84.09	107.95	118.11	99.13	89.16	89.97	98.92
2040	103.29	98.51	87.83	81.04	79.32	85.67	109.95	120.29	100.98	90.83	91.65	100.77
2041	105.60	100.71	89.78	82.84	81.07	87.57	112.41	123.00	103.24	92.85	93.69	103.02
2042	107.77	102.78	91.62	84.53	82.73	89.36	114.72	125.52	105.35	94.75	95.61	105.13
2043	109.98	104.88	93.49	86.26	84.43	91.20	117.07	128.09	107.51	96.69	97.57	107.28
2044	111.91	106.72	95.13	87.77	85.91	92.79	119.12	130.34	109.40	98.39	99.28	109.16
2045	114.65	109.34	97.49	89.96	88.04	95.09	122.03	133.51	112.08	100.82	101.73	111.84

Effective for service  
on and after May 20, 2020

**SCHEDULE 201 (Continued)**

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

TABLE 4b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Base Load QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27
2025	29.93	28.67	25.64	20.42	20.85	19.78	24.70	28.68	29.23	27.59	30.87	33.15
2026	33.68	33.94	29.49	23.48	23.00	20.83	28.62	31.42	32.30	31.31	34.82	35.32
2027	35.54	35.56	30.27	24.96	25.16	23.08	29.82	33.17	33.38	30.96	35.79	35.36
2028	35.16	32.24	29.57	24.63	22.52	21.62	29.08	32.72	33.52	32.77	35.56	36.09
2029	36.29	35.52	32.39	26.16	25.65	24.02	31.02	36.05	35.41	33.73	37.37	38.65
2030	60.08	58.81	53.62	43.32	42.47	39.76	51.36	59.68	58.62	55.83	61.86	63.99
2031	61.31	60.01	54.72	44.20	43.34	40.58	52.41	60.90	59.82	56.98	63.13	65.30
2032	62.40	61.08	55.69	44.99	44.11	41.30	53.34	61.98	60.88	57.98	64.24	66.46
2033	63.85	62.50	56.99	46.03	45.14	42.26	54.58	63.42	62.30	59.33	65.74	68.01
2034	65.16	63.78	58.16	46.98	46.06	43.12	55.70	64.72	63.58	60.55	67.09	69.40
2035	66.49	65.09	59.35	47.94	47.00	44.01	56.84	66.04	64.88	61.79	68.46	70.82
2036	67.67	66.24	60.40	48.79	47.84	44.79	57.84	67.21	66.03	62.88	69.67	72.07
2037	69.24	67.78	61.80	49.92	48.95	45.83	59.19	68.78	67.57	64.35	71.29	73.75
2038	70.66	69.17	63.07	50.94	49.95	46.77	60.40	70.19	68.95	65.67	72.75	75.26
2039	72.11	70.59	64.36	51.99	50.98	47.73	61.64	71.62	70.36	67.01	74.24	76.80
2040	73.39	71.83	65.50	52.91	51.88	48.57	62.73	72.89	71.61	68.20	75.56	78.16
2041	75.09	73.51	67.03	54.14	53.09	49.70	64.19	74.59	73.27	69.79	77.32	79.98
2042	76.63	75.01	68.40	55.25	54.17	50.72	65.51	76.12	74.78	71.22	78.90	81.62
2043	78.20	76.55	69.80	56.38	55.28	51.76	66.85	77.68	76.31	72.67	80.52	83.29
2044	79.59	77.90	71.04	57.38	56.26	52.67	68.03	79.05	77.66	73.96	81.94	84.77
2045	81.44	79.72	72.69	58.72	57.57	53.90	69.61	80.89	79.47	75.68	83.85	86.74



