



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

April 7, 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 – PORTLAND GENERAL ELECTRIC COMPANY’S Application to Update Schedule 201 Qualifying Facility Information**

Pursuant to Oregon Administrative Rules (OAR) 860-029-0040(4)(a), 860-029-0085, and 860-001-0420 and Order Nos. 11-505, and 14-058, Portland General Electric Company (PGE) submits this filing to revise its Schedule 201, Qualifying Facility 10 MW or Less Avoided Cost Power Purchase Information, Sheet Nos. 201-1 through 201-24.<sup>1</sup>

This avoided cost update follows the Commission’s acknowledgement of PGE’s 2019 Integrated Resource Plan (IRP) at its March 16, 2020 Special Public Meeting. In accordance with OARs 860-029-0040(4)(a) and 860-029-0085(3), PGE requests an effective date of May 7, 2020, 30 days after this filing. PGE respectfully requests that the updated prices in this filing be approved within the 30-day timeline provided by the rules to ensure that any new QFs entering the contracting queue following this update receive the most current and accurate avoided cost prices. The revisions in this filing can be expeditiously reviewed and approved because they are straightforward and consistent with the applicable rules and precedent.

This filing updates avoided cost prices using inputs from the acknowledged 2019 IRP. The major drivers for the price changes to Schedule 201 in this filing are as follows:

- Both the renewable and the non-renewable resource deficiency periods begin in a later year (See Attachments A, and B).
- The overnight capital costs from the 2019 IRP are lower for both Non-Renewable and Renewable Avoided Costs.

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<sup>1</sup> On February 28, 2020, PGE filed for changes to Schedule 201 regarding an As-Available Rate, and that request was docketed in UM 2060. The As-Available Rate will be addressed in docket UM 2060 and will become effective when the Commission approves that separate filing.

This filing also adds solar integration charges and related explanatory language, based on the solar integration cost analysis included in the IRP.<sup>2</sup> In 2015, the Commission ordered that PGE may file a solar integration study and request approval of a solar integration charge “when ready to do so.”<sup>3</sup> Because PGE has now completed a solar integration cost analysis PGE now requests approval of solar integration charges based on that analysis as reflected in Schedule 201 Sheet 201-19, Table 7.

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

- Attachment A provides a description of non-renewable avoided costs.
- Attachment B provides a description of renewable avoided costs.
- Attachment C provides a list of sources for various assumptions used to calculate prices.
- A redline of the changes to Schedule 201.

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

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<sup>2</sup> Docket LC 73, 2019 Integrated Resource Plan at 159, Resource Integration (July 3, 2019)

<sup>3</sup> In the Matter of Public Utility Commission of Oregon, Investigation into Qualifying Facility Contracting and Pricing, Docket UM 1610, Order No. 15-292 at 2 (Sept. 23, 2015).

UM 1728

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Attachment A  
Summary of Standard Avoided Costs

PORTLAND GENERAL ELECTRIC COMPANY  
NON-RENEWABLE AVOIDED COST STUDY  
2019 IRP UPDATE  
April 7, 2020

Introduction

This avoided cost update is made consistent with PGE's 2019 Integrated Resource Plan (IRP). The Commission directs electric utilities to make an avoided cost filing within 30 days of IRP acknowledgement.

Integrated Resource Plan

The Commission acknowledged PGE's 2019 IRP at its March 16, 2020 special public meeting. The 2019 IRP forms the basis of most of the inputs in this avoided cost study.<sup>1</sup>

Resource Timing

The resource deficiency period begins in 2025, consistent with the timing of the acknowledged<sup>2</sup> action to pursue new long-term capacity resources in the 2019 IRP. PGE's Action Plan calls for long-term resource additions with commercial online dates by December 31, 2024 to help meet the increasing capacity needs identified beginning in 2025. A capacity deficiency period beginning in 2025 is appropriate for the purposes of avoided costs because the IRP includes plans to pursue new long-term capacity resources that meet capacity needs for 2025, but not earlier. The Company plans to meet capacity needs beginning in 2021 through shorter-term contracts with existing resources in the region.

Avoided Cost Estimates

Tables 1-3 in PGE's updated Schedule 201 summarize the results for PGE's non-renewable fixed price option. Tables 1-3 are estimates of monthly on- and off-peak avoided costs beginning in 2020.

Beginning in 2025, on-peak prices are represented by capacity and energy costs, while off-peak prices are represented by energy costs only. The on-peak price includes the following costs of a CCCT: fuel, variable O&M, capacity, and other fixed costs. The off-peak price includes: fuel, variable O&M, and other fixed costs. The "other fixed costs" represent the energy portion of the fixed costs of a CCCT. Other fixed costs are calculated by taking the fixed costs of a CCCT minus the real levelized capital carrying

<sup>1</sup> Electricity prices, gas prices, and variable gas transportation costs based on forward curves and market information more recent than 2019 IRP.

<sup>2</sup> As of this filing, the written order in LC 73 has not yet been issued. The Commission included certain conditions when acknowledging PGE's Action Plan at the March 16, 2020 public meeting.

cost and fixed O&M of an SCCT net of the SCCT energy and flexibility value. The result (other fixed costs) represents the energy portion of the fixed costs of a CCCT. On-peak periods are from 6 a.m. through 10 p.m. Mondays through Saturdays. The off-peak hours are from 10 p.m. until 6 a.m. Mondays through Saturdays and all twenty-four hours on Sunday. Tables 4 and 5 show the on- and off-peak resource sufficiency rates.

### Resource Sufficiency Period Pricing

Resource sufficiency period prices in Tables 4 and 5 are developed using wholesale on- and off-peak prices (expressed in \$/MWh or mills/kWh) for the years 2020 through 2024, adjusted for delivery to PGE's system. On-peak periods are from 6 a.m. through 10 p.m. Mondays through Saturdays. The off-peak hours are from 10 p.m. until 6 a.m. Mondays through Saturdays and all twenty-four hours on Sunday. The forward trading curves are dated January 31, 2020.

### Gas Price Projections

The basis for the gas prices used in this study is described on Page 74 of PGE's 2019 IRP. The forecast is from January 31, 2020.

Gas prices are adjusted to account for variable gas transportation costs to deliver gas to the CCCT. In Table 8, the heat rate of a CCCT is then applied to the delivered gas price and combine with the estimated start costs to calculate "Total Avoided Fuel Costs"

### Renewable Capacity Contribution

To translate the renewable capacity contribution into prices for standard avoided costs consistent with Order No. 16-174, several inputs are necessary. First, the capacity contribution percentages of both wind and solar resources are necessary. The capacity contribution percentages are provided in PGE's 2019 IRP. The capacity contribution for wind is 28.57% and the capacity contribution for solar is 15.78%. Two additional inputs are necessary:

- (1) The on-peak capacity factor of the wind resource of 39.97% is calculated from the wind resource used to derive the capacity contribution for wind.
- (2) The on-peak capacity factor of the solar resource of 36.87% is calculated from the solar resource used to derive the capacity contribution for solar.

The translation of renewable capacity contribution into avoided cost prices is performed in two simple steps.

Step one: remove capacity value from all hours for the proxy gas resource.

Step two: add capacity in the on-peak hours for wind and solar QFs separately.

### CO2 (Carbon) Regulation

The Company, as directed in Order No. 08-339, continues to evaluate expected regulatory compliance for CO2 in the context of resource planning. However, because no carbon regulation has yet been legislated, this filing includes no assumptions related to cost effects of CO2 regulation. This practice is consistent with PGE's avoided costs since Commission Order No. 05-584.

### Avoided Cost Components

Tables 6 through 12 in the attachment show the capacity, fixed, variable, and gas forecast avoided cost components. The on- and off-peak SCCT-related capacity component costs are shown in Tables 10-12. Version b of Tables 10-12 are blank since no capacity value is calculated for the off-peak period. The capacity values are applicable to on-peak hours. Table 6 contains the energy portion of a CCCT, calculated using fixed costs of a CCCT minus the real levelized capital carrying cost and fixed O&M of an SCCT net of SCCT energy and flexibility values. Table 7 shows the variable O&M associated with the CCCT and Table 8 shows the projected fuel costs. Tables 6, 7, 8 and the applicable on-peak capacity table can be summed to equal the total on-peak avoided costs in Schedule 201 during the deficiency period. Tables 6, 7, and 8 can be summed to equal the total off-peak avoided costs in Schedule 201 during the deficiency period.

### Integration Charges

Wind and solar integration rates are included in this filing based on the wind integration and solar integration rates from the studies described on page 159 of PGE's 2019 IRP. These values are shown in Table 7 of PGE's Schedule 201 update. They are also adjusted for in the Wind and Solar versions of Table 2 and Table 3 of the Schedule 201 update respectively.

# **Standard Energy Tables**

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	18.88	18.96	19.02	18.30	18.37	18.45	18.53	18.61	18.68	18.76	19.78	19.86	18.85
2026	21.70	21.80	21.88	20.99	21.08	21.17	21.26	21.35	21.45	21.64	22.70	22.80	21.65
2027	23.36	23.47	23.22	22.23	22.32	22.20	22.30	22.39	22.49	22.59	20.28	20.36	22.26
2028	20.76	19.96	19.95	19.02	19.10	19.17	19.25	19.33	19.41	19.49	20.60	20.68	19.73
2029	21.21	21.29	20.59	19.63	19.71	19.80	19.88	19.96	20.05	20.16	21.27	21.35	20.41
2030	21.90	21.99	21.98	20.99	21.07	21.16	21.25	21.34	21.43	21.52	22.72	22.81	21.68
2031	23.40	23.50	23.59	22.53	22.62	22.72	22.82	22.92	23.02	23.15	24.52	24.62	23.28
2032	25.25	25.36	25.46	24.37	24.47	24.58	24.69	24.80	24.91	25.04	26.38	26.49	25.15
2033	27.17	27.29	26.13	25.01	25.12	25.23	25.34	25.46	25.57	25.73	27.05	27.16	26.02
2034	27.83	27.95	26.58	25.44	25.55	25.66	25.78	25.89	26.01	26.15	27.54	27.66	26.49
2035	28.36	28.48	27.89	26.64	26.75	26.87	26.99	27.11	27.23	27.51	28.79	28.92	27.62
2036	29.62	29.75	28.57	27.36	27.48	27.61	27.73	27.85	27.98	28.28	29.58	29.71	28.46
2037	30.50	30.64	30.57	29.37	29.50	29.63	30.14	30.32	30.45	32.06	34.18	34.33	30.98
2038	35.25	35.41	33.70	32.37	32.51	32.66	32.81	32.96	33.12	34.87	37.15	37.32	34.18
2039	38.34	38.52	38.38	36.93	37.10	37.27	37.45	37.63	37.81	39.16	40.98	41.17	38.40
2040	43.25	43.45	42.18	40.66	40.84	41.03	41.22	41.42	41.61	42.68	44.58	44.78	42.31
2041	44.15	44.36	43.06	41.51	41.70	41.89	42.08	42.28	42.48	43.57	45.51	45.72	43.18
2042	45.05	45.26	43.95	42.36	42.55	42.75	42.94	43.15	43.35	44.46	46.44	46.65	44.07
2043	45.98	46.19	44.85	43.22	43.42	43.63	43.82	44.03	44.24	45.37	47.39	47.61	44.97
2044	46.92	47.14	45.76	44.11	44.31	44.52	44.72	44.93	45.15	46.30	48.36	48.58	45.90
2045	47.88	48.10	46.70	45.01	45.22	45.43	45.64	45.85	46.07	47.25	49.35	49.58	46.83

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	18.88	18.96	19.02	18.30	18.37	18.45	18.53	18.61	18.68	18.76	19.78	19.86	18.85
2026	21.70	21.80	21.88	20.99	21.08	21.17	21.26	21.35	21.45	21.64	22.70	22.80	21.65
2027	23.36	23.47	23.22	22.23	22.32	22.20	22.30	22.39	22.49	22.59	20.28	20.36	22.27
2028	20.76	19.96	19.95	19.02	19.10	19.17	19.25	19.33	19.41	19.49	20.60	20.68	19.73
2029	21.21	21.29	20.59	19.63	19.71	19.80	19.88	19.96	20.05	20.16	21.27	21.35	20.40
2030	21.90	21.99	21.98	20.99	21.07	21.16	21.25	21.34	21.43	21.52	22.72	22.81	21.68
2031	23.40	23.50	23.59	22.53	22.62	22.72	22.82	22.92	23.02	23.15	24.52	24.62	23.29
2032	25.25	25.36	25.46	24.37	24.47	24.58	24.69	24.80	24.91	25.04	26.38	26.49	25.15
2033	27.17	27.29	26.13	25.01	25.12	25.23	25.34	25.46	25.57	25.73	27.05	27.16	26.01
2034	27.83	27.95	26.58	25.44	25.55	25.66	25.78	25.89	26.01	26.15	27.54	27.66	26.50
2035	28.36	28.48	27.89	26.64	26.75	26.87	26.99	27.11	27.23	27.51	28.79	28.92	27.62
2036	29.62	29.75	28.57	27.36	27.48	27.61	27.73	27.85	27.98	28.28	29.58	29.71	28.46
2037	30.50	30.64	30.57	29.37	29.50	29.63	30.14	30.32	30.45	32.06	34.18	34.33	30.98
2038	35.25	35.41	33.70	32.37	32.51	32.66	32.81	32.96	33.12	34.87	37.15	37.32	34.17
2039	38.34	38.52	38.38	36.93	37.10	37.27	37.45	37.63	37.81	39.16	40.98	41.17	38.39
2040	43.25	43.45	42.18	40.66	40.84	41.03	41.22	41.42	41.61	42.68	44.58	44.78	42.31
2041	44.15	44.36	43.06	41.51	41.70	41.89	42.08	42.28	42.48	43.57	45.51	45.72	43.19
2042	45.05	45.26	43.95	42.36	42.55	42.75	42.94	43.15	43.35	44.46	46.44	46.65	44.07
2043	45.98	46.19	44.85	43.22	43.42	43.63	43.82	44.03	44.24	45.37	47.39	47.61	44.97
2044	46.92	47.14	45.76	44.11	44.31	44.52	44.72	44.93	45.15	46.30	48.36	48.58	45.90
2045	47.88	48.10	46.70	45.01	45.22	45.43	45.64	45.85	46.07	47.25	49.35	49.58	46.84



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	18.52	18.60	18.66	17.94	18.01	18.09	18.17	18.25	18.32	18.40	19.42	19.50	18.49
2026	21.33	21.43	21.52	20.62	20.71	20.80	20.89	20.99	21.08	21.27	22.34	22.43	21.28
2027	22.99	23.09	22.85	21.85	21.95	21.83	21.92	22.02	22.11	22.21	19.91	19.99	21.88
2028	20.38	19.58	19.57	18.64	18.71	18.79	18.86	18.95	19.03	19.11	20.22	20.30	19.34
2029	20.82	20.90	20.20	19.24	19.32	19.41	19.49	19.57	19.66	19.77	20.88	20.96	20.01
2030	21.50	21.59	21.58	20.59	20.67	20.76	20.85	20.94	21.04	21.13	22.32	22.42	21.28
2031	22.99	23.09	23.18	22.12	22.22	22.32	22.41	22.51	22.61	22.74	24.11	24.21	22.87
2032	24.83	24.94	25.04	23.95	24.06	24.17	24.27	24.38	24.50	24.63	25.96	26.08	24.74
2033	26.74	26.86	25.71	24.59	24.70	24.81	24.92	25.03	25.15	25.30	26.62	26.74	25.59
2034	27.40	27.52	26.15	25.01	25.12	25.23	25.34	25.46	25.57	25.72	27.11	27.23	26.06
2035	27.91	28.04	27.45	26.19	26.31	26.43	26.55	26.67	26.79	27.07	28.35	28.48	27.18
2036	29.17	29.30	28.12	26.91	27.03	27.16	27.28	27.40	27.53	27.83	29.13	29.26	28.01
2037	30.04	30.18	30.11	28.91	29.04	29.17	29.68	29.86	30.00	31.60	33.72	33.88	30.52
2038	34.78	34.95	33.23	31.90	32.04	32.19	32.34	32.49	32.65	34.40	36.68	36.85	33.71
2039	37.86	38.04	37.90	36.45	36.62	36.80	36.97	37.15	37.33	38.68	40.50	40.69	37.92
2040	42.76	42.96	41.69	40.17	40.35	40.55	40.73	40.93	41.12	42.19	44.09	44.29	41.82
2041	43.65	43.86	42.56	41.01	41.20	41.39	41.58	41.78	41.98	43.07	45.01	45.22	42.69
2042	44.55	44.76	43.44	41.85	42.04	42.24	42.44	42.64	42.84	43.95	45.93	46.14	43.56
2043	45.46	45.67	44.33	42.71	42.90	43.11	43.31	43.51	43.72	44.85	46.87	47.09	44.45
2044	46.39	46.61	45.23	43.58	43.78	43.99	44.19	44.40	44.62	45.77	47.83	48.05	45.37
2045	47.34	47.56	46.16	44.47	44.68	44.89	45.10	45.31	45.53	46.71	48.81	49.04	46.29

