

**Portland General Electric Company** 121 SW Salmon Street • Portland, Oregon 97204 PortlandGeneral.com

May 1, 2015

Public Utility Commission of Oregon Attn: Filing Center 3930 Fairview Industrial Drive SE P.O. Box 1088 Salem, OR 97308-1088

# RE: UM \_\_\_\_\_ Application to Update Schedule 201 Qualifying Facility Information

Portland General Electric (PGE) submits this filing pursuant to Oregon Revised Statutes 758.505 through 758.555; Oregon Administrative Rules 860-029-0001 through 860-029-0100; Order No. 11-505; and Order No. 14-058, with a requested effective date of <u>June 1, 2015</u>:

Sheet Nos. 201-1 through Sheet Nos. 201-23

This filing revises Schedule 201, Qualifying Facility Power Purchase Information for Qualifying Facilities 10 MW or Less consistent with Order Nos. 11-505 and 14-058.

This filing changes prices only. The major drivers for the price changes to Schedule 201 effective on June 1, 2015 are as follows:

- For both Standard and Renewable Avoided Costs, forward electricity prices have fallen significantly during the sufficiency period.
- PGE's cost of capital (debt and equity) has decreased relative to the previous filing, reducing both Standard and Renewable Avoided Costs during the deficiency period.
- Prices in the most recent gas forecast are lower than those in the previous forecast, reducing Standard Avoided Costs during the deficiency period.

Work papers detailing the avoided cost calculations are attached. Also provided as a courtesy is a red lined version of Sheet Nos. 201-1 through Sheet Nos. 201-23.

Should you have any questions or comments regarding this filing, please contact Mihir Desu at (503) 464-2709 or Rob Macfarlane at (503) 464-8954.

UM \_\_\_\_ Application to Update Schedule 201 Qualifying Facility Information Page 2

Please direct all formal correspondence and requests to the following email address pge.opuc.filings@pgn.com

Sincerely,

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Karla Wenzel Manager, Pricing and Tariffs

Enclosures cc: Service List – UM 1610

#### 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.

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

PPA (Continued)

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

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

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

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

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

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

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

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

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

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

#### **OFF-SYSTEM PPA**

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

## BASIS FOR POWER PURCHASE PRICE

## AVOIDED COST SUMMARY

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

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

#### **ON-PEAK PERIOD**

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

## **OFF-PEAK PERIOD**

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

Standard Avoided Costs are based on forward market price estimates through the Resource Sufficiency Period, the period of time during which the Company's Standard Avoided Costs are associated with incremental purchases of Energy and capacity from the market. For the Resource Deficiency Period, the Standard Avoided Costs reflect the fully allocated costs of a natural gas fueled combined cycle combustion turbine (CCCT) including fuel and capital costs. The CCCT Avoided Costs are based on the variable cost of Energy plus capitalized Energy costs at a 93% capacity factor based on a natural gas price forecast, with prices modified for shrinkage and transportation costs.

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

#### PRICING FOR STANDARD PPA

Pricing represents the purchase price per MWh the Company will pay for electricity delivered to a Point of Delivery (POD) within the Company's service territory pursuant to a Standard PPA up to the nameplate rating of the QF in any hour. Any Energy delivered in excess of the nameplate rating will be purchased at the applicable Off-Peak Prices for the selected pricing 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.

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.

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 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 5%. The capacity contribution for Solar QF resources (Tables 3a and 3b) is assumed to be 5%.

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.

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

Sellers with PPAs exceeding 15 years will receive pricing equal to the Mid-C Index Price for all years up to five in excess of the initial 15.