TABLE 4b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Base Load QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.89	18.89	15.32	11.50	6.65	8.95	22.45	28.06	27.55	25.51	25.51	35.45
2021	33.16	30.67	24.27	14.37	10.89	12.46	26.59	31.81	29.62	27.92	28.80	35.12
2022	36.87	30.01	25.55	20.02	17.84	18.59	27.15	31.45	30.11	28.01	28.52	31.94
2023	33.93	30.30	25.79	20.20	18.00	18.76	27.41	31.75	30.39	28.28	28.79	32.25
2024	37.12	33.13	28.17	22.04	19.62	20.45	29.96	34.73	33.23	30.91	31.47	35.27
2025	42.18	37.65	32.01	25.04	22.29	23.24	34.04	39.46	37.76	35.12	35.76	40.08
2026	43.04	38.42	32.67	25.55	22.75	23.71	34.74	40.27	38.54	35.84	36.50	40.90
2027	43.92	39.21	33.34	26.08	23.21	24.20	35.45	41.09	39.33	36.57	37.24	41.74
2028	44.70	39.90	33.93	26.54	23.62	24.63	36.08	41.82	40.02	37.22	37.90	42.48
2029	45.74	40.83	34.72	27.16	24.17	25.20	36.92	42.79	40.95	38.09	38.78	43.47
2030	46.68	41.67	35.43	27.71	24.67	25.72	37.67	43.67	41.79	38.87	39.58	44.36
2031	47.63	42.52	36.15	28.28	25.18	26.24	38.44	44.57	42.65	39.66	40.39	45.27
2032	48.48	43.27	36.79	28.78	25.62	26.71	39.12	45.35	43.40	40.37	41.10	46.07
2033	49.60	44.28	37.65	29.45	26.22	27.33	40.03	46.41	44.42	41.31	42.06	47.14
2034	50.62	45.19	38.42	30.05	26.75	27.89	40.86	47.36	45.33	42.15	42.92	48.11
2035	51.66	46.11	39.21	30.67	27.30	28.46	41.69	48.33	46.25	43.02	43.80	49.09
2036	52.57	46.93	39.90	31.21	27.79	28.96	42.43	49.19	47.07	43.78	44.58	49.96
2037	53.80	48.02	40.83	31.94	28.43	29.64	43.42	50.33	48.17	44.80	45.62	51.12
2038	54.90	49.00	41.67	32.59	29.01	30.25	44.31	51.36	49.16	45.71	46.55	52.17
2039	56.02	50.01	42.52	33.26	29.61	30.87	45.22	52.42	50.16	46.65	47.50	53.24
2040	57.01	50.89	43.28	33.85	30.13	31.41	46.02	53.34	51.05	47.48	48.34	54.18
2041	58.34	52.08	44.28	34.64	30.83	32.14	47.09	54.58	52.24	48.58	49.47	55.44
2042	59.54	53.15	45.19	35.35	31.47	32.80	48.05	55.70	53.31	49.58	50.48	56.58
2043	60.76	54.23	46.12	36.07	32.11	33.47	49.04	56.84	54.40	50.59	51.52	57.74
2044	61.83	55.19	46.93	36.71	32.68	34.07	49.90	57.85	55.36	51.49	52.43	58.76
2045	63.27	56.48	48.03	37.56	33.44	34.86	51.07	59.20	56.65	52.69	53.65	60.13