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	18.52	18.60	18.66	17.94	18.01	18.09	18.17	18.25	18.32	18.40	19.42	19.50	18.49
2026	21.33	21.43	21.52	20.62	20.71	20.80	20.89	20.99	21.08	21.27	22.34	22.43	21.29
2027	22.99	23.09	22.85	21.85	21.95	21.83	21.92	22.02	22.11	22.21	19.91	19.99	21.90
2028	20.38	19.58	19.57	18.64	18.71	18.79	18.86	18.95	19.03	19.11	20.22	20.30	19.35
2029	20.82	20.90	20.20	19.24	19.32	19.41	19.49	19.57	19.66	19.77	20.88	20.96	20.01
2030	21.50	21.59	21.58	20.59	20.67	20.76	20.85	20.94	21.04	21.13	22.32	22.42	21.28
2031	22.99	23.09	23.18	22.12	22.22	22.32	22.41	22.51	22.61	22.74	24.11	24.21	22.88
2032	24.83	24.94	25.04	23.95	24.06	24.17	24.27	24.38	24.50	24.63	25.96	26.08	24.73
2033	26.74	26.86	25.71	24.59	24.70	24.81	24.92	25.03	25.15	25.30	26.62	26.74	25.59
2034	27.40	27.52	26.15	25.01	25.12	25.23	25.34	25.46	25.57	25.72	27.11	27.23	26.07
2035	27.91	28.04	27.45	26.19	26.31	26.43	26.55	26.67	26.79	27.07	28.35	28.48	27.18
2036	29.17	29.30	28.12	26.91	27.03	27.16	27.28	27.40	27.53	27.83	29.13	29.26	28.01
2037	30.04	30.18	30.11	28.91	29.04	29.17	29.68	29.86	30.00	31.60	33.72	33.88	30.52
2038	34.78	34.95	33.23	31.90	32.04	32.19	32.34	32.49	32.65	34.40	36.68	36.85	33.70
2039	37.86	38.04	37.90	36.45	36.62	36.80	36.97	37.15	37.33	38.68	40.50	40.69	37.91
2040	42.76	42.96	41.69	40.17	40.35	40.55	40.73	40.93	41.12	42.19	44.09	44.29	41.82
2041	43.65	43.86	42.56	41.01	41.20	41.39	41.58	41.78	41.98	43.07	45.01	45.22	42.69
2042	44.55	44.76	43.44	41.85	42.04	42.24	42.44	42.64	42.84	43.95	45.93	46.14	43.56
2043	45.46	45.67	44.33	42.71	42.90	43.11	43.31	43.51	43.72	44.85	46.87	47.09	44.45
2044	46.39	46.61	45.23	43.58	43.78	43.99	44.19	44.40	44.62	45.77	47.83	48.05	45.36
2045	47.34	47.56	46.16	44.47	44.68	44.89	45.10	45.31	45.53	46.71	48.81	49.04	46.30

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	17.38	17.46	17.52	16.80	16.87	16.95	17.03	17.11	17.18	17.26	18.28	18.36	17.35
2026	20.17	20.27	20.35	19.46	19.55	19.64	19.73	19.82	19.92	20.11	21.17	21.27	20.12
2027	21.80	21.91	21.66	20.67	20.76	20.64	20.73	20.83	20.93	21.03	18.72	18.80	20.70
2028	19.17	18.37	18.35	17.42	17.50	17.58	17.65	17.73	17.82	17.90	19.01	19.09	18.13
2029	19.58	19.67	18.96	18.01	18.09	18.17	18.25	18.34	18.42	18.53	19.64	19.73	18.78
2030	20.24	20.33	20.32	19.33	19.41	19.50	19.59	19.68	19.77	19.86	21.06	21.15	20.02
2031	21.71	21.81	21.90	20.83	20.93	21.03	21.12	21.22	21.32	21.45	22.82	22.93	21.59
2032	23.52	23.63	23.73	22.64	22.75	22.85	22.96	23.07	23.18	23.31	24.65	24.76	23.43
2033	25.40	25.52	24.36	23.25	23.36	23.47	23.58	23.69	23.81	23.96	25.28	25.40	24.25
2034	26.03	26.15	24.78	23.64	23.75	23.86	23.98	24.09	24.21	24.35	25.74	25.86	24.69
2035	26.52	26.64	26.05	24.80	24.91	25.03	25.15	25.27	25.39	25.67	26.96	27.08	25.79
2036	27.75	27.88	26.69	25.49	25.61	25.73	25.85	25.98	26.10	26.40	27.71	27.83	26.58
2037	28.59	28.73	28.65	27.45	27.58	27.72	28.23	28.40	28.54	30.14	32.27	32.42	29.06
2038	33.30	33.46	31.75	30.41	30.56	30.71	30.86	31.01	31.16	32.92	35.20	35.37	32.22
2039	36.35	36.53	36.39	34.93	35.10	35.28	35.45	35.63	35.81	37.17	38.99	39.18	36.41
2040	41.21	41.42	40.15	38.62	38.81	39.00	39.19	39.38	39.58	40.64	42.55	42.75	40.27
2041	42.08	42.28	40.99	39.43	39.62	39.82	40.01	40.21	40.41	41.49	43.43	43.64	41.11
2042	42.94	43.15	41.83	40.24	40.43	40.63	40.83	41.03	41.23	42.34	44.32	44.53	41.95
2043	43.82	44.03	42.68	41.06	41.26	41.46	41.66	41.87	42.08	43.21	45.23	45.45	42.81
2044	44.71	44.93	43.56	41.91	42.11	42.31	42.52	42.73	42.94	44.10	46.16	46.38	43.70
2045	45.63	45.85	44.45	42.76	42.97	43.18	43.39	43.60	43.82	45.00	47.10	47.33	44.58

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	17.38	17.46	17.52	16.80	16.87	16.95	17.03	17.11	17.18	17.26	18.28	18.36	17.35
2026	20.17	20.27	20.35	19.46	19.55	19.64	19.73	19.82	19.92	20.11	21.17	21.27	20.12
2027	21.80	21.91	21.66	20.67	20.76	20.64	20.73	20.83	20.93	21.03	18.72	18.80	20.71
2028	19.17	18.37	18.35	17.42	17.50	17.58	17.65	17.73	17.82	17.90	19.01	19.09	18.14
2029	19.58	19.67	18.96	18.01	18.09	18.17	18.25	18.34	18.42	18.53	19.64	19.73	18.77
2030	20.24	20.33	20.32	19.33	19.41	19.50	19.59	19.68	19.77	19.86	21.06	21.15	20.02
2031	21.71	21.81	21.90	20.83	20.93	21.03	21.12	21.22	21.32	21.45	22.82	22.93	21.59
2032	23.52	23.63	23.73	22.64	22.75	22.85	22.96	23.07	23.18	23.31	24.65	24.76	23.42
2033	25.40	25.52	24.36	23.25	23.36	23.47	23.58	23.69	23.81	23.96	25.28	25.40	24.25
2034	26.03	26.15	24.78	23.64	23.75	23.86	23.98	24.09	24.21	24.35	25.74	25.86	24.70
2035	26.52	26.64	26.05	24.80	24.91	25.03	25.15	25.27	25.39	25.67	26.96	27.08	25.78
2036	27.75	27.88	26.69	25.49	25.61	25.73	25.85	25.98	26.10	26.40	27.71	27.83	26.58
2037	28.59	28.73	28.65	27.45	27.58	27.72	28.23	28.40	28.54	30.14	32.27	32.42	29.07
2038	33.30	33.46	31.75	30.41	30.56	30.71	30.86	31.01	31.16	32.92	35.20	35.37	32.22
2039	36.35	36.53	36.39	34.93	35.10	35.28	35.45	35.63	35.81	37.17	38.99	39.18	36.39
2040	41.21	41.42	40.15	38.62	38.81	39.00	39.19	39.38	39.58	40.64	42.55	42.75	40.27
2041	42.08	42.28	40.99	39.43	39.62	39.82	40.01	40.21	40.41	41.49	43.43	43.64	41.11
2042	42.94	43.15	41.83	40.24	40.43	40.63	40.83	41.03	41.23	42.34	44.32	44.53	41.95
2043	43.82	44.03	42.68	41.06	41.26	41.46	41.66	41.87	42.08	43.21	45.23	45.45	42.81
2044	44.71	44.93	43.56	41.91	42.11	42.31	42.52	42.73	42.94	44.10	46.16	46.38	43.69
2045	45.63	45.85	44.45	42.76	42.97	43.18	43.39	43.60	43.82	45.00	47.10	47.33	44.59







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

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Attachment B  
Summary of Renewable Standard Avoided Costs

PORTLAND GENERAL ELECTRIC COMPANY  
RENEWABLE AVOIDED COST STUDY  
2019 IRP UPDATE  
April 7, 2020

### Introduction

This renewable avoided cost update is consistent with PGE's 2019 Integrated Resource Plan (IRP). The Commission directs electric utilities to make an avoided cost filing within 30 days of IRP acknowledgement.

### Integrated Resource Plan

The Commission acknowledged PGE's 2019 IRP at its March 16, 2020 special public meeting. The 2019 IRP forms the basis of most of the inputs in this avoided cost study.<sup>1</sup>

### Resource Timing

The resource deficiency period begins in 2030, consistent with the 2019 IRP. In the 2019 IRP, PGE identified that existing and contracted resources are expected to support a physical RPS compliance position through 2029 in the Reference Case. PGE further found that utilization of the REC bank could facilitate RPS compliance well into the 2030s. As such, PGE identified no near-term need for additional Renewable Energy Credits. The 2019 IRP included a renewable action as part of the least-cost, least-risk plan, seeking renewable energy additions to enter PGE's portfolio by the end of 2024 and aligning with the timing of PGE's capacity action. A condition of this acknowledged action requires PGE to return the value of RECs generated prior to 2030—the physical RPS deficiency year—to customers. Therefore, adoption of a 2030 RPS deficiency date is consistent with the acknowledged renewable action in the 2019 IRP. As part of the conditionally acknowledged renewable action, PGE proposed to return the value of RECs generated prior to the physical RPS deficiency year of 2030 to customers. PGE proposed a similar condition in the Revised Renewable Action as part of the 2016 IRP after the Commission determined the renewable deficiency period would begin in 2025. In the 2016 IRP Revised Renewable Action Plan, PGE proposed to return the value of RECs generated prior to 2025, the physical RPS deficiency year at the time, to customers. The adoption of a 2030 renewable deficiency date is consistent with the decision made for the 2016 IRP and renewable avoided cost determination, and with PGE's conditionally acknowledged renewable action in the recently acknowledged 2019 IRP.

### Avoided Cost Estimates

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<sup>1</sup> Electricity prices, gas prices, and variable gas transportation costs based on forward curves and market information more recent than 2019 IRP.

## PGE's 2020 AVOIDED COST UPDATE Attachment B – Page 2

Tables 4-6 in PGE's updated Schedule 201 summarize the results for PGE's renewable fixed price option. Tables 4-6 are estimates of monthly on- and off-peak avoided costs beginning in 2020.

Tables 1 through 12 (following) summarize PGE avoided cost data consistent with Commission Order Nos. 05-584 and 11-505. Beginning at the start of the deficiency period in January 2030, renewable avoided cost prices are represented by the fully allocated costs of a renewable wind resource. Table 8 provides estimates of monthly on- and off-peak renewable avoided costs beginning in 2030 prior to removing capacity and shaping energy. The on- and off-peak capacity component costs are shown in Tables 10-12. Version b of Tables 10-12 are blank since no capacity value is calculated for the off-peak period. The capacity values are applicable to on-peak hours. Tables 1-3 below provide energy prices prior to shaping.

### Resource Sufficiency Period Pricing

Renewable resource sufficiency period prices in Tables 5 and 6 are developed using wholesale on- and off-peak prices (expressed in \$/MWh or mills/kWh) for the years 2020 through 2029, adjusted for delivery to PGE's system. On-peak periods are from 6 a.m. through 10 p.m. Mondays through Saturdays. The off-peak hours are from 10 p.m. until 6 a.m. Mondays through Saturdays and all twenty-four hours on Sunday. The forward trading curves are dated January 31, 2020.

### Renewable Capacity Contribution

To translate the renewable capacity contribution into prices for renewable avoided costs consistent with Order No. 16-174, several inputs are necessary. First, the capacity contribution percentages of both wind and solar resources are necessary. The capacity contribution percentages are provided in PGE's 2019 IRP. The capacity contribution for wind is 28.57% and the capacity contribution for solar is 15.78%. Three additional inputs are necessary:

- (1) The capacity factor of the proxy wind resource of 40.80% is an existing input already provided in the renewable avoided cost model.
- (2) The on-peak capacity factor of the wind resource of 39.97% is calculated from the wind resource used to derive the capacity contribution for wind.
- (3) The on-peak capacity factor of the solar resource of 36.87% is calculated from the solar resource used to derive the capacity contribution for solar.

The translation of renewable capacity contribution into avoided cost prices is performed in two simple steps.

PGE's 2020 AVOIDED COST UPDATE  
Attachment B – Page 3

Step one: remove capacity value from all hours for the proxy wind resource.

Step two: add capacity in the on-peak hours for wind and solar QFs separately.

The proxy wind resource used to calculate prices in the deficiency period includes both energy and capacity. In the first step, capacity is removed from all hours using this formula:

$(\text{SCCT } \$/\text{kW-year} \times \text{wind capacity contribution percentage}) / (\text{number of annual hours} \times \text{annual capacity factor of the proxy wind resource})^*$

Step two is performed for wind and solar QFs separately. For solar QFs, capacity is added into the on-peak hours using this formula:

$(\text{SCCT } \$/\text{kW-year} \times \text{solar capacity contribution percentage}) / (\text{number of on-peak hours} \times \text{solar on-peak capacity factor})^*$

\* Additional adjustments are included for inflation and line losses.

The above formula is used for wind QFs using the wind capacity contribution percentage and wind on-peak capacity factor.

### Production Tax Credit

The Further Consolidated Appropriations Act, 2020 (H.R. 1865, Sec. 127) extended the PTC. The Act extended the PTC for wind facilities commencing construction through the end of 2020 and online by December 31, 2024.

No PTC is assumed in this filing because the deficiency begins in 2030.

### Integration Rates

Wind and solar integration rates are included in this filing based on the wind integration and solar integration rates from the studies described on page 159 of PGE's 2019 IRP. These values are shown in Table 7 of PGE's Schedule 201 update. They are also adjusted for in the Wind and Solar versions of Table 5 and Table 6 of the Schedule 201 update respectively.

## **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													
													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	32.08	30.58	27.28	22.29	22.39	20.09	26.79	30.73	31.27	30.03	33.71	35.96	28.61
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	31.48
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	32.49
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	32.21
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	34.29
2030	62.89	60.02	53.22	43.87	43.85	40.15	51.03	59.83	59.05	57.33	63.31	64.42	54.92
2031	64.18	61.25	54.31	44.77	44.75	40.97	52.08	61.05	60.26	58.50	64.61	65.74	56.04
2032	65.31	62.33	55.28	45.56	45.54	41.70	53.00	62.13	61.33	59.54	65.75	66.90	57.05
2033	66.83	63.78	56.56	46.62	46.60	42.67	54.23	63.58	62.76	60.92	67.28	68.46	58.37
2034	68.20	65.09	57.72	47.58	47.56	43.54	55.34	64.88	64.04	62.17	68.66	69.86	59.53
2035	69.60	66.42	58.90	48.55	48.53	44.44	56.48	66.21	65.35	63.44	70.07	71.29	60.77
2036	70.83	67.60	59.95	49.41	49.39	45.22	57.48	67.39	66.51	64.57	71.31	72.55	61.87
2037	72.48	69.17	61.34	50.56	50.54	46.28	58.81	68.95	68.06	66.07	72.97	74.24	63.28
2038	73.96	70.59	62.60	51.60	51.57	47.22	60.02	70.37	69.45	67.42	74.46	75.76	64.56
2039	75.48	72.03	63.88	52.65	52.63	48.19	61.25	71.81	70.88	68.80	75.99	77.31	65.92
2040	76.82	73.31	65.01	53.59	53.56	49.04	62.33	73.08	72.13	70.02	77.33	78.68	67.06
2041	78.60	75.02	66.52	54.83	54.81	50.19	63.78	74.78	73.81	71.65	79.13	80.52	68.64
2042	80.21	76.55	67.89	55.96	55.93	51.21	65.09	76.31	75.32	73.12	80.76	82.16	70.05
2043	81.86	78.12	69.28	57.10	57.08	52.26	66.42	77.88	76.87	74.62	82.41	83.85	71.47
2044	83.31	79.50	70.50	58.11	58.09	53.19	67.60	79.25	78.23	75.94	83.87	85.33	72.78
2045	85.25	81.35	72.15	59.47	59.44	54.43	69.17	81.10	80.05	77.71	85.82	87.32	74.41
<b>Capacity Removed, Aurora Shaping</b>													
Portland General Electric Renewable Avoided Cost Study Off-Peak Energy, Base Load													
													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	29.93	28.67	25.64	20.42	20.85	19.78	24.70	28.68	29.23	27.59	30.87	33.15	26.62
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	29.84
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	31.08
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	30.49
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	32.69
2030	58.11	56.88	51.86	41.89	41.08	38.46	49.67	57.72	56.70	54.00	59.83	61.89	52.34
2031	59.30	58.04	52.93	42.75	41.92	39.25	50.69	58.90	57.86	55.11	61.05	63.16	53.40
2032	60.35	59.07	53.86	43.51	42.66	39.94	51.58	59.94	58.89	56.08	62.13	64.28	54.35
2033	61.75	60.45	55.12	44.52	43.65	40.87	52.79	61.34	60.26	57.39	63.58	65.77	55.59
2034	63.02	61.69	56.25	45.43	44.55	41.71	53.87	62.59	61.49	58.56	64.88	67.12	56.78
2035	64.31	62.95	57.40	46.36	45.46	42.56	54.97	63.88	62.75	59.76	66.21	68.50	57.93
2036	65.45	64.06	58.41	47.19	46.27	43.32	55.94	65.01	63.86	60.82	67.38	69.71	58.95
2037	66.97	65.56	59.77	48.28	47.34	44.32	57.25	66.52	65.35	62.24	68.95	71.33	60.33
2038	68.34	66.90	61.00	49.27	48.31	45.23	58.42	67.88	66.69	63.51	70.37	72.79	61.56
2039	69.74	68.27	62.25	50.28	49.30	46.16	59.62	69.27	68.05	64.81	71.81	74.28	62.78
2040	70.98	69.48	63.35	51.17	50.17	46.98	60.67	70.50	69.26	65.96	73.08	75.60	63.98
2041	72.63	71.09	64.83	52.36	51.34	48.07	62.08	72.14	70.87	67.50	74.78	77.36	65.42
2042	74.12	72.55	66.15	53.44	52.39	49.05	63.36	73.62	72.32	68.88	76.31	78.94	66.75
2043	75.64	74.04	67.51	54.53	53.47	50.06	64.65	75.13	73.80	70.29	77.88	80.56	68.13
2044	76.98	75.35	68.70	55.50	54.41	50.95	65.80	76.46	75.11	71.53	79.25	81.99	69.31
2045	78.77	77.10	70.30	56.79	55.68	52.13	67.33	78.24	76.86	73.20	81.10	83.90	70.97
<b>Capacity Removed, Aurora Shaping</b>													