					T.	ABLE 1a						
					Avo	ided Cos	ts					
			St	andard F	ixed Pric	e Option	for Base	Load QF				
				0	n-Peak F	orecast (	\$/MWH)					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	31.13	25.13	26.13	21.88	22.88	25.13	33.13	34.73	29.63	27.38	28.88	33.13
2016	31.43	30.01	26.93	25.51	24.81	23.06	31.90	36.26	32.22	30.97	31.97	34.43
2017	34.12	32.56	29.20	28.13	27.35	25.40	34.51	39.26	34.86	33.83	34.92	37.63
2018	36.46	34.80	31.19	29.53	28.71	26.67	37.01	42.11	37.38	35.92	37.09	39.97
2019	38.14	36.40	32.63	30.89	30.03	27.89	38.72	44.06	39.11	37.58	38.80	41.81
2020	40.36	38.51	34.52	32.68	31.77	29.50	40.97	46.62	41.38	39.76	41.06	44.25
2021	78.37	78.12	73.80	72.86	73.01	73.16	73.31	73.46	73.62	73.77	75.78	77.10
2022	79.60	79.78	78.44	76.48	76.26	76.34	76.50	76.67	76.84	77.48	80.21	81.34
2023	82.63	82.66	80.27	78.81	78.21	78.22	78.39	78.56	78.73	79.46	82.18	83.13
2024	84.81	84.26	82.55	80.80	80.00	79.66	79.83	80.00	80.18	81.44	83.71	84.67
2025	87.20	86.76	84.95	83.60	83.30	83.50	83.68	83.88	84.08	84.75	87.87	88.86
2026	93.47	93.69	92.94	91.35	91.11	91.34	91.57	91.80	92.04	92.84	96.16	96.79
2027	98.73	98.97	93.85	92.24	91.99	92.22	92.45	92.67	92.91	93.60	96.95	98.01
2028	99.42	99.66	95.01	93.41	93.16	93.39	93.62	93.85	94.09	94.79	98.30	99.38
2029	101.94	101.29	98.21	96.29	95.84	96.08	96.31	96.55	96.80	97.53	100.99	103.20
2030	104.26	103.91	99.35	97.50	97.22	97.47	97.70	97.94	98.19	98.93	102.45	105.78
2031	105.82	105.51	101.80	99.52	99.21	99.46	99.70	99.95	100.20	100.96	104.54	105.68
2032	107.60	107.29	103.51	101.18	100.86	101.12	101.36	101.61	101.87	102.64	106.30	107.46
2033	110.10	109.78	105.92	103.55	103.23	103.49	103.74	103.99	104.26	105.04	108.77	109.96
2034	112.39	112.07	108.14	105.72	105.39	105.66	105.91	106.17	106.44	107.24	111.04	112.25
2035	114.61	114.28	110.27	107.80	107.47	107.74	108.00	108.27	108.54	109.36	113.23	114.47
2036	117.00	116.66	112.57	110.05	109.71	109.99	110.26	110.53	110.81	111.64	115.59	116.85
2037	119.76	119.42	115.25	112.68	112.34	112.62	112.89	113.16	113.45	114.30	118.33	119.61
2038	122.43	122.09	117.83	115.21	114.86	115.15	115.42	115.70	116.00	116.86	120.97	122.28
2039	124.98	124.63	120.29	117.62	117.26	117.55	117.83	118.12	118.42	119.30	123.49	124.82
2040	127.87	127.51	123.09	120.36	119.99	120.29	120.58	120.87	121.18	122.08	126.35	127.71