Effective for service  
on and after May 20, 2020

**SCHEDULE 201 (Continued)**

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

TABLE 5a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Wind QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09
2025	31.72	30.22	26.92	21.93	22.03	19.73	26.43	30.37	30.91	29.67	33.35	35.60
2026	35.69	34.18	30.75	24.61	23.08	20.59	29.74	32.88	33.93	33.55	37.01	37.37
2027	37.66	35.55	31.36	25.43	25.31	22.50	31.06	33.74	36.15	33.77	36.02	36.92
2028	36.59	33.57	31.80	25.11	24.85	21.14	30.35	34.67	35.19	33.82	37.07	37.78
2029	38.89	37.09	32.85	27.01	27.00	24.69	31.48	36.98	36.49	35.41	39.15	39.84
2030	83.30	80.33	73.31	63.64	63.62	59.79	71.04	80.14	79.33	77.55	83.74	84.88
2031	85.01	81.98	74.81	64.94	64.92	61.02	72.50	81.78	80.96	79.14	85.45	86.62
2032	86.44	83.36	76.06	66.02	66.00	62.03	73.71	83.15	82.32	80.47	86.89	88.08
2033	88.52	85.37	77.91	67.63	67.61	63.54	75.50	85.16	84.31	82.41	88.99	90.20
2034	90.40	87.18	79.57	69.08	69.06	64.91	77.11	86.97	86.10	84.17	90.88	92.12
2035	92.19	88.90	81.13	70.43	70.41	66.17	78.62	88.69	87.80	85.83	92.67	93.94
2036	93.81	90.47	82.56	71.66	71.64	67.33	80.00	90.25	89.34	87.33	94.30	95.59
2037	96.00	92.58	84.49	73.34	73.32	68.91	81.88	92.36	91.43	89.38	96.51	97.83
2038	97.97	94.48	86.22	74.85	74.82	70.32	83.55	94.25	93.31	91.21	98.49	99.83
2039	99.98	96.42	87.99	76.38	76.36	71.76	85.26	96.18	95.22	93.08	100.51	101.88
2040	101.81	98.18	89.60	77.79	77.77	73.10	86.83	97.95	96.97	94.79	102.35	103.74
2041	104.12	100.41	91.63	79.54	79.52	74.73	88.79	100.16	99.16	96.93	104.67	106.09
2042	106.25	102.46	93.51	81.17	81.14	76.27	90.61	102.22	101.19	98.92	106.81	108.27
2043	108.43	104.56	95.42	82.83	82.81	77.83	92.47	104.31	103.27	100.94	109.00	110.48
2044	110.33	106.40	97.10	84.29	84.26	79.19	94.09	106.14	105.08	102.72	110.91	112.43
2045	113.00	108.97	99.45	86.34	86.32	81.13	96.38	108.71	107.62	105.20	113.59	115.14

<b>TABLE 5a</b>												
<b>Renewable Avoided Costs</b>												
<b>Renewable Fixed Price Option for Wind QF</b>												
<b>On-Peak Forecast (\$/MWH)</b>												
<b>Year</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
2020	23.40	23.15	18.56	16.27	14.23	19.07	42.26	52.96	36.14	28.75	29.77	42.26
2021	40.99	37.96	28.56	19.23	17.45	22.06	53.53	64.10	44.88	33.59	34.51	44.15
2022	44.29	38.42	30.28	25.35	22.87	27.64	48.05	56.83	41.43	33.89	34.86	44.44
2023	43.11	38.42	30.28	25.34	22.86	31.08	45.82	52.10	40.38	34.21	34.71	40.24
2024	44.73	41.62	34.66	30.25	29.13	33.26	49.06	55.80	43.23	36.62	37.15	43.09
2025	67.74	64.21	56.30	51.29	50.01	54.71	72.67	80.32	66.03	58.53	59.13	65.87
2026	69.13	65.52	57.46	52.34	51.04	55.83	74.16	81.96	67.39	59.72	60.35	67.22
2027	70.55	66.87	58.63	53.41	52.08	56.97	75.68	83.64	68.77	60.95	61.58	68.60
2028	71.85	68.10	59.72	54.40	53.05	58.03	77.06	85.17	70.03	62.07	62.72	69.86
2029	73.47	69.63	61.06	55.62	54.24	59.33	78.81	87.11	71.61	63.47	64.13	71.44
2030	74.97	71.06	62.31	56.76	55.35	60.55	80.42	88.89	73.08	64.77	65.44	72.90
2031	76.51	72.52	63.59	57.92	56.48	61.79	82.07	90.71	74.58	66.10	66.79	74.40
2032	77.79	73.73	64.64	58.87	57.41	62.81	83.45	92.25	75.83	67.20	67.90	75.64
2033	79.68	75.52	66.22	60.32	58.82	64.34	85.47	94.47	77.66	68.83	69.55	77.48
2034	81.37	77.13	67.64	61.62	60.09	65.73	87.28	96.47	79.32	70.31	71.04	79.13
2035	82.98	78.64	68.96	62.82	61.25	67.01	89.00	98.38	80.88	71.68	72.43	80.68
2036	84.43	80.03	70.17	63.92	62.33	68.18	90.57	100.11	82.30	72.94	73.70	82.10
2037	86.41	81.90	71.82	65.42	63.79	69.78	92.69	102.45	84.23	74.65	75.43	84.02
2038	88.18	83.58	73.29	66.76	65.10	71.21	94.59	104.55	85.95	76.18	76.97	85.75
2039	89.99	85.29	74.79	68.12	66.43	72.67	96.53	106.69	87.71	77.74	78.55	87.50
2040	91.64	86.86	76.17	69.39	67.67	74.02	98.30	108.64	89.33	79.18	80.00	89.11
2041	93.71	88.82	77.89	70.94	69.18	75.68	100.52	111.11	91.34	80.96	81.80	91.12
2042	95.63	90.64	79.48	72.40	70.60	77.23	102.58	113.38	93.22	82.62	83.48	92.99
2043	97.59	92.50	81.11	73.88	72.04	78.81	104.68	115.70	95.12	84.31	85.19	94.90
2044	99.30	94.12	82.53	75.17	73.31	80.19	106.52	117.74	96.80	85.79	86.68	96.56
2045	101.71	96.41	84.55	77.02	75.11	82.15	109.10	120.57	99.14	87.88	88.79	98.90