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	36.14	28.75	29.77	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	31.72	30.22	26.92	21.93	22.03	19.73	26.43	30.37	30.91	29.67	33.35	35.60	28.25
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	31.11
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	32.11
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	31.83
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	33.90
2030	62.49	59.62	52.83	43.47	43.45	39.75	50.63	59.43	58.65	56.93	62.91	64.02	54.52
2031	63.77	60.84	53.91	44.36	44.34	40.57	51.67	60.65	59.86	58.09	64.20	65.33	55.64
2032	64.90	61.92	54.86	45.15	45.13	41.28	52.58	61.72	60.91	59.12	65.34	66.48	56.64
2033	66.41	63.36	56.14	46.20	46.18	42.25	53.81	63.16	62.33	60.50	66.86	68.03	57.94
2034	67.77	64.66	57.29	47.14	47.12	43.11	54.91	64.45	63.61	61.74	68.23	69.43	59.10
2035	69.16	65.98	58.46	48.11	48.09	44.00	56.04	65.77	64.91	63.00	69.63	70.85	60.33
2036	70.38	67.15	59.50	48.96	48.94	44.77	57.03	66.94	66.06	64.12	70.86	72.10	61.42
2037	72.02	68.71	60.88	50.10	50.08	45.82	58.35	68.49	67.60	65.61	72.51	73.78	62.82
2038	73.50	70.12	62.13	51.13	51.11	46.76	59.55	69.90	68.99	66.95	74.00	75.29	64.09
2039	75.00	71.56	63.40	52.18	52.15	47.71	60.77	71.33	70.40	68.33	75.51	76.84	65.44
2040	76.33	72.82	64.52	53.10	53.07	48.56	61.84	72.59	71.64	69.53	76.85	78.20	66.57
2041	78.11	74.52	66.03	54.34	54.31	49.69	63.29	74.28	73.31	71.15	78.64	80.02	68.14
2042	79.71	76.04	67.38	55.45	55.42	50.71	64.58	75.80	74.81	72.61	80.25	81.66	69.54
2043	81.34	77.60	68.76	56.58	56.56	51.74	65.91	77.36	76.35	74.10	81.89	83.33	70.95
2044	82.78	78.97	69.98	57.58	57.56	52.66	67.07	78.72	77.70	75.41	83.34	84.80	72.25
2045	84.71	80.81	71.61	58.93	58.90	53.89	68.63	80.56	79.51	77.17	85.28	86.78	73.87
<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	29.57	28.31	25.28	20.06	20.49	19.42	24.34	28.32	28.87	27.23	30.51	32.79	26.26
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	29.47
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	30.70
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	30.10
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	32.30
2030	57.71	56.48	51.47	41.50	40.68	38.06	49.27	57.32	56.30	53.60	59.43	61.49	51.94
2031	58.89	57.64	52.52	42.35	41.51	38.84	50.28	58.49	57.46	54.70	60.65	62.75	53.00
2032	59.93	58.66	53.45	43.09	42.25	39.53	51.17	59.53	58.47	55.67	61.72	63.86	53.93
2033	61.33	60.02	54.69	44.10	43.23	40.45	52.36	60.91	59.83	56.96	63.16	65.35	55.17
2034	62.59	61.25	55.81	45.00	44.12	41.28	53.44	62.16	61.06	58.13	64.45	66.69	56.35
2035	63.87	62.51	56.96	45.92	45.02	42.12	54.53	63.44	62.31	59.32	65.77	68.06	57.49
2036	65.00	63.61	57.96	46.74	45.82	42.87	55.49	64.56	63.41	60.37	66.93	69.26	58.50
2037	66.51	65.10	59.32	47.82	46.88	43.87	56.79	66.06	64.89	61.78	68.49	70.87	59.87
2038	67.87	66.43	60.53	48.80	47.84	44.76	57.95	67.41	66.22	63.04	69.90	72.32	61.10
2039	69.27	67.79	61.77	49.80	48.82	45.68	59.14	68.80	67.58	64.33	71.33	73.81	62.31
2040	70.49	68.99	62.86	50.68	49.69	46.49	60.18	70.01	68.77	65.47	72.59	75.11	63.49
2041	72.13	70.60	64.33	51.87	50.84	47.57	61.59	71.64	70.37	67.00	74.28	76.86	64.92
2042	73.61	72.04	65.65	52.93	51.89	48.55	62.85	73.11	71.81	68.37	75.80	78.44	66.24
2043	75.12	73.52	66.99	54.01	52.95	49.54	64.13	74.61	73.29	69.77	77.36	80.04	67.61
2044	76.45	74.82	68.17	54.97	53.89	50.42	65.27	75.93	74.58	71.00	78.72	81.46	68.78
2045	78.23	76.56	69.76	56.25	55.14	51.59	66.79	77.70	76.32	72.66	80.56	83.36	70.43
<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	30.58	29.08	25.78	20.79	20.89	18.59	25.29	29.23	29.77	28.53	32.21	34.46	27.11
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	29.95
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	30.92
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	30.62
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	32.67
2030	61.23	58.36	51.56	42.21	42.19	38.49	49.37	58.17	57.39	55.67	61.65	62.76	53.26
2031	62.48	59.55	52.62	43.07	43.06	39.28	50.38	59.36	58.57	56.81	62.92	64.04	54.35
2032	63.58	60.60	53.55	43.83	43.81	39.97	51.27	60.41	59.60	57.81	64.02	65.17	55.32
2033	65.07	62.02	54.80	44.86	44.84	40.91	52.47	61.82	60.99	59.16	65.52	66.69	56.60
2034	66.40	63.29	55.92	45.78	45.76	41.74	53.54	63.08	62.24	60.37	66.86	68.06	57.73
2035	67.76	64.58	57.07	46.71	46.69	42.60	54.64	64.38	63.52	61.61	68.23	69.45	58.93
2036	68.96	65.72	58.07	47.54	47.51	43.35	55.60	65.51	64.64	62.69	69.43	70.68	60.00
2037	70.57	67.26	59.43	48.65	48.63	44.36	56.90	67.04	66.15	64.16	71.06	72.33	61.37
2038	72.01	68.64	60.65	49.64	49.62	45.27	58.07	68.41	67.50	65.47	72.51	73.81	62.61
2039	73.49	70.04	61.89	50.66	50.64	46.20	59.26	69.82	68.88	66.81	74.00	75.32	63.93
2040	74.78	71.28	62.98	51.55	51.53	47.01	60.30	71.05	70.10	67.99	75.30	76.65	65.03
2041	76.53	72.94	64.45	52.76	52.73	48.11	61.71	72.71	71.74	69.58	77.06	78.44	66.57
2042	78.10	74.43	65.77	53.84	53.82	49.10	62.97	74.19	73.21	71.00	78.64	80.05	67.93
2043	79.70	75.96	67.12	54.94	54.92	50.10	64.26	75.71	74.71	72.46	80.25	81.69	69.31
2044	81.10	77.30	68.30	55.91	55.88	50.98	65.39	77.05	76.02	73.73	81.66	83.13	70.57
2045	83.00	79.10	69.90	57.22	57.19	52.18	66.92	78.85	77.80	75.46	83.57	85.07	72.16
<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	28.43	27.17	24.14	18.92	19.35	18.28	23.20	27.18	27.73	26.09	29.37	31.65	25.12
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	28.31
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	29.51
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	28.89
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	31.06
2030	56.45	55.22	50.20	40.23	39.42	36.80	48.01	56.06	55.04	52.34	58.17	60.23	50.68
2031	57.60	56.35	51.23	41.06	40.22	37.55	48.99	57.21	56.17	53.41	59.36	61.47	51.71
2032	58.62	57.34	52.13	41.78	40.93	38.21	49.86	58.21	57.16	54.35	60.41	62.55	52.62
2033	59.99	58.68	53.35	42.76	41.89	39.11	51.02	59.57	58.49	55.62	61.82	64.01	53.83
2034	61.22	59.89	54.45	43.63	42.75	39.91	52.07	60.79	59.69	56.76	63.08	65.32	54.98
2035	62.47	61.11	55.56	44.53	43.62	40.73	53.13	62.04	60.91	57.93	64.38	66.66	56.09
2036	63.57	62.19	56.54	45.31	44.39	41.44	54.07	63.13	61.99	58.95	65.51	67.83	57.08
2037	65.06	63.64	57.86	46.37	45.43	42.41	55.33	64.61	63.44	60.32	67.04	69.42	58.41
2038	66.39	64.95	59.05	47.32	46.36	43.28	56.47	65.93	64.73	61.56	68.41	70.84	59.61
2039	67.75	66.28	60.26	48.29	47.31	44.17	57.62	67.28	66.06	62.82	69.82	72.29	60.79
2040	68.94	67.44	61.32	49.14	48.14	44.94	58.64	68.47	67.22	63.93	71.05	73.57	61.94
2041	70.56	69.02	62.75	50.29	49.27	45.99	60.01	70.07	68.80	65.42	72.70	75.28	63.34
2042	72.00	70.43	64.04	51.32	50.28	46.94	61.24	71.50	70.20	66.76	74.19	76.83	64.63
2043	73.48	71.88	65.35	52.37	51.31	47.90	62.49	72.97	71.64	68.13	75.71	78.40	65.97
2044	74.77	73.14	66.50	53.29	52.21	48.74	63.59	74.25	72.90	69.33	77.05	79.78	67.10
2045	76.52	74.85	68.05	54.54	53.43	49.88	65.08	75.99	74.61	70.95	78.85	81.65	68.72
<i>Capacity Removed, Aurora Shaping, Integration Removed</i>													

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

<b>Portland General Electric</b>		
<b>Renewable Avoided Cost Study</b>		
<b>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

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Attachment C

**Workbook tab: Plant Capital Cost Inputs**

	4-6-20 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	
<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	
<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	352,265	(\$000s)	2018	2019 IRP - Supply-Side Resource Study - Spring 2018	496,174	2018
Annual capital reinvestment		\$/MW			12,500	2017
Economic life	30			2019 IRP - Supply-Side Resource Study - Spring 2018	30	
Tax life	5			no change	5	
Decommissioning cost	8041	(\$000s)	2018	2019 IRP LUCSA model	0	
In-service date	2030				2025	
Start construction date	2027				2023	
EPC period	27	months		2019 IRP - Supply-Side Resource Study - Spring 2018	16	
Plant retirement					2054	

**Workbook tab: Plant Operating Parameters**

	4-6-20 Filing				3-11-19 Filing	
	Value	Units	\$ 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%	

**Workbook tab: Financial and Tax Parameters**

	4-6-20 Filing			3-11-19 Filing
	Value		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%

UM 1728

PGE Update to Schedule 201  
Avoided Cost Power Purchase Information

Schedule 201 Redline

**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 9394.01% 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 ~~48.59~~28.57%. The capacity contribution for Solar QF resources (Tables 3a and 3b) is assumed to be 15.~~33~~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
2019	41.24	39.20	29.26	25.44	22.13	31.81	58.31	72.84	41.24	30.28	30.54	41.49
2020	38.74	35.53	26.79	22.36	21.63	27.26	51.38	60.63	42.57	29.58	30.04	36.10
2021	43.58	43.21	42.22	40.60	40.42	40.67	40.93	41.03	41.00	41.17	42.90	44.05
2022	45.57	45.21	44.58	42.19	42.04	42.23	42.44	42.52	42.46	42.63	44.38	45.38
2023	46.97	46.64	46.09	44.53	44.45	44.69	44.94	45.07	45.11	45.31	46.13	47.13
2024	47.27	47.33	47.39	46.87	46.96	47.03	47.09	47.16	47.22	47.29	48.27	48.34
2025	49.62	49.69	49.76	48.88	48.95	48.96	49.03	49.10	49.17	49.24	50.15	50.23
2026	51.33	51.10	51.14	50.26	50.33	50.41	50.48	50.55	50.63	50.71	51.77	51.85
2027	52.98	52.97	52.14	51.21	51.29	51.20	51.27	51.35	51.42	51.59	52.51	52.59
2028	53.70	53.16	52.93	51.99	52.06	52.14	52.22	52.30	52.37	52.48	53.56	53.64
2029	54.88	54.96	55.00	54.06	54.14	54.23	55.33	55.43	55.52	55.77	56.91	57.01
2030	58.38	58.48	58.37	57.33	57.42	57.52	57.62	57.72	57.82	57.98	59.24	59.34
2031	60.68	60.79	60.58	59.33	59.44	59.54	59.64	59.75	59.86	60.22	61.57	61.68
2032	62.84	62.96	62.73	61.59	61.70	61.82	61.93	62.05	62.17	62.64	64.05	64.17
2033	65.86	65.99	66.03	64.83	64.95	65.08	65.20	65.33	65.46	65.82	68.07	68.20
2034	69.86	70.00	70.14	68.86	69.00	69.14	69.28	69.43	69.58	70.34	73.32	73.92
2035	75.49	75.66	75.81	74.40	74.57	74.75	74.92	75.09	75.27	76.14	77.63	77.81
2036	79.47	79.64	78.43	76.97	77.15	77.33	77.51	77.70	77.89	78.93	80.75	80.94
2037	82.93	83.14	82.18	80.64	80.84	81.04	81.23	81.43	81.64	82.97	85.00	85.21
2038	87.18	87.41	86.53	84.90	85.11	85.33	85.55	85.77	85.99	87.13	89.20	89.43
2039	91.50	91.73	89.28	87.60	87.82	88.05	88.28	88.51	88.75	89.97	92.08	92.33
2040	95.48	94.47	93.00	91.26	91.49	91.73	91.97	92.21	92.45	93.37	94.96	95.21
2041	97.47	96.43	94.93	93.16	93.40	93.64	93.88	94.13	94.38	95.32	96.94	97.19
2042	99.48	98.43	96.90	95.09	95.33	95.58	95.83	96.08	96.33	97.29	98.95	99.21
2043	101.54	100.47	98.91	97.06	97.31	97.56	97.81	98.07	98.33	99.31	101.00	101.26
2044	103.52	102.42	100.82	98.94	99.19	99.45	99.71	99.97	100.24	101.23	102.96	103.23

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	43.55	43.63	43.70	42.98	43.05	43.13	43.20	43.28	43.36	43.44	44.46	44.54
2026	46.88	46.98	47.07	46.17	46.26	46.35	46.44	46.54	46.63	46.82	47.89	47.98
2027	49.06	49.17	48.92	47.93	48.02	47.90	47.99	48.09	48.19	48.29	45.98	46.06
2028	46.99	46.19	46.17	45.24	45.32	45.40	45.47	45.55	45.63	45.71	46.82	46.91
2029	47.97	48.06	47.35	46.40	46.48	46.56	46.64	46.72	46.81	46.92	48.03	48.12
2030	49.21	49.30	49.29	48.30	48.38	48.47	48.56	48.65	48.74	48.83	50.03	50.12
2031	51.27	51.37	51.46	50.40	50.49	50.59	50.69	50.79	50.89	51.01	52.39	52.49
2032	53.51	53.62	53.72	52.63	52.73	52.84	52.95	53.06	53.17	53.30	54.64	54.75
2033	56.19	56.31	55.15	54.04	54.14	54.26	54.37	54.48	54.59	54.75	56.07	56.19
2034	57.54	57.67	56.29	55.15	55.26	55.38	55.49	55.60	55.72	55.86	57.25	57.37
2035	58.58	58.71	58.11	56.86	56.98	57.10	57.21	57.33	57.46	57.73	59.02	59.14
2036	60.37	60.50	59.31	58.11	58.23	58.35	58.47	58.60	58.72	59.02	60.33	60.45
2037	61.98	62.11	62.04	60.84	60.97	61.10	61.62	61.79	61.93	63.53	65.66	65.81
2038	67.37	67.53	65.82	64.49	64.63	64.78	64.93	65.08	65.24	66.99	69.27	69.44
2039	71.12	71.30	71.16	69.71	69.88	70.05	70.22	70.40	70.58	71.94	73.76	73.95
2040	76.70	76.90	75.63	74.11	74.29	74.48	74.67	74.87	75.06	76.13	78.03	78.23
2041	78.28	78.49	77.20	75.64	75.83	76.03	76.22	76.42	76.62	77.70	79.64	79.85
2042	79.89	80.10	78.78	77.19	77.38	77.58	77.78	77.98	78.18	79.30	81.27	81.49
2043	81.53	81.74	80.39	78.77	78.97	79.17	79.37	79.58	79.79	80.92	82.94	83.16
2044	83.08	83.30	81.92	80.27	80.47	80.68	80.88	81.09	81.31	82.46	84.52	84.74
2045	85.02	85.24	83.84	82.15	82.36	82.57	82.78	82.99	83.21	84.39	86.49	86.72