					TA	ABLE 1b						
					Avoi	ided Cost	s					
			Sta	andard F	ixed Price	e Option	for Base	Load QF				
				0	ff-Peak F	orecast (	\$/MWH)					
						-			-			
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	26.88	20.38	20.88	15.88	17.88	19.13	23.88	26.13	25.63	23.13	25.38	28.38
2016	27.06	25.99	23.32	18.54	16.65	13.43	23.13	27.74	25.51	27.30	27.97	30.11
2017	30.27	29.06	26.04	21.47	19.23	15.43	25.37	30.49	28.02	29.93	30.67	33.03
2018	32.60	31.29	28.03	22.20	19.89	15.96	27.80	33.43	30.71	32.89	33.71	36.32
2019	34.42	33.04	29.59	23.42	20.98	16.82	29.35	35.30	32.42	34.73	35.60	38.36
2020	36.91	35.42	31.72	25.08	22.46	17.99	31.45	37.85	34.75	37.24	38.17	41.14
2021	40.14	39.89	35.57	34.63	34.78	34.93	35.08	35.23	35.39	35.54	37.55	38.87
2022	40.62	40.79	39.46	37.50	37.28	37.35	37.52	37.68	37.85	38.49	41.22	42.36
2023	42.75	42.77	40.39	38.92	38.33	38.34	38.51	38.68	38.85	39.58	42.30	43.25
2024	44.40	43.85	42.14	40.39	39.59	39.25	39.42	39.59	39.77	41.03	43.30	44.26
2025	45.86	45.42	43.61	42.26	41.96	42.16	42.35	42.54	42.74	43.41	46.53	47.52
2026	51.31	51.54	50.79	49.19	48.95	49.19	49.41	49.65	49.89	50.69	54.00	54.64
2027	55.74	55.98	50.87	49.26	49.00	49.24	49.46	49.69	49.93	50.62	53.97	55.02
2028	55.58	55.83	51.18	49.58	49.32	49.56	49.78	50.01	50.25	50.96	54.47	55.54
2029	57.23	56.59	53.51	51.59	51.14	51.38	51.61	51.85	52.10	52.83	56.29	58.50
2030	58.68	58.33	53.77	51.92	51.63	51.88	52.12	52.36	52.61	53.35	56.87	60.20
2031	59.33	59.03	55.32	53.04	52.73	52.98	53.22	53.46	53.72	54.48	58.06	59.20
2032	60.50	60.19	56.41	54.08	53.76	54.02	54.26	54.51	54.77	55.54	59.20	60.36
2033	61.76	61.44	57.59	55.21	54.89	55.15	55.40	55.66	55.92	56.71	60.43	61.62
2034	62.95	62.62	58.69	56.27	55.94	56.21	56.46	56.72	56.99	57.80	61.59	62.80
2035	64.35	64.02	60.01	57.54	57.21	57.48	57.74	58.00	58.28	59.10	62.97	64.20
2036	65.90	65.57	61.48	58.96	58.62	58.90	59.16	59.43	59.72	60.55	64.50	65.76
2037	67.50	67.15	62.99	60.42	60.07	60.35	60.62	60.90	61.18	62.03	66.06	67.34
2038	69.14	68.79	64.54	61.92	61.56	61.85	62.12	62.41	62.70	63.57	67.67	68.98
2039	70.63	70.28	65.94	63.27	62.91	63.20	63.48	63.77	64.07	64.95	69.14	70.47
2040	72.44	72.08	67.66	64.94	64.57	64.87	65.16	65.45	65.75	66.65	70.93	72.28