**SCHEDULE 201 (Continued)**

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

TABLE 5b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Wind QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92
2025	29.57	28.31	25.28	20.06	20.49	19.42	24.34	28.32	28.87	27.23	30.51	32.79
2026	33.31	33.57	29.12	23.11	22.63	20.47	28.25	31.06	31.93	30.94	34.45	34.95
2027	35.17	35.18	29.90	24.59	24.78	22.71	29.44	32.80	33.01	30.58	35.42	34.98
2028	34.78	31.86	29.19	24.25	22.13	21.24	28.69	32.34	33.14	32.38	35.18	35.71
2029	35.90	35.13	32.00	25.77	25.26	23.63	30.63	35.66	35.02	33.34	36.97	38.26
2030	59.68	58.41	53.23	42.92	42.07	39.36	50.96	59.28	58.23	55.43	61.46	63.59
2031	60.90	59.61	54.32	43.80	42.93	40.17	52.00	60.49	59.42	56.57	62.72	64.90
2032	61.98	60.66	55.28	44.57	43.69	40.88	52.92	61.56	60.47	57.57	63.83	66.04
2033	63.43	62.07	56.56	45.61	44.71	41.83	54.15	63.00	61.88	58.91	65.31	67.58
2034	64.72	63.35	57.72	46.54	45.63	42.69	55.26	64.29	63.15	60.12	66.65	68.97
2035	66.05	64.64	58.91	47.50	46.56	43.57	56.40	65.60	64.44	61.35	68.02	70.38
2036	67.22	65.79	59.95	48.34	47.39	44.34	57.39	66.76	65.58	62.43	69.22	71.62
2037	68.78	67.32	61.34	49.46	48.49	45.37	58.73	68.32	67.11	63.89	70.83	73.29
2038	70.19	68.70	62.60	50.48	49.48	46.30	59.93	69.72	68.48	65.20	72.29	74.79
2039	71.63	70.11	63.88	51.51	50.50	47.25	61.16	71.15	69.88	66.53	73.77	76.33
2040	72.90	71.35	65.01	52.42	51.39	48.08	62.24	72.40	71.12	67.71	75.07	77.68
2041	74.60	73.01	66.53	53.64	52.59	49.20	63.69	74.09	72.78	69.29	76.82	79.49
2042	76.13	74.50	67.89	54.74	53.66	50.21	65.00	75.61	74.27	70.71	78.39	81.11
2043	77.68	76.03	69.28	55.86	54.76	51.24	66.33	77.16	75.79	72.16	80.00	82.78
2044	79.06	77.37	70.51	56.85	55.73	52.14	67.50	78.52	77.13	73.43	81.41	84.24
2045	80.90	79.18	72.15	58.18	57.03	53.36	69.07	80.35	78.93	75.14	83.31	86.20