**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
2019	37.67	33.34	24.17	20.09	14.74	16.77	28.75	35.89	31.56	26.20	26.97	33.34
2020	34.59	29.73	23.75	15.03	12.98	13.43	25.93	32.27	30.63	26.02	26.58	30.11
2021	17.16	16.80	15.80	14.18	14.00	14.25	14.51	14.61	14.59	14.75	16.48	17.63
2022	18.62	18.26	17.64	15.25	15.10	15.29	15.50	15.57	15.52	15.69	17.43	18.43
2023	19.40	19.07	18.51	16.96	16.88	17.12	17.37	17.50	17.54	17.74	18.56	19.56
2024	19.33	19.39	19.45	18.93	19.02	19.08	19.15	19.21	19.28	19.35	20.33	20.40
2025	21.03	21.10	21.16	20.29	20.35	20.37	20.44	20.51	20.58	20.65	21.56	21.63
2026	22.17	21.94	21.97	21.10	21.17	21.24	21.31	21.39	21.47	21.54	22.61	22.69
2027	23.23	23.22	22.39	21.47	21.54	21.45	21.52	21.60	21.68	21.84	22.77	22.84
2028	23.36	22.82	22.59	21.65	21.72	21.80	21.88	21.95	22.03	22.14	23.22	23.30
2029	23.93	24.01	24.06	23.11	23.19	23.28	24.39	24.48	24.57	24.82	25.97	26.06
2030	26.81	26.91	26.81	25.76	25.86	25.96	26.05	26.15	26.25	26.42	27.67	27.78
2031	28.48	28.59	28.38	27.14	27.24	27.34	27.45	27.55	27.66	28.02	29.37	29.48
2032	30.21	30.33	30.10	28.96	29.07	29.19	29.30	29.42	29.53	30.01	31.42	31.54
2033	32.36	32.49	32.53	31.33	31.46	31.58	31.71	31.84	31.97	32.32	34.57	34.71
2034	35.58	35.73	35.86	34.58	34.72	34.87	35.01	35.16	35.31	36.06	39.05	39.65
2035	40.64	40.82	40.96	39.55	39.72	39.90	40.07	40.24	40.42	41.29	42.78	42.96
2036	44.04	44.21	43.00	41.54	41.72	41.90	42.08	42.27	42.46	43.49	45.32	45.51
2037	46.68	46.88	45.92	44.39	44.58	44.78	44.98	45.18	45.38	46.72	48.74	48.95
2038	50.20	50.43	49.55	47.92	48.13	48.35	48.57	48.79	49.01	50.15	52.22	52.45
2039	53.78	54.01	51.56	49.88	50.11	50.34	50.56	50.79	51.03	52.25	54.37	54.61
2040	57.01	55.99	54.52	52.79	53.02	53.26	53.49	53.74	53.98	54.90	56.49	56.74
2041	58.22	57.19	55.69	53.92	54.16	54.40	54.64	54.89	55.14	56.08	57.70	57.95
2042	59.46	58.40	56.87	55.07	55.31	55.56	55.80	56.05	56.31	57.27	58.92	59.18
2043	60.72	59.64	58.08	56.24	56.48	56.74	56.99	57.25	57.50	58.48	60.17	60.44
2044	62.01	60.91	59.31	57.44	57.69	57.95	58.20	58.46	58.73	59.73	61.45	61.72

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	18.88	18.96	19.02	18.30	18.37	18.45	18.53	18.61	18.68	18.76	19.78	19.86
2026	21.70	21.80	21.88	20.99	21.08	21.17	21.26	21.35	21.45	21.64	22.70	22.80
2027	23.36	23.47	23.22	22.23	22.32	22.20	22.30	22.39	22.49	22.59	20.28	20.36
2028	20.76	19.96	19.95	19.02	19.10	19.17	19.25	19.33	19.41	19.49	20.60	20.68
2029	21.21	21.29	20.59	19.63	19.71	19.80	19.88	19.96	20.05	20.16	21.27	21.35
2030	21.90	21.99	21.98	20.99	21.07	21.16	21.25	21.34	21.43	21.52	22.72	22.81
2031	23.40	23.50	23.59	22.53	22.62	22.72	22.82	22.92	23.02	23.15	24.52	24.62
2032	25.25	25.36	25.46	24.37	24.47	24.58	24.69	24.80	24.91	25.04	26.38	26.49
2033	27.17	27.29	26.13	25.01	25.12	25.23	25.34	25.46	25.57	25.73	27.05	27.16
2034	27.83	27.95	26.58	25.44	25.55	25.66	25.78	25.89	26.01	26.15	27.54	27.66
2035	28.36	28.48	27.89	26.64	26.75	26.87	26.99	27.11	27.23	27.51	28.79	28.92
2036	29.62	29.75	28.57	27.36	27.48	27.61	27.73	27.85	27.98	28.28	29.58	29.71
2037	30.50	30.64	30.57	29.37	29.50	29.63	30.14	30.32	30.45	32.06	34.18	34.33
2038	35.25	35.41	33.70	32.37	32.51	32.66	32.81	32.96	33.12	34.87	37.15	37.32
2039	38.34	38.52	38.38	36.93	37.10	37.27	37.45	37.63	37.81	39.16	40.98	41.17
2040	43.25	43.45	42.18	40.66	40.84	41.03	41.22	41.42	41.61	42.68	44.58	44.78
2041	44.15	44.36	43.06	41.51	41.70	41.89	42.08	42.28	42.48	43.57	45.51	45.72
2042	45.05	45.26	43.95	42.36	42.55	42.75	42.94	43.15	43.35	44.46	46.44	46.65
2043	45.98	46.19	44.85	43.22	43.42	43.63	43.82	44.03	44.24	45.37	47.39	47.61
2044	46.92	47.14	45.76	44.11	44.31	44.52	44.72	44.93	45.15	46.30	48.36	48.58
2045	47.88	48.10	46.70	45.01	45.22	45.43	45.64	45.85	46.07	47.25	49.35	49.58

**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
2019	40.36	38.32	28.38	24.56	21.25	30.93	57.43	71.96	40.36	29.40	29.66	40.61
2020	37.84	34.63	25.89	21.46	20.73	26.36	50.48	59.73	41.67	28.68	29.14	35.20
2021	27.58	27.22	26.23	24.60	24.43	24.68	24.93	25.04	25.01	25.18	26.91	28.06
2022	29.25	28.89	28.27	25.88	25.73	25.92	26.13	26.20	26.15	26.32	28.06	29.06
2023	30.28	29.95	29.39	27.84	27.76	28.00	28.25	28.38	28.42	28.62	29.44	30.44
2024	30.35	30.41	30.47	29.95	30.04	30.10	30.17	30.23	30.30	30.36	31.35	31.41
2025	32.31	32.38	32.44	31.57	31.63	31.65	31.72	31.79	31.86	31.93	32.84	32.91
2026	33.67	33.44	33.48	32.60	32.67	32.74	32.82	32.89	32.97	33.05	34.11	34.19
2027	34.96	34.95	34.12	33.20	33.27	33.18	33.26	33.33	33.41	33.57	34.50	34.58
2028	35.33	34.79	34.56	33.62	33.69	33.77	33.85	33.92	34.00	34.11	35.19	35.27
2029	36.14	36.22	36.27	35.32	35.40	35.49	36.59	36.69	36.78	37.03	38.18	38.27
2030	39.27	39.37	39.26	38.22	38.31	38.41	38.51	38.61	38.71	38.87	40.13	40.23
2031	41.19	41.29	41.09	39.84	39.94	40.05	40.15	40.26	40.37	40.73	42.08	42.19
2032	43.08	43.20	42.97	41.83	41.94	42.06	42.17	42.29	42.41	42.88	44.29	44.41
2033	45.58	45.71	45.74	44.55	44.67	44.80	44.92	45.05	45.18	45.54	47.78	47.92
2034	49.11	49.26	49.39	48.11	48.25	48.40	48.54	48.69	48.83	49.59	52.57	53.17
2035	54.39	54.57	54.71	53.31	53.48	53.65	53.82	54.00	54.17	55.05	56.53	56.71
2036	58.01	58.19	56.97	55.51	55.69	55.88	56.06	56.24	56.43	57.47	59.29	59.49
2037	60.98	61.19	60.23	58.70	58.89	59.09	59.28	59.49	59.69	61.02	63.05	63.26
2038	64.79	65.02	64.14	62.51	62.72	62.94	63.16	63.38	63.60	64.74	66.81	67.04
2039	68.67	68.90	66.45	64.77	64.99	65.22	65.45	65.68	65.91	67.14	69.25	69.50
2040	72.19	71.17	69.70	67.97	68.20	68.44	68.67	68.92	69.16	70.08	71.67	71.92
2041	73.70	72.67	71.17	69.40	69.64	69.88	70.12	70.37	70.62	71.56	73.18	73.43
2042	75.26	74.20	72.67	70.87	71.11	71.36	71.60	71.85	72.11	73.06	74.72	74.98
2043	76.83	75.75	74.19	72.35	72.60	72.85	73.10	73.36	73.62	74.59	76.28	76.55
2044	78.38	77.28	75.69	73.81	74.06	74.32	74.57	74.84	75.10	76.10	77.82	78.09

<b>TABLE 2a</b>												
<b>Avoided Costs</b>												
<b>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	35.10	35.18	35.25	34.52	34.60	34.67	34.75	34.83	34.91	34.98	36.00	36.08
2026	38.25	38.35	38.44	37.54	37.63	37.72	37.82	37.91	38.00	38.19	39.26	39.35
2027	40.26	40.36	40.11	39.12	39.22	39.09	39.19	39.29	39.38	39.48	37.18	37.26
2028	38.00	37.20	37.19	36.26	36.34	36.41	36.49	36.57	36.65	36.73	37.84	37.92
2029	38.80	38.89	38.18	37.23	37.31	37.39	37.47	37.56	37.64	37.75	38.86	38.95
2030	39.85	39.94	39.93	38.94	39.03	39.12	39.20	39.30	39.39	39.48	40.67	40.77
2031	41.72	41.82	41.91	40.85	40.94	41.04	41.14	41.24	41.34	41.47	42.84	42.94
2032	43.82	43.93	44.03	42.94	43.05	43.16	43.26	43.37	43.49	43.62	44.95	45.07
2033	46.25	46.37	45.21	44.09	44.20	44.31	44.42	44.54	44.65	44.81	46.13	46.24
2034	47.36	47.49	46.11	44.98	45.09	45.20	45.31	45.42	45.54	45.68	47.08	47.19
2035	48.22	48.35	47.76	46.50	46.62	46.74	46.86	46.98	47.10	47.38	48.66	48.79
2036	49.83	49.96	48.78	47.57	47.69	47.82	47.94	48.06	48.19	48.49	49.79	49.92
2037	51.20	51.33	51.26	50.06	50.19	50.32	50.83	51.01	51.15	52.75	54.87	55.03
2038	56.37	56.53	54.82	53.48	53.63	53.78	53.93	54.08	54.23	55.99	58.27	58.44
2039	59.89	60.07	59.93	58.47	58.65	58.82	58.99	59.17	59.35	60.71	62.53	62.72
2040	65.24	65.44	64.17	62.65	62.83	63.02	63.21	63.41	63.60	64.67	66.57	66.77
2041	66.59	66.80	65.50	63.95	64.14	64.33	64.52	64.72	64.92	66.01	67.95	68.16
2042	67.95	68.16	66.84	65.26	65.45	65.65	65.84	66.05	66.25	67.36	69.34	69.55
2043	69.35	69.56	68.21	66.59	66.79	66.99	67.19	67.40	67.61	68.74	70.76	70.98
2044	70.69	70.91	69.53	67.88	68.08	68.29	68.49	68.70	68.91	70.07	72.13	72.35
2045	72.30	72.52	71.12	69.43	69.63	69.85	70.05	70.27	70.49	71.67	73.77	73.99



## 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
2019	36.79	32.46	23.29	19.21	13.86	15.89	27.87	35.01	30.68	25.32	26.09	32.46
2020	33.69	28.83	22.85	14.13	12.08	12.53	25.03	31.37	29.73	25.12	25.68	29.21
2021	16.24	15.88	14.88	13.26	13.08	13.33	13.59	13.69	13.67	13.83	15.56	16.71
2022	17.68	17.32	16.70	14.31	14.16	14.35	14.56	14.63	14.58	14.75	16.49	17.49
2023	18.44	18.11	17.55	16.00	15.92	16.16	16.41	16.54	16.58	16.78	17.60	18.60
2024	18.35	18.41	18.47	17.95	18.04	18.10	18.17	18.23	18.30	18.37	19.35	19.42
2025	20.03	20.10	20.16	19.29	19.35	19.37	19.44	19.51	19.58	19.65	20.56	20.63
2026	21.15	20.92	20.95	20.08	20.15	20.22	20.29	20.37	20.45	20.52	21.59	21.67
2027	22.19	22.18	21.35	20.43	20.50	20.41	20.48	20.56	20.64	20.80	21.73	21.80
2028	22.30	21.76	21.53	20.59	20.66	20.74	20.82	20.89	20.97	21.08	22.16	22.24
2029	22.85	22.93	22.98	22.03	22.11	22.20	23.31	23.40	23.49	23.74	24.89	24.98
2030	25.71	25.81	25.71	24.66	24.76	24.86	24.95	25.05	25.15	25.32	26.57	26.68
2031	27.36	27.47	27.26	26.02	26.12	26.22	26.33	26.43	26.54	26.90	28.25	28.36
2032	29.07	29.19	28.96	27.82	27.93	28.05	28.16	28.28	28.39	28.87	30.28	30.40
2033	31.19	31.32	31.36	30.16	30.29	30.41	30.54	30.67	30.80	31.15	33.40	33.54
2034	34.39	34.54	34.67	33.39	33.53	33.68	33.82	33.97	34.12	34.87	37.86	38.46
2035	39.43	39.61	39.75	38.34	38.51	38.69	38.86	39.03	39.21	40.08	41.57	41.75
2036	42.80	42.97	41.76	40.30	40.48	40.66	40.84	41.03	41.22	42.25	44.08	44.27
2037	45.42	45.62	44.66	43.13	43.32	43.52	43.72	43.92	44.12	45.46	47.48	47.69
2038	48.91	49.14	48.26	46.63	46.84	47.06	47.28	47.50	47.72	48.86	50.93	51.16
2039	52.47	52.70	50.25	48.57	48.80	49.03	49.25	49.48	49.72	50.94	53.06	53.30
2040	55.67	54.65	53.18	51.45	51.68	51.92	52.15	52.40	52.64	53.56	55.15	55.40
2041	56.85	55.82	54.32	52.55	52.79	53.03	53.27	53.52	53.77	54.71	56.33	56.58
2042	58.07	57.01	55.48	53.68	53.92	54.17	54.41	54.66	54.92	55.88	57.53	57.79
2043	59.30	58.22	56.66	54.82	55.06	55.32	55.57	55.83	56.08	57.06	58.75	59.02
2044	60.56	59.46	57.86	55.99	56.24	56.50	56.75	57.01	57.28	58.28	60.00	60.27

<b>TABLE 2b</b>												
<b>Avoided Costs</b>												
<b>Fixed Price Option for Wind QF</b>												
<b>Off-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	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	18.52	18.60	18.66	17.94	18.01	18.09	18.17	18.25	18.32	18.40	19.42	19.50
2026	21.33	21.43	21.52	20.62	20.71	20.80	20.89	20.99	21.08	21.27	22.34	22.43
2027	22.99	23.09	22.85	21.85	21.95	21.83	21.92	22.02	22.11	22.21	19.91	19.99
2028	20.38	19.58	19.57	18.64	18.71	18.79	18.86	18.95	19.03	19.11	20.22	20.30
2029	20.82	20.90	20.20	19.24	19.32	19.41	19.49	19.57	19.66	19.77	20.88	20.96
2030	21.50	21.59	21.58	20.59	20.67	20.76	20.85	20.94	21.04	21.13	22.32	22.42
2031	22.99	23.09	23.18	22.12	22.22	22.32	22.41	22.51	22.61	22.74	24.11	24.21
2032	24.83	24.94	25.04	23.95	24.06	24.17	24.27	24.38	24.50	24.63	25.96	26.08
2033	26.74	26.86	25.71	24.59	24.70	24.81	24.92	25.03	25.15	25.30	26.62	26.74
2034	27.40	27.52	26.15	25.01	25.12	25.23	25.34	25.46	25.57	25.72	27.11	27.23
2035	27.91	28.04	27.45	26.19	26.31	26.43	26.55	26.67	26.79	27.07	28.35	28.48
2036	29.17	29.30	28.12	26.91	27.03	27.16	27.28	27.40	27.53	27.83	29.13	29.26
2037	30.04	30.18	30.11	28.91	29.04	29.17	29.68	29.86	30.00	31.60	33.72	33.88
2038	34.78	34.95	33.23	31.90	32.04	32.19	32.34	32.49	32.65	34.40	36.68	36.85
2039	37.86	38.04	37.90	36.45	36.62	36.80	36.97	37.15	37.33	38.68	40.50	40.69
2040	42.76	42.96	41.69	40.17	40.35	40.55	40.73	40.93	41.12	42.19	44.09	44.29
2041	43.65	43.86	42.56	41.01	41.20	41.39	41.58	41.78	41.98	43.07	45.01	45.22
2042	44.55	44.76	43.44	41.85	42.04	42.24	42.44	42.64	42.84	43.95	45.93	46.14
2043	45.46	45.67	44.33	42.71	42.90	43.11	43.31	43.51	43.72	44.85	46.87	47.09
2044	46.39	46.61	45.23	43.58	43.78	43.99	44.19	44.40	44.62	45.77	47.83	48.05
2045	47.34	47.56	46.16	44.47	44.68	44.89	45.10	45.31	45.53	46.71	48.81	49.04