					T/	ABLE 2a						
					Avoi	ided Cost	ts					
				Standard	Fixed P	rice Optic	on for Wi	nd QF				
				0	n-Peak F	orecast (	\$/MWH)					
									•	•		
Year	Jan	Feb 21.37	Mar	Apr 19.10	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	27.37		22.37	18.12	19.12	21.37	29.37	30.97	25.87	23.62	25.12	29.37
2016	27.59 30.21	26.17	23.09 25.29	21.67 24.22	20.97 23.44	19.22 21.49	28.06 30.60	32.42	28.38 30.95	27.13 29.92	28.13 31.01	30.59 33.72
2017		28.65			-	-		35.35				
2018	32.47	30.81	27.20	25.54	24.72	22.68	33.02	38.12	33.39	31.93	33.10	35.98
2019	34.07	32.33	28.56	26.82	25.96	23.82	34.65	39.99	35.04	33.51	34.73	37.74
2020	36.21	34.36	30.37	28.53	27.62	25.35	36.82	42.47	37.23	35.61	36.91	40.10
2021	37.82	37.58	33.25	32.31	32.46	32.62	32.76	32.91	33.07	33.22	35.23	36.56
2022	38.26	38.43	37.10	35.14	34.92	34.99	35.15	35.32	35.49	36.13	38.86	40.00
2023	40.34	40.37	37.98	36.52	35.92	35.93	36.10	36.27	36.45	37.18	39.89	40.84
2024	41.93	41.38	39.67	37.92	37.12	36.78	36.95	37.12	37.30	38.56	40.83	41.79
2025	43.34	42.91	41.10	39.75	39.45	39.65	39.83	40.03	40.23	40.90	44.02	45.01
2026	48.75	48.97	48.22	46.63	46.39	46.63	46.85	47.08	47.32	48.12	51.44	52.08
2027	53.13	53.37	48.25	46.65	46.39	46.63	46.85	47.08	47.32	48.01	51.36	52.41
2028	52.92	53.17	48.52	46.92	46.66	46.90	47.12	47.35	47.59	48.30	51.81	52.88
2029	54.52	53.88	50.79	48.87	48.42	48.66	48.90	49.14	49.38	50.11	53.58	55.79
2030	55.92	55.57	51.00	49.16	48.87	49.12	49.36	49.60	49.85	50.59	54.11	57.44
2031	56.52	56.21	52.51	50.22	49.91	50.16	50.40	50.65	50.90	51.66	55.24	56.38
2032	57.60	57.29	53.51	51.18	50.87	51.12	51.37	51.62	51.88	52.65	56.30	57.46
2033	58.83	58.51	54.66	52.28	51.96	52.22	52.47	52.72	52.99	53.78	57.50	58.69
2034	59.96	59.64	55.70	53.28	52.95	53.22	53.48	53.73	54.01	54.81	58.61	59.81
2035	61.30	60.97	56.96	54.49	54.16	54.43	54.69	54.95	55.23	56.05	59.92	61.16
2036	62.79	62.46	58.37	55.85	55.51	55.78	56.05	56.32	56.60	57.43	61.38	62.64
2037	64.33	63.99	59.82	57.25	56.90	57.19	57.45	57.73	58.02	58.87	62.90	64.18
2038	65.90	65.55	61.30	58.68	58.33	58.62	58.89	59.17	59.46	60.33	64.44	65.74
2039	67.33	66.97	62.64	59.97	59.60	59.90	60.18	60.46	60.76	61.65	65.84	67.17
2040	69.09	68.72	64.30	61.58	61.21	61.51	61.80	62.09	62.39	63.29	67.57	68.92

					T/	ABLE 2b						
					Avoi	ded Cost	ts					
				Standard	I Fixed P	rice Optio	on for Wi	nd QF				
				0	ff-Peak F	orecast (	\$/MWH)					
	-	_							-			
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	23.12	16.62	17.12	12.12	14.12	15.37	20.12	22.37	21.87	19.37	21.62	24.62
2016	23.22	22.15	19.48	14.70	12.81	9.59	19.29	23.90	21.67	23.46	24.13	26.27
2017	26.36	25.15	22.13	17.56	15.32	11.52	21.46	26.58	24.11	26.02	26.76	29.12
2018	28.61	27.30	24.04	18.21	15.90	11.97	23.81	29.44	26.72	28.90	29.72	32.33
2019	30.35	28.97	25.52	19.35	16.91	12.75	25.28	31.23	28.35	30.66	31.53	34.29
2020	32.76	31.27	27.57	20.93	18.31	13.84	27.30	33.70	30.60	33.09	34.02	36.99
2021	35.91	35.66	31.34	30.40	30.55	30.70	30.85	31.00	31.16	31.31	33.32	34.64
2022	36.31	36.48	35.15	33.19	32.97	33.04	33.21	33.37	33.54	34.18	36.91	38.05
2023	38.35	38.37	35.99	34.52	33.93	33.94	34.11	34.28	34.45	35.18	37.90	38.85
2024	39.91	39.36	37.65	35.90	35.10	34.76	34.93	35.10	35.28	36.54	38.81	39.77
2025	41.28	40.84	39.03	37.68	37.38	37.58	37.77	37.96	38.16	38.83	41.95	42.94
2026	46.64	46.87	46.12	44.52	44.28	44.52	44.74	44.98	45.22	46.02	49.33	49.97
2027	50.98	51.22	46.11	44.50	44.24	44.48	44.70	44.93	45.17	45.86	49.21	50.26
2028	50.73	50.98	46.33	44.73	44.47	44.71	44.93	45.16	45.40	46.11	49.62	50.69
2029	52.28	51.64	48.56	46.64	46.19	46.43	46.66	46.90	47.15	47.88	51.34	53.55
2030	53.64	53.29	48.73	46.88	46.59	46.84	47.08	47.32	47.57	48.31	51.83	55.16
2031	54.19	53.89	50.18	47.90	47.59	47.84	48.08	48.32	48.58	49.34	52.92	54.06
2032	55.25	54.94	51.16	48.83	48.51	48.77	49.01	49.26	49.52	50.29	53.95	55.11
2033	56.41	56.09	52.24	49.86	49.54	49.80	50.05	50.31	50.57	51.36	55.08	56.27
2034	57.49	57.16	53.23	50.81	50.48	50.75	51.00	51.26	51.53	52.34	56.13	57.34
2035	58.79	58.46	54.45	51.98	51.65	51.92	52.18	52.44	52.72	53.54	57.41	58.64
2036	60.23	59.90	55.81	53.29	52.95	53.23	53.49	53.76	54.05	54.88	58.83	60.09
2037	61.72	61.37	57.21	54.64	54.29	54.57	54.84	55.12	55.40	56.25	60.28	61.56
2038	63.24	62.89	58.64	56.02	55.66	55.95	56.22	56.51	56.80	57.67	61.77	63.08
2039	64.61	64.26	59.92	57.25	56.89	57.18	57.46	57.75	58.05	58.93	63.12	64.45
2040	66.31	65.95	61.53	58.81	58.44	58.74	59.03	59.32	59.62	60.52	64.80	66.15