TABLE 5b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Wind QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	18.56	18.56	14.99	11.17	6.33	8.62	22.13	27.74	27.23	25.19	25.19	35.13
2021	32.83	30.33	23.94	14.04	10.56	12.13	26.26	31.48	29.29	27.59	28.47	34.79
2022	36.54	29.68	25.21	19.68	17.50	18.25	26.82	31.11	29.77	27.67	28.18	31.60
2023	33.58	29.96	25.44	19.86	17.66	18.41	27.07	31.41	30.05	27.93	28.45	31.90
2024	36.76	32.78	27.82	21.68	19.26	20.10	29.60	34.37	32.88	30.55	31.12	34.92
2025	41.82	37.29	31.65	24.68	21.93	22.88	33.68	39.10	37.40	34.76	35.40	39.72
2026	42.67	38.05	32.30	25.19	22.38	23.35	34.37	39.90	38.17	35.47	36.13	40.53
2027	43.55	38.83	32.96	25.70	22.84	23.82	35.07	40.72	38.95	36.20	36.87	41.36
2028	44.32	39.52	33.55	26.16	23.24	24.24	35.69	41.44	39.64	36.84	37.52	42.10
2029	45.35	40.44	34.33	26.77	23.78	24.81	36.53	42.40	40.56	37.70	38.39	43.08
2030	46.28	41.27	35.03	27.31	24.27	25.32	37.27	43.27	41.40	38.47	39.18	43.96
2031	47.23	42.11	35.75	27.87	24.77	25.84	38.04	44.16	42.24	39.26	39.98	44.86
2032	48.06	42.86	36.38	28.37	25.21	26.29	38.71	44.94	42.99	39.95	40.69	45.65
2033	49.18	43.86	37.23	29.03	25.79	26.91	39.61	45.99	43.99	40.88	41.64	46.72
2034	50.19	44.75	37.99	29.62	26.32	27.46	40.42	46.93	44.89	41.72	42.49	47.67
2035	51.22	45.67	38.77	30.23	26.86	28.02	41.25	47.89	45.81	42.57	43.36	48.65
2036	52.12	46.48	39.45	30.76	27.34	28.51	41.98	48.74	46.62	43.33	44.13	49.51
2037	53.34	47.56	40.37	31.48	27.97	29.18	42.96	49.87	47.71	44.34	45.16	50.66
2038	54.43	48.54	41.20	32.12	28.55	29.78	43.84	50.89	48.69	45.25	46.08	51.70
2039	55.55	49.53	42.04	32.78	29.13	30.39	44.74	51.94	49.68	46.17	47.03	52.76
2040	56.53	50.41	42.79	33.36	29.65	30.92	45.53	52.85	50.56	46.99	47.86	53.69
2041	57.84	51.58	43.79	34.14	30.34	31.65	46.59	54.09	51.74	48.08	48.97	54.94
2042	59.03	52.64	44.68	34.84	30.96	32.29	47.54	55.19	52.80	49.07	49.98	56.07
2043	60.24	53.72	45.60	35.55	31.59	32.95	48.52	56.33	53.88	50.07	51.00	57.22
2044	61.30	54.66	46.40	36.18	32.15	33.54	49.37	57.32	54.83	50.96	51.90	58.23
2045	62.73	55.94	47.48	37.02	32.90	34.32	50.53	58.66	56.11	52.15	53.11	59.59