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

<b>TABLE 3a</b>												
<b>Avoided Costs</b>												
<b>Fixed Price Option for Solar 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>
2019	41.24	39.20	29.26	25.44	22.13	31.81	58.31	72.84	41.24	30.28	30.54	41.49
2020	38.74	35.53	26.79	22.36	21.63	27.26	51.38	60.63	42.57	29.58	30.04	36.10
2021	24.67	24.31	23.32	21.69	21.52	21.77	22.02	22.13	22.10	22.27	24.00	25.15
2022	26.29	25.92	25.30	22.91	22.76	22.95	23.16	23.24	23.18	23.35	25.10	26.10
2023	27.24	26.92	26.36	24.80	24.72	24.96	25.21	25.34	25.38	25.58	26.40	27.40
2024	27.27	27.34	27.40	26.88	26.97	27.03	27.09	27.16	27.23	27.29	28.28	28.34
2025	29.16	29.23	29.30	28.42	28.49	28.50	28.57	28.64	28.71	28.78	29.69	29.77
2026	30.46	30.23	30.27	29.39	29.46	29.54	29.61	29.68	29.76	29.84	30.90	30.98
2027	31.69	31.68	30.85	29.93	30.00	29.91	29.98	30.06	30.14	30.30	31.23	31.30
2028	31.99	31.45	31.22	30.28	30.35	30.43	30.51	30.58	30.66	30.77	31.85	31.93
2029	32.73	32.82	32.86	31.91	32.00	32.08	33.19	33.28	33.37	33.62	34.77	34.86
2030	35.79	35.89	35.79	34.74	34.84	34.93	35.03	35.13	35.23	35.40	36.65	36.75
2031	37.64	37.75	37.54	36.30	36.40	36.50	36.60	36.71	36.82	37.18	38.53	38.64
2032	39.49	39.61	39.38	38.24	38.35	38.47	38.58	38.70	38.82	39.29	40.70	40.82
2033	41.89	42.02	42.06	40.86	40.98	41.11	41.24	41.36	41.49	41.85	44.10	44.23
2034	45.33	45.48	45.61	44.33	44.47	44.62	44.76	44.91	45.05	45.81	48.79	49.39
2035	50.55	50.73	50.87	49.47	49.63	49.81	49.98	50.15	50.33	51.21	52.69	52.87
2036	54.11	54.29	53.08	51.62	51.79	51.98	52.16	52.35	52.53	53.57	55.39	55.59
2037	56.99	57.19	56.23	54.70	54.89	55.09	55.29	55.49	55.69	57.03	59.05	59.27
2038	60.72	60.94	60.06	58.44	58.65	58.87	59.08	59.31	59.53	60.67	62.74	62.97
2039	64.51	64.74	62.29	60.61	60.83	61.06	61.29	61.52	61.76	62.98	65.09	65.34
2040	67.95	66.94	65.47	63.73	63.96	64.20	64.44	64.68	64.92	65.84	67.43	67.68
2041	69.39	68.35	66.85	65.08	65.32	65.56	65.80	66.05	66.30	67.24	68.86	69.11
2042	70.84	69.79	68.26	66.45	66.69	66.94	67.19	67.44	67.69	68.65	70.31	70.56
2043	72.33	71.26	69.69	67.85	68.10	68.35	68.60	68.86	69.12	70.09	71.78	72.05
2044	73.81	72.72	71.12	69.24	69.49	69.75	70.00	70.27	70.53	71.53	73.26	73.52

<b>TABLE 3a</b>												
<b>Avoided Costs</b>												
<b>Fixed Price Option for Solar 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	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	27.30	27.38	27.45	26.73	26.80	26.88	26.95	27.03	27.11	27.19	28.21	28.29
2026	30.30	30.40	30.48	29.59	29.68	29.77	29.86	29.95	30.05	30.24	31.30	31.40
2027	32.14	32.24	32.00	31.00	31.10	30.98	31.07	31.17	31.27	31.36	29.06	29.14
2028	29.72	28.92	28.90	27.97	28.05	28.13	28.20	28.28	28.37	28.45	29.55	29.64
2029	30.34	30.43	29.73	28.77	28.85	28.94	29.02	29.10	29.19	29.30	30.41	30.49
2030	31.22	31.31	31.30	30.31	30.40	30.49	30.58	30.67	30.76	30.85	32.05	32.14
2031	32.92	33.02	33.11	32.05	32.14	32.24	32.34	32.44	32.54	32.66	34.04	34.14
2032	34.89	35.00	35.10	34.01	34.11	34.22	34.33	34.44	34.55	34.68	36.02	36.13
2033	37.08	37.20	36.04	34.92	35.03	35.14	35.25	35.37	35.48	35.64	36.96	37.07
2034	37.98	38.11	36.73	35.59	35.70	35.82	35.93	36.04	36.16	36.30	37.69	37.81
2035	38.68	38.80	38.21	36.96	37.07	37.19	37.31	37.43	37.55	37.83	39.12	39.24
2036	40.12	40.25	39.06	37.86	37.98	38.10	38.22	38.35	38.47	38.77	40.07	40.20
2037	41.25	41.39	41.32	40.11	40.24	40.38	40.89	41.06	41.20	42.80	44.93	45.08
2038	46.22	46.38	44.67	43.34	43.48	43.63	43.78	43.93	44.09	45.84	48.12	48.29
2039	49.53	49.71	49.57	48.12	48.29	48.47	48.64	48.82	49.00	50.35	52.17	52.36
2040	54.67	54.87	53.61	52.08	52.27	52.46	52.64	52.84	53.03	54.10	56.00	56.20
2041	55.81	56.01	54.72	53.16	53.35	53.55	53.74	53.94	54.14	55.23	57.16	57.37
2042	56.95	57.16	55.84	54.25	54.45	54.65	54.84	55.04	55.25	56.36	58.34	58.55
2043	58.12	58.33	56.98	55.36	55.56	55.76	55.96	56.17	56.38	57.51	59.53	59.75
2044	59.26	59.48	58.11	56.45	56.65	56.86	57.06	57.27	57.49	58.64	60.70	60.92
2045	60.57	60.79	59.39	57.70	57.91	58.12	58.33	58.54	58.76	59.94	62.04	62.27

## 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
2019	37.67	33.34	24.17	20.09	14.74	16.77	28.75	35.89	31.56	26.20	26.97	33.34
2020	34.59	29.73	23.75	15.03	12.98	13.43	25.93	32.27	30.63	26.02	26.58	30.11
2021	17.16	16.80	15.80	14.18	14.00	14.25	14.51	14.61	14.59	14.75	16.48	17.63
2022	18.62	18.26	17.64	15.25	15.10	15.29	15.50	15.57	15.52	15.69	17.43	18.43
2023	19.40	19.07	18.51	16.96	16.88	17.12	17.37	17.50	17.54	17.74	18.56	19.56
2024	19.33	19.39	19.45	18.93	19.02	19.08	19.15	19.21	19.28	19.35	20.33	20.40
2025	21.03	21.10	21.16	20.29	20.35	20.37	20.44	20.51	20.58	20.65	21.56	21.63
2026	22.17	21.94	21.97	21.10	21.17	21.24	21.31	21.39	21.47	21.54	22.61	22.69
2027	23.23	23.22	22.39	21.47	21.54	21.45	21.52	21.60	21.68	21.84	22.77	22.84
2028	23.36	22.82	22.59	21.65	21.72	21.80	21.88	21.95	22.03	22.14	23.22	23.30
2029	23.93	24.01	24.06	23.11	23.19	23.28	24.39	24.48	24.57	24.82	25.97	26.06
2030	26.81	26.91	26.81	25.76	25.86	25.96	26.05	26.15	26.25	26.42	27.67	27.78
2031	28.48	28.59	28.38	27.14	27.24	27.34	27.45	27.55	27.66	28.02	29.37	29.48
2032	30.21	30.33	30.10	28.96	29.07	29.19	29.30	29.42	29.53	30.01	31.42	31.54
2033	32.36	32.49	32.53	31.33	31.46	31.58	31.71	31.84	31.97	32.32	34.57	34.71
2034	35.58	35.73	35.86	34.58	34.72	34.87	35.01	35.16	35.31	36.06	39.05	39.65
2035	40.64	40.82	40.96	39.55	39.72	39.90	40.07	40.24	40.42	41.29	42.78	42.96
2036	44.04	44.21	43.00	41.54	41.72	41.90	42.08	42.27	42.46	43.49	45.32	45.51
2037	46.68	46.88	45.92	44.39	44.58	44.78	44.98	45.18	45.38	46.72	48.74	48.95
2038	50.20	50.43	49.55	47.92	48.13	48.35	48.57	48.79	49.01	50.15	52.22	52.45
2039	53.78	54.01	51.56	49.88	50.11	50.34	50.56	50.79	51.03	52.25	54.37	54.61
2040	57.01	55.99	54.52	52.79	53.02	53.26	53.49	53.74	53.98	54.90	56.49	56.74
2041	58.22	57.19	55.69	53.92	54.16	54.40	54.64	54.89	55.14	56.08	57.70	57.95
2042	59.46	58.40	56.87	55.07	55.31	55.56	55.80	56.05	56.31	57.27	58.92	59.18
2043	60.72	59.64	58.08	56.24	56.48	56.74	56.99	57.25	57.50	58.48	60.17	60.44
2044	62.01	60.91	59.31	57.44	57.69	57.95	58.20	58.46	58.73	59.73	61.45	61.72

<b>TABLE 3b</b>												
<b>Avoided Costs</b>												
<b>Fixed Price Option for Solar QF</b>												
<b>Off-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	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	17.38	17.46	17.52	16.80	16.87	16.95	17.03	17.11	17.18	17.26	18.28	18.36
2026	20.17	20.27	20.35	19.46	19.55	19.64	19.73	19.82	19.92	20.11	21.17	21.27
2027	21.80	21.91	21.66	20.67	20.76	20.64	20.73	20.83	20.93	21.03	18.72	18.80
2028	19.17	18.37	18.35	17.42	17.50	17.58	17.65	17.73	17.82	17.90	19.01	19.09
2029	19.58	19.67	18.96	18.01	18.09	18.17	18.25	18.34	18.42	18.53	19.64	19.73
2030	20.24	20.33	20.32	19.33	19.41	19.50	19.59	19.68	19.77	19.86	21.06	21.15
2031	21.71	21.81	21.90	20.83	20.93	21.03	21.12	21.22	21.32	21.45	22.82	22.93
2032	23.52	23.63	23.73	22.64	22.75	22.85	22.96	23.07	23.18	23.31	24.65	24.76
2033	25.40	25.52	24.36	23.25	23.36	23.47	23.58	23.69	23.81	23.96	25.28	25.40
2034	26.03	26.15	24.78	23.64	23.75	23.86	23.98	24.09	24.21	24.35	25.74	25.86
2035	26.52	26.64	26.05	24.80	24.91	25.03	25.15	25.27	25.39	25.67	26.96	27.08
2036	27.75	27.88	26.69	25.49	25.61	25.73	25.85	25.98	26.10	26.40	27.71	27.83
2037	28.59	28.73	28.65	27.45	27.58	27.72	28.23	28.40	28.54	30.14	32.27	32.42
2038	33.30	33.46	31.75	30.41	30.56	30.71	30.86	31.01	31.16	32.92	35.20	35.37
2039	36.35	36.53	36.39	34.93	35.10	35.28	35.45	35.63	35.81	37.17	38.99	39.18
2040	41.21	41.42	40.15	38.62	38.81	39.00	39.19	39.38	39.58	40.64	42.55	42.75
2041	42.08	42.28	40.99	39.43	39.62	39.82	40.01	40.21	40.41	41.49	43.43	43.64
2042	42.94	43.15	41.83	40.24	40.43	40.63	40.83	41.03	41.23	42.34	44.32	44.53
2043	43.82	44.03	42.68	41.06	41.26	41.46	41.66	41.87	42.08	43.21	45.23	45.45
2044	44.71	44.93	43.56	41.91	42.11	42.31	42.52	42.73	42.94	44.10	46.16	46.38
2045	45.63	45.85	44.45	42.76	42.97	43.18	43.39	43.60	43.82	45.00	47.10	47.33

**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 ~~48.59~~28.57%. The capacity contribution for Solar QF resources (Tables 6a and 6b) is assumed to be 15.~~33~~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.

~~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.~~



**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
2019	41.24	39.20	29.26	25.44	22.13	31.81	58.31	72.84	41.24	30.28	30.54	41.49
2020	38.74	35.53	26.79	22.36	21.63	27.26	51.38	60.63	42.57	29.58	30.04	36.10
2021	40.91	38.88	29.06	25.25	22.00	31.53	57.66	71.95	40.89	30.07	30.33	40.86
2022	41.56	39.50	29.54	25.68	22.39	32.05	58.55	73.05	41.54	30.57	30.83	41.51
2023	45.83	43.54	32.48	28.20	24.54	35.27	64.68	80.76	45.80	33.63	33.91	45.76
2024	49.08	46.62	34.76	30.16	26.24	37.75	69.31	86.57	49.05	35.99	36.30	49.01
2025	94.32	90.05	86.22	74.65	68.71	53.60	79.32	86.27	92.22	92.28	93.51	97.39
2026	96.21	91.85	87.94	76.15	70.08	54.67	80.90	88.00	94.07	94.12	95.38	99.34
2027	98.13	93.68	89.70	77.67	71.48	55.76	82.52	89.76	95.95	96.00	97.29	101.32
2028	99.90	95.37	91.32	79.09	72.80	56.81	84.02	91.38	97.68	97.74	99.04	103.15
2029	102.09	97.46	93.32	80.80	74.37	58.01	85.85	93.38	99.82	99.88	101.22	105.41
2030	104.13	99.41	95.18	82.42	75.86	59.17	87.57	95.25	101.82	101.87	103.24	107.52
2031	106.22	101.40	97.08	84.07	77.37	60.36	89.32	97.15	103.85	103.91	105.30	109.67
2032	107.92	103.02	98.63	85.39	78.58	61.28	90.73	98.70	105.52	105.58	106.99	111.43
2033	110.50	105.49	101.00	87.46	80.50	62.79	92.92	101.07	108.04	108.10	109.55	114.09
2034	112.82	107.71	103.13	89.32	82.21	64.16	94.89	103.20	110.31	110.37	111.85	116.48
2035	114.96	109.75	105.08	90.99	83.74	65.33	96.67	105.15	112.40	112.47	113.97	118.70
2036	116.93	111.62	106.87	92.54	85.17	66.44	98.32	106.94	114.32	114.39	115.92	120.73
2037	119.61	114.18	109.32	94.66	87.13	67.96	100.58	109.40	116.94	117.01	118.58	123.49
2038	122.00	116.46	111.51	96.55	88.87	69.32	102.59	111.58	119.28	119.35	120.95	125.96
2039	124.43	118.79	113.74	98.48	90.64	70.71	104.64	113.81	121.66	121.73	123.36	128.48
2040	126.68	120.94	115.80	100.28	92.31	72.03	106.54	115.88	123.86	123.93	125.59	130.79
2041	129.46	123.58	118.33	102.46	94.30	73.56	108.86	118.41	126.57	126.64	128.34	133.66
2042	132.04	126.05	120.69	104.51	96.19	75.03	111.04	120.77	129.10	129.18	130.91	136.34
2043	134.68	128.57	123.10	106.60	98.11	76.53	113.26	123.19	131.68	131.76	133.52	139.06
2044	136.98	130.76	125.20	108.41	99.78	77.83	115.18	125.29	133.93	134.00	135.80	141.43

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	90.20	87.33	80.53	71.18	71.16	67.46	78.34	87.14	86.36	84.64	90.62	91.73
2031	92.05	89.12	82.18	72.64	72.62	68.84	79.95	88.92	88.13	86.37	92.48	93.61
2032	93.57	90.59	83.53	73.82	73.80	69.96	81.26	90.39	89.59	87.80	94.01	95.16
2033	95.86	92.80	85.58	75.64	75.62	71.69	83.25	92.60	91.78	89.95	96.31	97.48
2034	97.91	94.80	87.43	77.29	77.27	73.26	85.06	94.60	93.75	91.88	98.37	99.57
2035	99.82	96.65	89.13	78.78	78.75	74.66	86.70	96.44	95.58	93.67	100.29	101.52
2036	101.58	98.34	90.69	80.16	80.13	75.97	88.22	98.13	97.26	95.31	102.05	103.30
2037	103.95	100.65	92.82	82.04	82.01	77.75	90.29	100.43	99.54	97.55	104.44	105.72
2038	106.08	102.71	94.72	83.72	83.69	79.34	92.14	102.49	101.57	99.54	106.58	107.88
2039	108.26	104.81	96.66	85.43	85.41	80.97	94.03	104.59	103.66	101.58	108.77	110.09
2040	110.27	106.76	98.46	87.04	87.01	82.49	95.78	106.53	105.58	103.47	110.78	112.13
2041	112.74	109.15	100.66	88.97	88.94	84.32	97.92	108.92	107.95	105.79	113.27	114.65
2042	115.05	111.39	102.72	90.79	90.77	86.05	99.92	111.15	110.16	107.95	115.59	117.00
2043	117.41	113.67	104.83	92.65	92.63	87.81	101.97	113.42	112.41	110.17	117.96	119.40
2044	119.47	115.66	106.67	94.27	94.25	89.35	103.76	115.41	114.39	112.10	120.03	121.49
2045	122.38	118.49	109.28	96.61	96.58	91.56	106.31	118.24	117.19	114.85	122.96	124.46

## 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
2019	37.67	33.34	24.17	20.09	14.74	16.77	28.75	35.89	31.56	26.20	26.97	33.34
2020	34.59	29.73	23.75	15.03	12.98	13.43	25.93	32.27	30.63	26.02	26.58	30.11
2021	37.66	33.33	24.21	20.10	14.80	16.81	28.76	35.86	31.57	26.26	27.02	37.62
2022	39.53	34.99	25.41	21.09	15.52	17.64	30.18	37.65	33.14	27.56	28.36	39.49
2023	42.17	37.30	27.04	22.40	16.44	18.71	32.15	40.15	35.32	29.34	30.20	42.13
2024	44.93	39.73	28.78	23.83	17.46	19.88	34.23	42.77	37.62	31.24	32.15	44.88
2025	58.19	53.34	52.60	43.71	37.09	21.11	44.24	52.02	56.40	57.61	60.55	62.65
2026	59.35	54.40	53.65	44.59	37.83	21.53	45.13	53.06	57.52	58.76	61.76	63.90
2027	60.53	55.49	54.72	45.48	38.59	21.96	46.03	54.12	58.67	59.94	62.99	65.18
2028	61.58	56.45	55.67	46.26	39.25	22.34	46.82	55.05	59.68	60.97	64.07	66.30
2029	62.98	57.73	56.93	47.31	40.14	22.85	47.89	56.31	61.04	62.36	65.53	67.81
2030	64.24	58.89	58.07	48.26	40.95	23.31	48.85	57.43	62.26	63.60	66.84	69.17
2031	65.52	60.06	59.23	49.22	41.76	23.77	49.82	58.58	63.51	64.87	68.18	70.55
2032	66.65	61.10	60.25	50.07	42.48	24.18	50.68	59.59	64.60	65.99	69.35	71.76
2033	68.17	62.49	61.62	51.21	43.45	24.73	51.83	60.95	66.07	67.49	70.93	73.40
2034	69.53	63.74	62.85	52.23	44.32	25.23	52.87	62.16	67.39	68.84	72.35	74.87
2035	70.92	65.01	64.11	53.28	45.20	25.73	53.92	63.41	68.74	70.22	73.80	76.36
2036	72.14	66.13	65.21	54.19	45.98	26.17	54.85	64.50	69.92	71.42	75.06	77.67
2037	73.78	67.63	66.70	55.43	47.03	26.77	56.10	65.97	71.51	73.05	76.77	79.44
2038	75.25	68.99	68.03	56.54	47.97	27.30	57.22	67.28	72.94	74.51	78.31	81.03
2039	76.76	70.36	69.39	57.66	48.93	27.85	58.37	68.63	74.40	76.00	79.87	82.65
2040	78.08	71.57	70.59	58.66	49.77	28.33	59.37	69.81	75.68	77.31	81.25	84.07
2041	79.86	73.20	72.19	59.99	50.90	28.97	60.72	71.40	77.40	79.07	83.10	85.99
2042	81.45	74.67	73.64	61.19	51.92	29.55	61.94	72.83	78.95	80.65	84.76	87.71
2043	83.08	76.16	75.11	62.41	52.96	30.14	63.17	74.28	80.53	82.26	86.45	89.46
2044	84.51	77.47	76.40	63.49	53.87	30.66	64.26	75.56	81.91	83.67	87.94	91.00