Effective for service  
on and after May 20, 2020



**SCHEDULE 201 (Continued)**PRICING OPTIONS FOR STANDARD PPA (Continued)  
Renewable Fixed Price Option (Continued)

TABLE 6a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Solar QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97
2025	30.58	29.08	25.78	20.79	20.89	18.59	25.29	29.23	29.77	28.53	32.21	34.46
2026	34.53	33.01	29.59	23.45	21.91	19.43	28.58	31.72	32.76	32.38	35.85	36.21
2027	36.47	34.37	30.18	24.24	24.12	21.32	29.88	32.55	34.96	32.58	34.84	35.73
2028	35.38	32.35	30.59	23.90	23.64	19.93	29.13	33.46	33.98	32.61	35.86	36.57
2029	37.65	35.86	31.61	25.77	25.76	23.45	30.24	35.74	35.25	34.18	37.91	38.60
2030	74.54	71.57	64.55	54.88	54.86	51.03	62.28	71.38	70.58	68.79	74.98	76.12
2031	76.07	73.04	65.87	56.00	55.98	52.08	63.56	72.84	72.02	70.20	76.52	77.68
2032	77.37	74.29	66.99	56.95	56.93	52.95	64.64	74.08	73.25	71.40	77.82	79.01
2033	79.22	76.06	68.60	58.32	58.30	54.24	66.19	75.86	75.00	73.11	79.68	80.90
2034	80.88	77.66	70.04	59.56	59.53	55.39	67.58	77.45	76.58	74.64	81.36	82.59
2035	82.50	79.21	71.44	60.74	60.71	56.48	68.93	79.00	78.11	76.13	82.98	84.25
2036	83.95	80.60	72.69	61.80	61.78	57.47	70.14	80.38	79.48	77.47	84.44	85.73
2037	85.91	82.49	74.40	63.25	63.23	58.82	71.78	82.27	81.34	79.28	86.42	87.73
2038	87.67	84.18	75.92	64.55	64.52	60.02	73.25	83.95	83.01	80.91	88.19	89.53
2039	89.47	85.90	77.47	65.87	65.84	61.25	74.75	85.67	84.71	82.57	89.99	91.37
2040	91.08	87.46	78.88	67.07	67.04	62.37	76.11	87.22	86.24	84.06	91.62	93.01
2041	93.17	89.46	80.68	68.59	68.57	63.79	77.85	89.22	88.21	85.98	93.72	95.15
2042	95.08	91.29	82.33	70.00	69.97	65.10	79.44	91.05	90.02	87.75	95.64	97.10
2043	97.03	93.16	84.02	71.43	71.41	66.43	81.07	92.91	91.87	89.54	97.60	99.09
2044	98.73	94.80	85.50	72.68	72.66	67.59	82.49	94.54	93.48	91.11	99.31	100.83
2045	101.09	97.07	87.55	74.44	74.41	69.23	84.47	96.80	95.72	93.30	101.69	103.24

TABLE 6a												
Renewable Avoided Costs												
Renewable Fixed Price Option for Solar QF												
On-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	22.37	22.12	17.53	15.24	13.20	18.04	41.23	51.93	35.11	27.72	28.74	41.23
2021	39.94	36.91	27.51	18.18	16.40	21.01	52.48	63.04	43.83	32.54	33.46	43.10
2022	43.21	37.35	29.21	24.27	21.79	26.57	46.98	55.76	40.35	32.82	33.79	43.37
2023	42.02	37.32	29.18	24.24	21.76	29.99	44.73	51.00	39.28	33.12	33.62	39.15
2024	43.61	40.50	33.55	29.13	28.01	32.14	47.95	54.68	42.11	35.50	36.04	41.97
2025	59.83	56.30	48.39	43.37	42.10	46.79	64.75	72.41	58.12	50.61	51.22	57.96
2026	61.06	57.45	49.38	44.26	42.96	47.75	66.08	73.89	59.31	51.65	52.27	59.15
2027	62.31	58.63	50.39	45.17	43.84	48.73	67.43	75.40	60.53	52.71	53.34	60.36
2028	63.44	59.69	51.31	45.99	44.64	49.62	68.65	76.76	61.62	53.66	54.31	61.45
2029	64.89	61.05	52.48	47.04	45.65	50.75	70.23	78.52	63.03	54.89	55.55	62.86
2030	66.22	62.30	53.56	48.00	46.59	51.79	71.66	80.13	64.32	56.01	56.69	64.15
2031	67.57	63.58	54.65	48.98	47.54	52.85	73.13	81.77	65.64	57.16	57.85	65.46
2032	68.72	64.66	55.57	49.80	48.34	53.74	74.38	83.17	66.76	58.13	58.83	66.57
2033	70.37	66.21	56.91	51.01	49.51	55.04	76.16	85.16	68.36	59.53	60.24	68.17
2034	71.85	67.61	58.12	52.10	50.57	56.20	77.76	86.94	69.80	60.79	61.52	69.61
2035	73.28	68.95	59.27	53.12	51.56	57.32	79.31	88.68	71.19	61.99	62.74	70.99
2036	74.57	70.16	60.31	54.05	52.46	58.32	80.71	90.24	72.44	63.08	63.84	72.24
2037	76.32	71.81	61.72	55.32	53.70	59.69	82.60	92.35	74.13	64.56	65.33	73.93
2038	77.88	73.28	62.99	56.46	54.80	60.91	84.29	94.25	75.65	65.88	66.67	75.45
2039	79.48	74.78	64.28	57.61	55.92	62.16	86.01	96.18	77.20	67.23	68.04	76.99
2040	80.91	76.13	65.45	58.66	56.94	63.29	87.57	97.91	78.60	68.45	69.27	78.39
2041	82.76	77.87	66.94	60.00	58.23	64.73	89.57	100.16	80.40	70.01	70.85	80.18
2042	84.46	79.47	68.31	61.23	59.43	66.06	91.41	102.21	82.04	71.45	72.31	81.82
2043	86.19	81.10	69.71	62.48	60.64	67.41	93.28	104.30	83.73	72.91	73.79	83.50
2044	87.70	82.52	70.93	63.57	61.70	68.59	94.92	106.14	85.19	74.19	75.08	84.96
2045	89.81	84.50	72.64	65.11	63.20	70.25	97.19	108.67	87.24	75.98	76.89	87.00

Effective for service  
on and after May 20, 2020



**SCHEDULE 201 (Continued)**

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

TABLE 6b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Solar QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80
2025	28.43	27.17	24.14	18.92	19.35	18.28	23.20	27.18	27.73	26.09	29.37	31.65
2026	32.15	32.41	27.96	21.95	21.47	19.30	27.09	29.89	30.77	29.78	33.29	33.79
2027	33.98	34.00	28.71	23.40	23.59	21.52	28.26	31.61	31.82	29.39	34.23	33.80
2028	33.56	30.65	27.98	23.04	20.92	20.03	27.48	31.13	31.93	31.17	33.97	34.50
2029	34.66	33.90	30.76	24.54	24.03	22.39	29.39	34.42	33.78	32.10	35.74	37.03
2030	58.42	57.15	51.96	41.66	40.81	38.10	49.70	58.02	56.96	54.17	60.20	62.33
2031	59.62	58.32	53.03	42.51	41.65	38.88	50.71	59.20	58.13	55.28	61.43	63.61
2032	60.67	59.35	53.96	43.26	42.38	39.57	51.61	60.25	59.16	56.26	62.51	64.73
2033	62.08	60.73	55.22	44.27	43.37	40.49	52.81	61.65	60.54	57.57	63.97	66.24
2034	63.36	61.98	56.35	45.18	44.26	41.32	53.89	62.92	61.78	58.75	65.28	67.60
2035	64.65	63.25	57.51	46.10	45.17	42.17	55.00	64.21	63.04	59.95	66.62	68.98
2036	65.79	64.36	58.52	46.91	45.96	42.91	55.97	65.34	64.15	61.01	67.80	70.20
2037	67.33	65.87	59.89	48.01	47.04	43.92	57.28	66.86	65.65	62.44	69.38	71.84
2038	68.71	67.22	61.12	48.99	48.00	44.81	58.45	68.23	67.00	63.71	70.80	73.31
2039	70.12	68.59	62.37	50.00	48.98	45.73	59.65	69.63	68.37	65.02	72.25	74.81
2040	71.35	69.80	63.47	50.88	49.84	46.54	60.70	70.86	69.57	66.16	73.52	76.13
2041	73.02	71.43	64.95	52.07	51.01	47.63	62.12	72.51	71.20	67.71	75.24	77.91
2042	74.52	72.90	66.28	53.13	52.06	48.60	63.39	74.00	72.66	69.10	76.78	79.51
2043	76.04	74.39	67.64	54.22	53.12	49.60	64.69	75.52	74.15	70.51	78.36	81.13
2044	77.38	75.70	68.83	55.17	54.06	50.47	65.82	76.85	75.45	71.76	79.74	82.56
2045	79.19	77.47	70.44	56.46	55.32	51.65	67.36	78.64	77.22	73.43	81.60	84.49