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	58.11	56.88	51.86	41.89	41.08	38.46	49.67	57.72	56.70	54.00	59.83	61.89
2031	59.30	58.04	52.93	42.75	41.92	39.25	50.69	58.90	57.86	55.11	61.05	63.16
2032	60.35	59.07	53.86	43.51	42.66	39.94	51.58	59.94	58.89	56.08	62.13	64.28
2033	61.75	60.45	55.12	44.52	43.65	40.87	52.79	61.34	60.26	57.39	63.58	65.77
2034	63.02	61.69	56.25	45.43	44.55	41.71	53.87	62.59	61.49	58.56	64.88	67.12
2035	64.31	62.95	57.40	46.36	45.46	42.56	54.97	63.88	62.75	59.76	66.21	68.50
2036	65.45	64.06	58.41	47.19	46.27	43.32	55.94	65.01	63.86	60.82	67.38	69.71
2037	66.97	65.56	59.77	48.28	47.34	44.32	57.25	66.52	65.35	62.24	68.95	71.33
2038	68.34	66.90	61.00	49.27	48.31	45.23	58.42	67.88	66.69	63.51	70.37	72.79
2039	69.74	68.27	62.25	50.28	49.30	46.16	59.62	69.27	68.05	64.81	71.81	74.28
2040	70.98	69.48	63.35	51.17	50.17	46.98	60.67	70.50	69.26	65.96	73.08	75.60
2041	72.63	71.09	64.83	52.36	51.34	48.07	62.08	72.14	70.87	67.50	74.78	77.36
2042	74.12	72.55	66.15	53.44	52.39	49.05	63.36	73.62	72.32	68.88	76.31	78.94
2043	75.64	74.04	67.51	54.53	53.47	50.06	64.65	75.13	73.80	70.29	77.88	80.56
2044	76.98	75.35	68.70	55.50	54.41	50.95	65.80	76.46	75.11	71.53	79.25	81.99
2045	78.77	77.10	70.30	56.79	55.68	52.13	67.33	78.24	76.86	73.20	81.10	83.90

**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
2019	40.36	38.32	28.38	24.56	21.25	30.93	57.43	71.96	40.36	29.40	29.66	40.61
2020	37.84	34.63	25.89	21.46	20.73	26.36	50.48	59.73	41.67	28.68	29.14	35.20
2021	39.99	37.96	28.14	24.33	21.08	30.61	56.74	71.03	39.97	29.15	29.41	39.94
2022	40.62	38.56	28.60	24.74	21.45	31.11	57.61	72.11	40.60	29.63	29.89	40.57
2023	44.87	42.58	31.52	27.24	23.58	34.31	63.72	79.80	44.84	32.67	32.95	44.80
2024	48.10	45.64	33.78	29.18	25.26	36.77	68.33	85.59	48.07	35.01	35.32	48.03
2025	77.01	72.73	68.90	57.34	51.40	36.29	62.00	68.96	74.91	74.96	76.20	80.08
2026	78.55	74.18	70.28	58.49	52.42	37.01	63.24	70.34	76.41	76.46	77.72	81.68
2027	80.12	75.67	71.68	59.65	53.47	37.75	64.51	71.74	77.93	77.99	79.27	83.31
2028	81.53	77.00	72.95	60.71	54.42	38.43	65.65	73.01	79.31	79.36	80.67	84.77
2029	83.36	78.72	74.58	62.07	55.63	39.28	67.11	74.64	81.08	81.14	82.48	86.67
2030	85.02	80.30	76.07	63.31	56.74	40.06	68.46	76.14	82.70	82.76	84.13	88.41
2031	86.72	81.91	77.59	64.57	57.88	40.87	69.83	77.66	84.36	84.42	85.81	90.18
2032	88.16	83.26	78.88	65.63	58.82	41.52	70.98	78.94	85.76	85.82	87.23	91.68
2033	90.22	85.21	80.72	67.18	60.21	42.51	72.64	80.79	87.76	87.82	89.27	93.81
2034	92.07	86.96	82.38	68.57	61.47	43.41	74.14	82.45	89.56	89.63	91.10	95.74
2035	93.87	88.65	83.99	69.90	62.65	44.23	75.58	84.06	91.31	91.37	92.88	97.61
2036	95.47	90.16	85.41	71.08	63.71	44.98	76.86	85.49	92.86	92.93	94.46	99.27
2037	97.66	92.23	87.38	72.72	65.18	46.02	78.63	87.45	94.99	95.06	96.63	101.55
2038	99.60	94.07	89.12	74.16	66.48	46.93	80.20	89.19	96.89	96.96	98.55	103.57
2039	101.60	95.96	90.90	75.65	67.81	47.88	81.80	90.98	98.83	98.90	100.53	105.65
2040	103.39	97.64	92.50	76.99	69.01	48.74	83.25	92.58	100.57	100.64	102.30	107.50
2041	105.70	99.82	94.57	78.70	70.54	49.80	85.10	94.65	102.81	102.88	104.58	109.90
2042	107.82	101.83	96.46	80.28	71.96	50.80	86.81	96.55	104.87	104.95	106.68	112.11
2043	109.97	103.86	98.39	81.88	73.39	51.82	88.54	98.47	106.97	107.04	108.81	114.34
2044	111.85	105.63	100.07	83.28	74.64	52.70	90.05	100.15	108.79	108.87	110.67	116.30

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	80.84	77.97	71.18	61.82	61.80	58.10	68.98	77.78	77.01	75.28	81.27	82.37
2031	82.50	79.57	72.63	63.09	63.07	59.30	70.40	79.38	78.58	76.82	82.93	84.06
2032	83.89	80.91	73.85	64.14	64.12	60.27	71.57	80.71	79.90	78.11	84.33	85.47
2033	85.91	82.86	75.64	65.70	65.68	61.75	73.31	82.66	81.84	80.00	86.36	87.54
2034	87.74	84.62	77.25	67.11	67.09	63.08	74.88	84.42	83.58	81.70	88.20	89.39
2035	89.47	86.29	78.77	68.42	68.40	64.31	76.35	86.08	85.22	83.31	89.94	91.16
2036	91.04	87.81	80.16	69.62	69.60	65.43	77.69	87.60	86.72	84.78	91.52	92.76
2037	93.17	89.86	82.03	71.25	71.23	66.97	79.51	89.65	88.75	86.76	93.66	94.93
2038	95.08	91.70	83.71	72.71	72.69	68.34	81.13	91.48	90.57	88.54	95.58	96.88
2039	97.03	93.58	85.43	74.20	74.18	69.74	82.80	93.36	92.42	90.35	97.54	98.86
2040	98.80	95.30	87.00	75.58	75.55	71.03	84.32	95.07	94.12	92.01	99.32	100.67
2041	101.04	97.46	88.96	77.27	77.25	72.63	86.22	97.22	96.25	94.09	101.57	102.96
2042	103.11	99.45	90.79	78.86	78.83	74.11	87.99	99.21	98.22	96.02	103.66	105.06
2043	105.23	101.49	92.65	80.47	80.45	75.63	89.79	101.24	100.23	97.99	105.78	107.22
2044	107.08	103.27	94.27	81.88	81.86	76.96	91.37	103.02	102.00	99.71	107.64	109.10
2045	109.66	105.77	96.56	83.88	83.86	78.84	93.59	105.52	104.46	102.12	110.24	111.73

**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
2019	36.79	32.46	23.29	19.21	13.86	15.89	27.87	35.01	30.68	25.32	26.09	32.46
2020	33.69	28.83	22.85	14.13	12.08	12.53	25.03	31.37	29.73	25.12	25.68	29.21
2021	36.74	32.41	23.29	19.18	13.88	15.89	27.84	34.94	30.65	25.34	26.10	36.70
2022	38.59	34.05	24.47	20.15	14.58	16.70	29.24	36.71	32.20	26.62	27.42	38.55
2023	41.21	36.34	26.08	21.44	15.48	17.75	31.19	39.19	34.36	28.38	29.24	41.17
2024	43.95	38.75	27.80	22.85	16.48	18.90	33.25	41.79	36.64	30.26	31.17	43.90
2025	57.19	52.34	51.60	42.71	36.09	20.11	43.24	51.02	55.40	56.61	59.55	61.65
2026	58.33	53.38	52.63	43.57	36.81	20.51	44.11	52.04	56.50	57.74	60.74	62.88
2027	59.49	54.45	53.68	44.44	37.55	20.92	44.99	53.08	57.63	58.90	61.95	64.14
2028	60.52	55.39	54.61	45.20	38.19	21.28	45.76	53.99	58.62	59.91	63.01	65.24
2029	61.90	56.65	55.85	46.23	39.06	21.77	46.81	55.23	59.96	61.28	64.45	66.73
2030	63.14	57.79	56.97	47.16	39.85	22.21	47.75	56.33	61.16	62.50	65.74	68.07
2031	64.40	58.94	58.11	48.10	40.64	22.65	48.70	57.46	62.39	63.75	67.06	69.43
2032	65.51	59.96	59.11	48.93	41.34	23.04	49.54	58.45	63.46	64.85	68.21	70.62
2033	67.00	61.32	60.45	50.04	42.28	23.56	50.66	59.78	64.90	66.32	69.76	72.23
2034	68.34	62.55	61.66	51.04	43.13	24.04	51.68	60.97	66.20	67.65	71.16	73.68
2035	69.71	63.80	62.90	52.07	43.99	24.52	52.71	62.20	67.53	69.01	72.59	75.15
2036	70.90	64.89	63.97	52.95	44.74	24.93	53.61	63.26	68.68	70.18	73.82	76.43
2037	72.52	66.37	65.44	54.17	45.77	25.51	54.84	64.71	70.25	71.79	75.51	78.18
2038	73.96	67.70	66.74	55.25	46.68	26.01	55.93	65.99	71.65	73.22	77.02	79.74
2039	75.45	69.05	68.08	56.35	47.62	26.54	57.06	67.32	73.09	74.69	78.56	81.34
2040	76.74	70.23	69.25	57.32	48.43	26.99	58.03	68.47	74.34	75.97	79.91	82.73
2041	78.49	71.83	70.82	58.62	49.53	27.60	59.35	70.03	76.03	77.70	81.73	84.62
2042	80.06	73.28	72.25	59.80	50.53	28.16	60.55	71.44	77.56	79.26	83.37	86.32
2043	81.66	74.74	73.69	60.99	51.54	28.72	61.75	72.86	79.11	80.84	85.03	88.04
2044	83.06	76.02	74.95	62.04	52.42	29.21	62.81	74.11	80.46	82.22	86.49	89.55

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	57.71	56.48	51.47	41.50	40.68	38.06	49.27	57.32	56.30	53.60	59.43	61.49
2031	58.89	57.64	52.52	42.35	41.51	38.84	50.28	58.49	57.46	54.70	60.65	62.75
2032	59.93	58.66	53.45	43.09	42.25	39.53	51.17	59.53	58.47	55.67	61.72	63.86
2033	61.33	60.02	54.69	44.10	43.23	40.45	52.36	60.91	59.83	56.96	63.16	65.35
2034	62.59	61.25	55.81	45.00	44.12	41.28	53.44	62.16	61.06	58.13	64.45	66.69
2035	63.87	62.51	56.96	45.92	45.02	42.12	54.53	63.44	62.31	59.32	65.77	68.06
2036	65.00	63.61	57.96	46.74	45.82	42.87	55.49	64.56	63.41	60.37	66.93	69.26
2037	66.51	65.10	59.32	47.82	46.88	43.87	56.79	66.06	64.89	61.78	68.49	70.87
2038	67.87	66.43	60.53	48.80	47.84	44.76	57.95	67.41	66.22	63.04	69.90	72.32
2039	69.27	67.79	61.77	49.80	48.82	45.68	59.14	68.80	67.58	64.33	71.33	73.81
2040	70.49	68.99	62.86	50.68	49.69	46.49	60.18	70.01	68.77	65.47	72.59	75.11
2041	72.13	70.60	64.33	51.87	50.84	47.57	61.59	71.64	70.37	67.00	74.28	76.86
2042	73.61	72.04	65.65	52.93	51.89	48.55	62.85	73.11	71.81	68.37	75.80	78.44
2043	75.12	73.52	66.99	54.01	52.95	49.54	64.13	74.61	73.29	69.77	77.36	80.04
2044	76.45	74.82	68.17	54.97	53.89	50.42	65.27	75.93	74.58	71.00	78.72	81.46
2045	78.23	76.56	69.76	56.25	55.14	51.59	66.79	77.70	76.32	72.66	80.56	83.36



## 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
2019	41.24	39.20	29.26	25.44	22.13	31.81	58.31	72.84	41.24	30.28	30.54	41.49
2020	38.74	35.53	26.79	22.36	21.63	27.26	51.38	60.63	42.57	29.58	30.04	36.10
2021	40.91	38.88	29.06	25.25	22.00	31.53	57.66	71.95	40.89	30.07	30.33	40.86
2022	41.56	39.50	29.54	25.68	22.39	32.05	58.55	73.05	41.54	30.57	30.83	41.51
2023	45.83	43.54	32.48	28.20	24.54	35.27	64.68	80.76	45.80	33.63	33.91	45.76
2024	49.08	46.62	34.76	30.16	26.24	37.75	69.31	86.57	49.05	35.99	36.30	49.01
2025	73.86	69.59	65.76	54.19	48.25	33.14	58.86	65.81	71.76	71.82	73.05	76.93
2026	75.34	70.98	67.07	55.28	49.21	33.80	60.03	67.13	73.20	73.25	74.51	78.47
2027	76.85	72.39	68.41	56.38	50.20	34.48	61.23	68.47	74.66	74.72	76.00	80.04
2028	78.19	73.66	69.61	57.38	51.08	35.09	62.31	69.67	75.97	76.02	77.33	81.44
2029	79.95	75.32	71.17	58.66	52.22	35.87	63.71	71.23	77.68	77.73	79.07	83.27
2030	81.55	76.82	72.59	59.83	53.27	36.59	64.98	72.66	79.23	79.28	80.65	84.93
2031	83.18	78.36	74.04	61.03	54.33	37.32	66.28	74.11	80.81	80.87	82.26	86.63
2032	84.57	79.67	75.28	62.04	55.23	37.93	67.38	75.35	82.17	82.23	83.64	88.08
2033	86.53	81.52	77.03	63.49	56.53	38.82	68.95	77.10	84.07	84.13	85.58	90.13
2034	88.29	83.18	78.60	64.79	57.69	39.63	70.36	78.67	85.78	85.85	87.32	91.96
2035	90.03	84.81	80.14	66.05	58.81	40.39	71.74	80.21	87.47	87.53	89.04	93.76
2036	91.57	86.27	81.52	67.18	59.81	41.08	72.97	81.59	88.97	89.03	90.56	95.37
2037	93.66	88.24	83.38	68.72	61.18	42.02	74.63	83.45	91.00	91.06	92.63	97.55
2038	95.53	90.00	85.05	70.09	62.40	42.86	76.12	85.12	92.82	92.88	94.48	99.50
2039	97.44	91.80	86.74	71.49	63.65	43.72	77.65	86.82	94.67	94.74	96.37	101.49
2040	99.15	93.41	88.27	72.75	64.78	44.50	79.01	88.34	96.33	96.40	98.06	103.26
2041	101.38	95.50	90.25	74.38	66.22	45.48	80.78	90.33	98.49	98.56	100.26	105.58
2042	103.40	97.41	92.05	75.87	67.54	46.39	82.39	92.13	100.46	100.53	102.27	107.69
2043	105.47	99.36	93.89	77.38	68.89	47.32	84.04	93.97	102.47	102.54	104.31	109.85
2044	107.28	101.06	95.50	78.71	70.07	48.13	85.48	95.58	104.23	104.30	106.10	111.73

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	72.21	69.34	62.55	53.20	53.18	49.48	60.36	69.15	68.38	66.65	72.64	73.74
2031	73.69	70.76	63.83	54.29	54.27	50.49	61.59	70.57	69.78	68.02	74.13	75.25
2032	74.95	71.97	64.91	55.20	55.18	51.34	62.64	71.77	70.97	69.18	75.39	76.54
2033	76.74	73.69	66.47	56.53	56.51	52.58	64.14	73.49	72.67	70.83	77.19	78.37
2034	78.35	75.24	67.87	57.73	57.71	53.70	65.49	75.04	74.19	72.32	78.81	80.01
2035	79.92	76.74	69.22	58.87	58.85	54.76	66.80	76.53	75.68	73.77	80.39	81.61
2036	81.32	78.09	70.44	59.90	59.88	55.72	67.97	77.88	77.00	75.06	81.80	83.05
2037	83.23	79.92	72.09	61.31	61.29	57.02	69.56	79.70	78.81	76.82	83.72	84.99
2038	84.93	81.56	73.57	62.57	62.54	58.19	70.99	81.34	80.42	78.39	85.43	86.73
2039	86.67	83.23	75.07	63.85	63.82	59.38	72.44	83.00	82.07	80.00	87.18	88.51
2040	88.24	84.73	76.43	65.01	64.99	60.47	73.76	84.50	83.55	81.45	88.76	90.11
2041	90.26	86.67	78.18	66.49	66.47	61.84	75.44	86.44	85.47	83.31	90.79	92.17
2042	92.11	88.45	79.78	67.85	67.83	63.11	76.99	88.21	87.22	85.02	92.65	94.06
2043	94.00	90.26	81.42	69.24	69.22	64.40	78.56	90.01	89.01	86.76	94.55	95.99
2044	95.65	91.84	82.85	70.46	70.43	65.53	79.94	91.60	90.57	88.28	96.21	97.67
2045	97.94	94.04	84.84	72.16	72.13	67.12	81.86	93.79	92.74	90.40	98.51	100.01