TABLE 6b												
Renewable Avoided Costs												
Renewable Fixed Price Option for Solar QF												
Off-Peak Forecast (\$/MWH)												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	17.53	17.53	13.96	10.14	5.30	7.59	21.10	26.71	26.20	24.16	24.16	34.10
2021	31.78	29.28	22.89	12.99	9.51	11.07	25.21	30.43	28.24	26.54	27.42	33.74
2022	35.46	28.60	24.14	18.61	16.43	17.18	25.74	30.04	28.69	26.60	27.11	30.53
2023	32.49	28.86	24.35	18.76	16.56	17.32	25.97	30.31	28.95	26.84	27.35	30.81
2024	35.65	31.66	26.70	20.57	18.15	18.98	28.49	33.26	31.76	29.44	30.00	33.80
2025	40.68	36.15	30.51	23.54	20.79	21.74	32.54	37.96	36.26	33.62	34.26	38.58
2026	41.51	36.89	31.14	24.02	21.22	22.18	33.21	38.74	37.01	34.31	34.96	39.37
2027	42.36	37.64	31.78	24.51	21.65	22.64	33.89	39.53	37.76	35.01	35.68	40.18
2028	43.11	38.31	32.33	24.94	22.03	23.03	34.48	40.23	38.43	35.63	36.31	40.88
2029	44.11	39.20	33.09	25.53	22.55	23.57	35.29	41.17	39.33	36.46	37.16	41.84
2030	45.02	40.01	33.77	26.05	23.01	24.06	36.01	42.01	40.13	37.21	37.92	42.70
2031	45.94	40.82	34.46	26.59	23.48	24.55	36.75	42.87	40.96	37.97	38.70	43.57
2032	46.75	41.54	35.07	27.05	23.89	24.98	37.40	43.63	41.68	38.64	39.38	44.34
2033	47.84	42.51	35.89	27.69	24.45	25.57	38.27	44.65	42.65	39.54	40.30	45.38
2034	48.82	43.39	36.62	28.25	24.95	26.09	39.05	45.56	43.52	40.35	41.12	46.30
2035	49.82	44.27	37.37	28.83	25.47	26.62	39.85	46.49	44.42	41.18	41.97	47.25
2036	50.70	45.05	38.03	29.34	25.91	27.09	40.56	47.31	45.20	41.90	42.70	48.08
2037	51.88	46.11	38.92	30.03	26.52	27.73	41.50	48.42	46.26	42.88	43.70	49.21
2038	52.95	47.05	39.72	30.64	27.06	28.29	42.35	49.41	47.20	43.76	44.60	50.22
2039	54.03	48.02	40.53	31.27	27.62	28.87	43.22	50.42	48.17	44.66	45.51	51.25
2040	54.98	48.86	41.24	31.82	28.10	29.38	43.98	51.31	49.02	45.44	46.31	52.15
2041	56.27	50.00	42.21	32.56	28.76	30.07	45.01	52.51	50.16	46.51	47.40	53.37
2042	57.42	51.03	43.07	33.23	29.35	30.68	45.93	53.59	51.19	47.46	48.37	54.46
2043	58.60	52.07	43.96	33.91	29.95	31.31	46.87	54.68	52.24	48.43	49.36	55.58
2044	59.63	52.99	44.73	34.50	30.47	31.86	47.70	55.65	53.16	49.28	50.22	56.55
2045	61.02	54.23	45.77	35.31	31.19	32.61	48.82	56.95	54.40	50.44	51.40	57.88

Effective for service  
on and after May 20, 2020

## SCHEDULE 201 (Continued)

## WIND INTEGRATION

<b>TABLE 7</b>		
<b>Integration Costs</b>		
<b>Year</b>	<b>Wind</b>	<b>Solar</b>
2020	0.33	1.36
2021	0.33	1.38
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

**SCHEDULE 201 (Continued)****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.
- 2) 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.

**SCHEDULE 201 (Continued)****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

**SCHEDULE 201 (Continued)****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.

**SCHEDULE 201 (Continued)****OTHER DEFINITIONS****Mid-C Index Price**

As used in this schedule, the daily Mid-C Index Price shall be the Day Ahead Intercontinental Exchange (“ICE”) for the bilateral OTC market for energy at the Mid-C Physical for Average On-Peak Power and Average Off-Peak Power found on the following website: <https://www.theice.com/products/OTC/Physical-Energy/Electricity>. 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.

**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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), 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 ~~2029~~2024.

**Definition of Renewable Resource Deficiency Period**

This is the period from ~~2030~~2025.



**SCHEDULE 201 (Concluded)****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.

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.