**SCHEDULE 201 (Continued)**

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

<b>TABLE 6b</b>												
<b>Renewable Avoided Costs</b>												
<b>Renewable Fixed Price Option for Solar QF</b>												
<b>Off-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>
2019	37.67	33.34	24.17	20.09	14.74	16.77	28.75	35.89	31.56	26.20	26.97	33.34
2020	34.59	29.73	23.75	15.03	12.98	13.43	25.93	32.27	30.63	26.02	26.58	30.11
2021	37.66	33.33	24.21	20.10	14.80	16.81	28.76	35.86	31.57	26.26	27.02	37.62
2022	39.53	34.99	25.41	21.09	15.52	17.64	30.18	37.65	33.14	27.56	28.36	39.49
2023	42.17	37.30	27.04	22.40	16.44	18.71	32.15	40.15	35.32	29.34	30.20	42.13
2024	44.93	39.73	28.78	23.83	17.46	19.88	34.23	42.77	37.62	31.24	32.15	44.88
2025	58.19	53.34	52.60	43.71	37.09	21.11	44.24	52.02	56.40	57.61	60.55	62.65
2026	59.35	54.40	53.65	44.59	37.83	21.53	45.13	53.06	57.52	58.76	61.76	63.90
2027	60.53	55.49	54.72	45.48	38.59	21.96	46.03	54.12	58.67	59.94	62.99	65.18
2028	61.58	56.45	55.67	46.26	39.25	22.34	46.82	55.05	59.68	60.97	64.07	66.30
2029	62.98	57.73	56.93	47.31	40.14	22.85	47.89	56.31	61.04	62.36	65.53	67.81
2030	64.24	58.89	58.07	48.26	40.95	23.31	48.85	57.43	62.26	63.60	66.84	69.17
2031	65.52	60.06	59.23	49.22	41.76	23.77	49.82	58.58	63.51	64.87	68.18	70.55
2032	66.65	61.10	60.25	50.07	42.48	24.18	50.68	59.59	64.60	65.99	69.35	71.76
2033	68.17	62.49	61.62	51.21	43.45	24.73	51.83	60.95	66.07	67.49	70.93	73.40
2034	69.53	63.74	62.85	52.23	44.32	25.23	52.87	62.16	67.39	68.84	72.35	74.87
2035	70.92	65.01	64.11	53.28	45.20	25.73	53.92	63.41	68.74	70.22	73.80	76.36
2036	72.14	66.13	65.21	54.19	45.98	26.17	54.85	64.50	69.92	71.42	75.06	77.67
2037	73.78	67.63	66.70	55.43	47.03	26.77	56.10	65.97	71.51	73.05	76.77	79.44
2038	75.25	68.99	68.03	56.54	47.97	27.30	57.22	67.28	72.94	74.51	78.31	81.03
2039	76.76	70.36	69.39	57.66	48.93	27.85	58.37	68.63	74.40	76.00	79.87	82.65
2040	78.08	71.57	70.59	58.66	49.77	28.33	59.37	69.81	75.68	77.31	81.25	84.07
2041	79.86	73.20	72.19	59.99	50.90	28.97	60.72	71.40	77.40	79.07	83.10	85.99
2042	81.45	74.67	73.64	61.19	51.92	29.55	61.94	72.83	78.95	80.65	84.76	87.71
2043	83.08	76.16	75.11	62.41	52.96	30.14	63.17	74.28	80.53	82.26	86.45	89.46
2044	84.51	77.47	76.40	63.49	53.87	30.66	64.26	75.56	81.91	83.67	87.94	91.00

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	56.45	55.22	50.20	40.23	39.42	36.80	48.01	56.06	55.04	52.34	58.17	60.23
2031	57.60	56.35	51.23	41.06	40.22	37.55	48.99	57.21	56.17	53.41	59.36	61.47
2032	58.62	57.34	52.13	41.78	40.93	38.21	49.86	58.21	57.16	54.35	60.41	62.55
2033	59.99	58.68	53.35	42.76	41.89	39.11	51.02	59.57	58.49	55.62	61.82	64.01
2034	61.22	59.89	54.45	43.63	42.75	39.91	52.07	60.79	59.69	56.76	63.08	65.32
2035	62.47	61.11	55.56	44.53	43.62	40.73	53.13	62.04	60.91	57.93	64.38	66.66
2036	63.57	62.19	56.54	45.31	44.39	41.44	54.07	63.13	61.99	58.95	65.51	67.83
2037	65.06	63.64	57.86	46.37	45.43	42.41	55.33	64.61	63.44	60.32	67.04	69.42
2038	66.39	64.95	59.05	47.32	46.36	43.28	56.47	65.93	64.73	61.56	68.41	70.84
2039	67.75	66.28	60.26	48.29	47.31	44.17	57.62	67.28	66.06	62.82	69.82	72.29
2040	68.94	67.44	61.32	49.14	48.14	44.94	58.64	68.47	67.22	63.93	71.05	73.57
2041	70.56	69.02	62.75	50.29	49.27	45.99	60.01	70.07	68.80	65.42	72.70	75.28
2042	72.00	70.43	64.04	51.32	50.28	46.94	61.24	71.50	70.20	66.76	74.19	76.83
2043	73.48	71.88	65.35	52.37	51.31	47.90	62.49	72.97	71.64	68.13	75.71	78.40
2044	74.77	73.14	66.50	53.29	52.21	48.74	63.59	74.25	72.90	69.33	77.05	79.78
2045	76.52	74.85	68.05	54.54	53.43	49.88	65.08	75.99	74.61	70.95	78.85	81.65

## SCHEDULE 201 (Continued)

## WIND INTEGRATION

TABLE 7		
Integration Costs		
Year	Wind	Solar
2019	0.88	0.00
2020	0.90	0.00
2021	0.92	0.00
2022	0.94	0.00
2023	0.96	0.00
2024	0.98	0.00
2025	1.00	0.00
2026	1.02	0.00
2027	1.04	0.00
2028	1.06	0.00
2029	1.08	0.00
2030	1.10	0.00
2031	1.12	0.00
2032	1.14	0.00
2033	1.17	0.00
2034	1.19	0.00
2035	1.21	0.00
2036	1.24	0.00
2037	1.26	0.00
2038	1.29	0.00
2039	1.31	0.00
2040	1.34	0.00
2041	1.37	0.00
2042	1.39	0.00
2043	1.42	0.00
2044	1.45	0.00

<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 ~~2020~~2024.

**Definition of Resource Deficiency Period**

~~This is the period from 2021.~~

This is the period from 2025.

**Definition of Renewable Resource Sufficiency Period**

This is the period from the current year through ~~2024~~2029.

**Definition of Renewable Resource Deficiency Period**

## **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.

**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	43.55	43.63	43.70	42.98	43.05	43.13	43.20	43.28	43.36	43.44	44.46	44.54
2026	46.88	46.98	47.07	46.17	46.26	46.35	46.44	46.54	46.63	46.82	47.89	47.98
2027	49.06	49.17	48.92	47.93	48.02	47.90	47.99	48.09	48.19	48.29	45.98	46.06
2028	46.99	46.19	46.17	45.24	45.32	45.40	45.47	45.55	45.63	45.71	46.82	46.91
2029	47.97	48.06	47.35	46.40	46.48	46.56	46.64	46.72	46.81	46.92	48.03	48.12
2030	49.21	49.30	49.29	48.30	48.38	48.47	48.56	48.65	48.74	48.83	50.03	50.12
2031	51.27	51.37	51.46	50.40	50.49	50.59	50.69	50.79	50.89	51.01	52.39	52.49
2032	53.51	53.62	53.72	52.63	52.73	52.84	52.95	53.06	53.17	53.30	54.64	54.75
2033	56.19	56.31	55.15	54.04	54.14	54.26	54.37	54.48	54.59	54.75	56.07	56.19
2034	57.54	57.67	56.29	55.15	55.26	55.38	55.49	55.60	55.72	55.86	57.25	57.37
2035	58.58	58.71	58.11	56.86	56.98	57.10	57.21	57.33	57.46	57.73	59.02	59.14
2036	60.37	60.50	59.31	58.11	58.23	58.35	58.47	58.60	58.72	59.02	60.33	60.45
2037	61.98	62.11	62.04	60.84	60.97	61.10	61.62	61.79	61.93	63.53	65.66	65.81
2038	67.37	67.53	65.82	64.49	64.63	64.78	64.93	65.08	65.24	66.99	69.27	69.44
2039	71.12	71.30	71.16	69.71	69.88	70.05	70.22	70.40	70.58	71.94	73.76	73.95
2040	76.70	76.90	75.63	74.11	74.29	74.48	74.67	74.87	75.06	76.13	78.03	78.23
2041	78.28	78.49	77.20	75.64	75.83	76.03	76.22	76.42	76.62	77.70	79.64	79.85
2042	79.89	80.10	78.78	77.19	77.38	77.58	77.78	77.98	78.18	79.30	81.27	81.49
2043	81.53	81.74	80.39	78.77	78.97	79.17	79.37	79.58	79.79	80.92	82.94	83.16
2044	83.08	83.30	81.92	80.27	80.47	80.68	80.88	81.09	81.31	82.46	84.52	84.74
2045	85.02	85.24	83.84	82.15	82.36	82.57	82.78	82.99	83.21	84.39	86.49	86.72

## 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	18.88	18.96	19.02	18.30	18.37	18.45	18.53	18.61	18.68	18.76	19.78	19.86
2026	21.70	21.80	21.88	20.99	21.08	21.17	21.26	21.35	21.45	21.64	22.70	22.80
2027	23.36	23.47	23.22	22.23	22.32	22.20	22.30	22.39	22.49	22.59	20.28	20.36
2028	20.76	19.96	19.95	19.02	19.10	19.17	19.25	19.33	19.41	19.49	20.60	20.68
2029	21.21	21.29	20.59	19.63	19.71	19.80	19.88	19.96	20.05	20.16	21.27	21.35
2030	21.90	21.99	21.98	20.99	21.07	21.16	21.25	21.34	21.43	21.52	22.72	22.81
2031	23.40	23.50	23.59	22.53	22.62	22.72	22.82	22.92	23.02	23.15	24.52	24.62
2032	25.25	25.36	25.46	24.37	24.47	24.58	24.69	24.80	24.91	25.04	26.38	26.49
2033	27.17	27.29	26.13	25.01	25.12	25.23	25.34	25.46	25.57	25.73	27.05	27.16
2034	27.83	27.95	26.58	25.44	25.55	25.66	25.78	25.89	26.01	26.15	27.54	27.66
2035	28.36	28.48	27.89	26.64	26.75	26.87	26.99	27.11	27.23	27.51	28.79	28.92
2036	29.62	29.75	28.57	27.36	27.48	27.61	27.73	27.85	27.98	28.28	29.58	29.71
2037	30.50	30.64	30.57	29.37	29.50	29.63	30.14	30.32	30.45	32.06	34.18	34.33
2038	35.25	35.41	33.70	32.37	32.51	32.66	32.81	32.96	33.12	34.87	37.15	37.32
2039	38.34	38.52	38.38	36.93	37.10	37.27	37.45	37.63	37.81	39.16	40.98	41.17
2040	43.25	43.45	42.18	40.66	40.84	41.03	41.22	41.42	41.61	42.68	44.58	44.78
2041	44.15	44.36	43.06	41.51	41.70	41.89	42.08	42.28	42.48	43.57	45.51	45.72
2042	45.05	45.26	43.95	42.36	42.55	42.75	42.94	43.15	43.35	44.46	46.44	46.65
2043	45.98	46.19	44.85	43.22	43.42	43.63	43.82	44.03	44.24	45.37	47.39	47.61
2044	46.92	47.14	45.76	44.11	44.31	44.52	44.72	44.93	45.15	46.30	48.36	48.58
2045	47.88	48.10	46.70	45.01	45.22	45.43	45.64	45.85	46.07	47.25	49.35	49.58

**SCHEDULE 201 (Continued)**

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

<b>TABLE 2a</b>												
<b>Avoided Costs</b>												
<b>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	35.10	35.18	35.25	34.52	34.60	34.67	34.75	34.83	34.91	34.98	36.00	36.08
2026	38.25	38.35	38.44	37.54	37.63	37.72	37.82	37.91	38.00	38.19	39.26	39.35
2027	40.26	40.36	40.11	39.12	39.22	39.09	39.19	39.29	39.38	39.48	37.18	37.26
2028	38.00	37.20	37.19	36.26	36.34	36.41	36.49	36.57	36.65	36.73	37.84	37.92
2029	38.80	38.89	38.18	37.23	37.31	37.39	37.47	37.56	37.64	37.75	38.86	38.95
2030	39.85	39.94	39.93	38.94	39.03	39.12	39.20	39.30	39.39	39.48	40.67	40.77
2031	41.72	41.82	41.91	40.85	40.94	41.04	41.14	41.24	41.34	41.47	42.84	42.94
2032	43.82	43.93	44.03	42.94	43.05	43.16	43.26	43.37	43.49	43.62	44.95	45.07
2033	46.25	46.37	45.21	44.09	44.20	44.31	44.42	44.54	44.65	44.81	46.13	46.24
2034	47.36	47.49	46.11	44.98	45.09	45.20	45.31	45.42	45.54	45.68	47.08	47.19
2035	48.22	48.35	47.76	46.50	46.62	46.74	46.86	46.98	47.10	47.38	48.66	48.79
2036	49.83	49.96	48.78	47.57	47.69	47.82	47.94	48.06	48.19	48.49	49.79	49.92
2037	51.20	51.33	51.26	50.06	50.19	50.32	50.83	51.01	51.15	52.75	54.87	55.03
2038	56.37	56.53	54.82	53.48	53.63	53.78	53.93	54.08	54.23	55.99	58.27	58.44
2039	59.89	60.07	59.93	58.47	58.65	58.82	58.99	59.17	59.35	60.71	62.53	62.72
2040	65.24	65.44	64.17	62.65	62.83	63.02	63.21	63.41	63.60	64.67	66.57	66.77
2041	66.59	66.80	65.50	63.95	64.14	64.33	64.52	64.72	64.92	66.01	67.95	68.16
2042	67.95	68.16	66.84	65.26	65.45	65.65	65.84	66.05	66.25	67.36	69.34	69.55
2043	69.35	69.56	68.21	66.59	66.79	66.99	67.19	67.40	67.61	68.74	70.76	70.98
2044	70.69	70.91	69.53	67.88	68.08	68.29	68.49	68.70	68.91	70.07	72.13	72.35
2045	72.30	72.52	71.12	69.43	69.63	69.85	70.05	70.27	70.49	71.67	73.77	73.99

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

<b>TABLE 2b</b>												
<b>Avoided Costs</b>												
<b>Fixed Price Option for Wind QF</b>												
<b>Off-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	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	18.52	18.60	18.66	17.94	18.01	18.09	18.17	18.25	18.32	18.40	19.42	19.50
2026	21.33	21.43	21.52	20.62	20.71	20.80	20.89	20.99	21.08	21.27	22.34	22.43
2027	22.99	23.09	22.85	21.85	21.95	21.83	21.92	22.02	22.11	22.21	19.91	19.99
2028	20.38	19.58	19.57	18.64	18.71	18.79	18.86	18.95	19.03	19.11	20.22	20.30
2029	20.82	20.90	20.20	19.24	19.32	19.41	19.49	19.57	19.66	19.77	20.88	20.96
2030	21.50	21.59	21.58	20.59	20.67	20.76	20.85	20.94	21.04	21.13	22.32	22.42
2031	22.99	23.09	23.18	22.12	22.22	22.32	22.41	22.51	22.61	22.74	24.11	24.21
2032	24.83	24.94	25.04	23.95	24.06	24.17	24.27	24.38	24.50	24.63	25.96	26.08
2033	26.74	26.86	25.71	24.59	24.70	24.81	24.92	25.03	25.15	25.30	26.62	26.74
2034	27.40	27.52	26.15	25.01	25.12	25.23	25.34	25.46	25.57	25.72	27.11	27.23
2035	27.91	28.04	27.45	26.19	26.31	26.43	26.55	26.67	26.79	27.07	28.35	28.48
2036	29.17	29.30	28.12	26.91	27.03	27.16	27.28	27.40	27.53	27.83	29.13	29.26
2037	30.04	30.18	30.11	28.91	29.04	29.17	29.68	29.86	30.00	31.60	33.72	33.88
2038	34.78	34.95	33.23	31.90	32.04	32.19	32.34	32.49	32.65	34.40	36.68	36.85
2039	37.86	38.04	37.90	36.45	36.62	36.80	36.97	37.15	37.33	38.68	40.50	40.69
2040	42.76	42.96	41.69	40.17	40.35	40.55	40.73	40.93	41.12	42.19	44.09	44.29
2041	43.65	43.86	42.56	41.01	41.20	41.39	41.58	41.78	41.98	43.07	45.01	45.22
2042	44.55	44.76	43.44	41.85	42.04	42.24	42.44	42.64	42.84	43.95	45.93	46.14
2043	45.46	45.67	44.33	42.71	42.90	43.11	43.31	43.51	43.72	44.85	46.87	47.09
2044	46.39	46.61	45.23	43.58	43.78	43.99	44.19	44.40	44.62	45.77	47.83	48.05
2045	47.34	47.56	46.16	44.47	44.68	44.89	45.10	45.31	45.53	46.71	48.81	49.04

**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	27.30	27.38	27.45	26.73	26.80	26.88	26.95	27.03	27.11	27.19	28.21	28.29
2026	30.30	30.40	30.48	29.59	29.68	29.77	29.86	29.95	30.05	30.24	31.30	31.40
2027	32.14	32.24	32.00	31.00	31.10	30.98	31.07	31.17	31.27	31.36	29.06	29.14
2028	29.72	28.92	28.90	27.97	28.05	28.13	28.20	28.28	28.37	28.45	29.55	29.64
2029	30.34	30.43	29.73	28.77	28.85	28.94	29.02	29.10	29.19	29.30	30.41	30.49
2030	31.22	31.31	31.30	30.31	30.40	30.49	30.58	30.67	30.76	30.85	32.05	32.14
2031	32.92	33.02	33.11	32.05	32.14	32.24	32.34	32.44	32.54	32.66	34.04	34.14
2032	34.89	35.00	35.10	34.01	34.11	34.22	34.33	34.44	34.55	34.68	36.02	36.13
2033	37.08	37.20	36.04	34.92	35.03	35.14	35.25	35.37	35.48	35.64	36.96	37.07
2034	37.98	38.11	36.73	35.59	35.70	35.82	35.93	36.04	36.16	36.30	37.69	37.81
2035	38.68	38.80	38.21	36.96	37.07	37.19	37.31	37.43	37.55	37.83	39.12	39.24
2036	40.12	40.25	39.06	37.86	37.98	38.10	38.22	38.35	38.47	38.77	40.07	40.20
2037	41.25	41.39	41.32	40.11	40.24	40.38	40.89	41.06	41.20	42.80	44.93	45.08
2038	46.22	46.38	44.67	43.34	43.48	43.63	43.78	43.93	44.09	45.84	48.12	48.29
2039	49.53	49.71	49.57	48.12	48.29	48.47	48.64	48.82	49.00	50.35	52.17	52.36
2040	54.67	54.87	53.61	52.08	52.27	52.46	52.64	52.84	53.03	54.10	56.00	56.20
2041	55.81	56.01	54.72	53.16	53.35	53.55	53.74	53.94	54.14	55.23	57.16	57.37
2042	56.95	57.16	55.84	54.25	54.45	54.65	54.84	55.04	55.25	56.36	58.34	58.55
2043	58.12	58.33	56.98	55.36	55.56	55.76	55.96	56.17	56.38	57.51	59.53	59.75
2044	59.26	59.48	58.11	56.45	56.65	56.86	57.06	57.27	57.49	58.64	60.70	60.92
2045	60.57	60.79	59.39	57.70	57.91	58.12	58.33	58.54	58.76	59.94	62.04	62.27

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

<b>TABLE 3b</b>												
<b>Avoided Costs</b>												
<b>Fixed Price Option for Solar QF</b>												
<b>Off-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	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	17.38	17.46	17.52	16.80	16.87	16.95	17.03	17.11	17.18	17.26	18.28	18.36
2026	20.17	20.27	20.35	19.46	19.55	19.64	19.73	19.82	19.92	20.11	21.17	21.27
2027	21.80	21.91	21.66	20.67	20.76	20.64	20.73	20.83	20.93	21.03	18.72	18.80
2028	19.17	18.37	18.35	17.42	17.50	17.58	17.65	17.73	17.82	17.90	19.01	19.09
2029	19.58	19.67	18.96	18.01	18.09	18.17	18.25	18.34	18.42	18.53	19.64	19.73
2030	20.24	20.33	20.32	19.33	19.41	19.50	19.59	19.68	19.77	19.86	21.06	21.15
2031	21.71	21.81	21.90	20.83	20.93	21.03	21.12	21.22	21.32	21.45	22.82	22.93
2032	23.52	23.63	23.73	22.64	22.75	22.85	22.96	23.07	23.18	23.31	24.65	24.76
2033	25.40	25.52	24.36	23.25	23.36	23.47	23.58	23.69	23.81	23.96	25.28	25.40
2034	26.03	26.15	24.78	23.64	23.75	23.86	23.98	24.09	24.21	24.35	25.74	25.86
2035	26.52	26.64	26.05	24.80	24.91	25.03	25.15	25.27	25.39	25.67	26.96	27.08
2036	27.75	27.88	26.69	25.49	25.61	25.73	25.85	25.98	26.10	26.40	27.71	27.83
2037	28.59	28.73	28.65	27.45	27.58	27.72	28.23	28.40	28.54	30.14	32.27	32.42
2038	33.30	33.46	31.75	30.41	30.56	30.71	30.86	31.01	31.16	32.92	35.20	35.37
2039	36.35	36.53	36.39	34.93	35.10	35.28	35.45	35.63	35.81	37.17	38.99	39.18
2040	41.21	41.42	40.15	38.62	38.81	39.00	39.19	39.38	39.58	40.64	42.55	42.75
2041	42.08	42.28	40.99	39.43	39.62	39.82	40.01	40.21	40.41	41.49	43.43	43.64
2042	42.94	43.15	41.83	40.24	40.43	40.63	40.83	41.03	41.23	42.34	44.32	44.53
2043	43.82	44.03	42.68	41.06	41.26	41.46	41.66	41.87	42.08	43.21	45.23	45.45
2044	44.71	44.93	43.56	41.91	42.11	42.31	42.52	42.73	42.94	44.10	46.16	46.38
2045	45.63	45.85	44.45	42.76	42.97	43.18	43.39	43.60	43.82	45.00	47.10	47.33

**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	90.20	87.33	80.53	71.18	71.16	67.46	78.34	87.14	86.36	84.64	90.62	91.73
2031	92.05	89.12	82.18	72.64	72.62	68.84	79.95	88.92	88.13	86.37	92.48	93.61
2032	93.57	90.59	83.53	73.82	73.80	69.96	81.26	90.39	89.59	87.80	94.01	95.16
2033	95.86	92.80	85.58	75.64	75.62	71.69	83.25	92.60	91.78	89.95	96.31	97.48
2034	97.91	94.80	87.43	77.29	77.27	73.26	85.06	94.60	93.75	91.88	98.37	99.57
2035	99.82	96.65	89.13	78.78	78.75	74.66	86.70	96.44	95.58	93.67	100.29	101.52
2036	101.58	98.34	90.69	80.16	80.13	75.97	88.22	98.13	97.26	95.31	102.05	103.30
2037	103.95	100.65	92.82	82.04	82.01	77.75	90.29	100.43	99.54	97.55	104.44	105.72
2038	106.08	102.71	94.72	83.72	83.69	79.34	92.14	102.49	101.57	99.54	106.58	107.88
2039	108.26	104.81	96.66	85.43	85.41	80.97	94.03	104.59	103.66	101.58	108.77	110.09
2040	110.27	106.76	98.46	87.04	87.01	82.49	95.78	106.53	105.58	103.47	110.78	112.13
2041	112.74	109.15	100.66	88.97	88.94	84.32	97.92	108.92	107.95	105.79	113.27	114.65
2042	115.05	111.39	102.72	90.79	90.77	86.05	99.92	111.15	110.16	107.95	115.59	117.00
2043	117.41	113.67	104.83	92.65	92.63	87.81	101.97	113.42	112.41	110.17	117.96	119.40
2044	119.47	115.66	106.67	94.27	94.25	89.35	103.76	115.41	114.39	112.10	120.03	121.49
2045	122.38	118.49	109.28	96.61	96.58	91.56	106.31	118.24	117.19	114.85	122.96	124.46



## 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	58.11	56.88	51.86	41.89	41.08	38.46	49.67	57.72	56.70	54.00	59.83	61.89
2031	59.30	58.04	52.93	42.75	41.92	39.25	50.69	58.90	57.86	55.11	61.05	63.16
2032	60.35	59.07	53.86	43.51	42.66	39.94	51.58	59.94	58.89	56.08	62.13	64.28
2033	61.75	60.45	55.12	44.52	43.65	40.87	52.79	61.34	60.26	57.39	63.58	65.77
2034	63.02	61.69	56.25	45.43	44.55	41.71	53.87	62.59	61.49	58.56	64.88	67.12
2035	64.31	62.95	57.40	46.36	45.46	42.56	54.97	63.88	62.75	59.76	66.21	68.50
2036	65.45	64.06	58.41	47.19	46.27	43.32	55.94	65.01	63.86	60.82	67.38	69.71
2037	66.97	65.56	59.77	48.28	47.34	44.32	57.25	66.52	65.35	62.24	68.95	71.33
2038	68.34	66.90	61.00	49.27	48.31	45.23	58.42	67.88	66.69	63.51	70.37	72.79
2039	69.74	68.27	62.25	50.28	49.30	46.16	59.62	69.27	68.05	64.81	71.81	74.28
2040	70.98	69.48	63.35	51.17	50.17	46.98	60.67	70.50	69.26	65.96	73.08	75.60
2041	72.63	71.09	64.83	52.36	51.34	48.07	62.08	72.14	70.87	67.50	74.78	77.36
2042	74.12	72.55	66.15	53.44	52.39	49.05	63.36	73.62	72.32	68.88	76.31	78.94
2043	75.64	74.04	67.51	54.53	53.47	50.06	64.65	75.13	73.80	70.29	77.88	80.56
2044	76.98	75.35	68.70	55.50	54.41	50.95	65.80	76.46	75.11	71.53	79.25	81.99
2045	78.77	77.10	70.30	56.79	55.68	52.13	67.33	78.24	76.86	73.20	81.10	83.90

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

<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	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	80.84	77.97	71.18	61.82	61.80	58.10	68.98	77.78	77.01	75.28	81.27	82.37
2031	82.50	79.57	72.63	63.09	63.07	59.30	70.40	79.38	78.58	76.82	82.93	84.06
2032	83.89	80.91	73.85	64.14	64.12	60.27	71.57	80.71	79.90	78.11	84.33	85.47
2033	85.91	82.86	75.64	65.70	65.68	61.75	73.31	82.66	81.84	80.00	86.36	87.54
2034	87.74	84.62	77.25	67.11	67.09	63.08	74.88	84.42	83.58	81.70	88.20	89.39
2035	89.47	86.29	78.77	68.42	68.40	64.31	76.35	86.08	85.22	83.31	89.94	91.16
2036	91.04	87.81	80.16	69.62	69.60	65.43	77.69	87.60	86.72	84.78	91.52	92.76
2037	93.17	89.86	82.03	71.25	71.23	66.97	79.51	89.65	88.75	86.76	93.66	94.93
2038	95.08	91.70	83.71	72.71	72.69	68.34	81.13	91.48	90.57	88.54	95.58	96.88
2039	97.03	93.58	85.43	74.20	74.18	69.74	82.80	93.36	92.42	90.35	97.54	98.86
2040	98.80	95.30	87.00	75.58	75.55	71.03	84.32	95.07	94.12	92.01	99.32	100.67
2041	101.04	97.46	88.96	77.27	77.25	72.63	86.22	97.22	96.25	94.09	101.57	102.96
2042	103.11	99.45	90.79	78.86	78.83	74.11	87.99	99.21	98.22	96.02	103.66	105.06
2043	105.23	101.49	92.65	80.47	80.45	75.63	89.79	101.24	100.23	97.99	105.78	107.22
2044	107.08	103.27	94.27	81.88	81.86	76.96	91.37	103.02	102.00	99.71	107.64	109.10
2045	109.66	105.77	96.56	83.88	83.86	78.84	93.59	105.52	104.46	102.12	110.24	111.73

**SCHEDULE 201 (Continued)**

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

<b>TABLE 5b</b>												
<b>Renewable Avoided Costs</b>												
<b>Renewable Fixed Price Option for Wind QF</b>												
<b>Off-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	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	57.71	56.48	51.47	41.50	40.68	38.06	49.27	57.32	56.30	53.60	59.43	61.49
2031	58.89	57.64	52.52	42.35	41.51	38.84	50.28	58.49	57.46	54.70	60.65	62.75
2032	59.93	58.66	53.45	43.09	42.25	39.53	51.17	59.53	58.47	55.67	61.72	63.86
2033	61.33	60.02	54.69	44.10	43.23	40.45	52.36	60.91	59.83	56.96	63.16	65.35
2034	62.59	61.25	55.81	45.00	44.12	41.28	53.44	62.16	61.06	58.13	64.45	66.69
2035	63.87	62.51	56.96	45.92	45.02	42.12	54.53	63.44	62.31	59.32	65.77	68.06
2036	65.00	63.61	57.96	46.74	45.82	42.87	55.49	64.56	63.41	60.37	66.93	69.26
2037	66.51	65.10	59.32	47.82	46.88	43.87	56.79	66.06	64.89	61.78	68.49	70.87
2038	67.87	66.43	60.53	48.80	47.84	44.76	57.95	67.41	66.22	63.04	69.90	72.32
2039	69.27	67.79	61.77	49.80	48.82	45.68	59.14	68.80	67.58	64.33	71.33	73.81
2040	70.49	68.99	62.86	50.68	49.69	46.49	60.18	70.01	68.77	65.47	72.59	75.11
2041	72.13	70.60	64.33	51.87	50.84	47.57	61.59	71.64	70.37	67.00	74.28	76.86
2042	73.61	72.04	65.65	52.93	51.89	48.55	62.85	73.11	71.81	68.37	75.80	78.44
2043	75.12	73.52	66.99	54.01	52.95	49.54	64.13	74.61	73.29	69.77	77.36	80.04
2044	76.45	74.82	68.17	54.97	53.89	50.42	65.27	75.93	74.58	71.00	78.72	81.46
2045	78.23	76.56	69.76	56.25	55.14	51.59	66.79	77.70	76.32	72.66	80.56	83.36

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

<b>TABLE 6a</b>												
<b>Renewable Avoided Costs</b>												
<b>Renewable Fixed Price Option for Solar 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	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	72.21	69.34	62.55	53.20	53.18	49.48	60.36	69.15	68.38	66.65	72.64	73.74
2031	73.69	70.76	63.83	54.29	54.27	50.49	61.59	70.57	69.78	68.02	74.13	75.25
2032	74.95	71.97	64.91	55.20	55.18	51.34	62.64	71.77	70.97	69.18	75.39	76.54
2033	76.74	73.69	66.47	56.53	56.51	52.58	64.14	73.49	72.67	70.83	77.19	78.37
2034	78.35	75.24	67.87	57.73	57.71	53.70	65.49	75.04	74.19	72.32	78.81	80.01
2035	79.92	76.74	69.22	58.87	58.85	54.76	66.80	76.53	75.68	73.77	80.39	81.61
2036	81.32	78.09	70.44	59.90	59.88	55.72	67.97	77.88	77.00	75.06	81.80	83.05
2037	83.23	79.92	72.09	61.31	61.29	57.02	69.56	79.70	78.81	76.82	83.72	84.99
2038	84.93	81.56	73.57	62.57	62.54	58.19	70.99	81.34	80.42	78.39	85.43	86.73
2039	86.67	83.23	75.07	63.85	63.82	59.38	72.44	83.00	82.07	80.00	87.18	88.51
2040	88.24	84.73	76.43	65.01	64.99	60.47	73.76	84.50	83.55	81.45	88.76	90.11
2041	90.26	86.67	78.18	66.49	66.47	61.84	75.44	86.44	85.47	83.31	90.79	92.17
2042	92.11	88.45	79.78	67.85	67.83	63.11	76.99	88.21	87.22	85.02	92.65	94.06
2043	94.00	90.26	81.42	69.24	69.22	64.40	78.56	90.01	89.01	86.76	94.55	95.99
2044	95.65	91.84	82.85	70.46	70.43	65.53	79.94	91.60	90.57	88.28	96.21	97.67
2045	97.94	94.04	84.84	72.16	72.13	67.12	81.86	93.79	92.74	90.40	98.51	100.01

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

<b>TABLE 6b</b>												
<b>Renewable Avoided Costs</b>												
<b>Renewable Fixed Price Option for Solar QF</b>												
<b>Off-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	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	56.45	55.22	50.20	40.23	39.42	36.80	48.01	56.06	55.04	52.34	58.17	60.23
2031	57.60	56.35	51.23	41.06	40.22	37.55	48.99	57.21	56.17	53.41	59.36	61.47
2032	58.62	57.34	52.13	41.78	40.93	38.21	49.86	58.21	57.16	54.35	60.41	62.55
2033	59.99	58.68	53.35	42.76	41.89	39.11	51.02	59.57	58.49	55.62	61.82	64.01
2034	61.22	59.89	54.45	43.63	42.75	39.91	52.07	60.79	59.69	56.76	63.08	65.32
2035	62.47	61.11	55.56	44.53	43.62	40.73	53.13	62.04	60.91	57.93	64.38	66.66
2036	63.57	62.19	56.54	45.31	44.39	41.44	54.07	63.13	61.99	58.95	65.51	67.83
2037	65.06	63.64	57.86	46.37	45.43	42.41	55.33	64.61	63.44	60.32	67.04	69.42
2038	66.39	64.95	59.05	47.32	46.36	43.28	56.47	65.93	64.73	61.56	68.41	70.84
2039	67.75	66.28	60.26	48.29	47.31	44.17	57.62	67.28	66.06	62.82	69.82	72.29
2040	68.94	67.44	61.32	49.14	48.14	44.94	58.64	68.47	67.22	63.93	71.05	73.57
2041	70.56	69.02	62.75	50.29	49.27	45.99	60.01	70.07	68.80	65.42	72.70	75.28
2042	72.00	70.43	64.04	51.32	50.28	46.94	61.24	71.50	70.20	66.76	74.19	76.83
2043	73.48	71.88	65.35	52.37	51.31	47.90	62.49	72.97	71.64	68.13	75.71	78.40
2044	74.77	73.14	66.50	53.29	52.21	48.74	63.59	74.25	72.90	69.33	77.05	79.78
2045	76.52	74.85	68.05	54.54	53.43	49.88	65.08	75.99	74.61	70.95	78.85	81.65

## 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.

**Definition of Renewable Resource Deficiency Period**

This is the period from 2030.

**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.