					T/	ABLE 3a						
					Avoi	ided Cost	ts					
				Standard	Fixed P	rice Optio	on for So	lar QF				
				0	n-Peak F	orecast (	\$/MWH)					
Veer	lan	Fab	Mor	A	May	lum	l. d	A	Can	Oct	Nev	Dee
Year 2015	Jan 31.13	Feb 25.13	Mar 26.13	Apr 21.88	May 22.88	Jun 25.13	Jul 33.13	Aug 34.73	<b>Sep</b> 29.63	Oct 27.38	<b>Nov</b> 28.88	<b>Dec</b> 33.13
2015	31.43	30.01	26.93	25.51	22.00	23.06	31.90	36.26	32.22	30.97	31.97	34.43
2010	34.12	32.56	20.93	28.13	27.35	25.40	34.51	39.26	34.86	33.83	34.92	37.63
2017	36.46	34.80	31.19	29.53	28.71	26.67	37.01	42.11	37.38	35.92	37.09	39.97
2010	38.14	36.40	32.63	30.89	30.03	27.89	38.72	44.06	39.11	37.58	38.80	41.81
2020	40.36	38.51	34.52	32.68	31.77	29.50	40.97	46.62	41.38	39.76	41.06	44.25
2021	42.05	41.81	37.48	36.54	36.69	36.85	36.99	37.14	37.30	37.45	39.46	40.79
2022	42.57	42.74	41.41	39.45	39.23	39.30	39.46	39.63	39.80	40.44	43.17	44.31
2023	44.74	44.77	42.38	40.92	40.32	40.33	40.50	40.67	40.85	41.58	44.29	45.24
2024	46.42	45.87	44.16	42.41	41.61	41.27	41.44	41.61	41.79	43.05	45.32	46.28
2025	47.92	47.49	45.68	44.33	44.03	44.23	44.41	44.61	44.81	45.48	48.60	49.59
2026	53.42	53.64	52.89	51.30	51.06	51.30	51.52	51.75	51.99	52.79	56.11	56.75
2027	57.89	58.13	53.01	51.41	51.15	51.39	51.61	51.84	52.08	52.77	56.12	57.17
2028	57.77	58.02	53.37	51.77	51.51	51.75	51.97	52.20	52.44	53.15	56.66	57.73
2029	59.47	58.83	55.74	53.82	53.37	53.61	53.85	54.09	54.33	55.06	58.53	60.74
2030	60.96	60.61	56.04	54.20	53.91	54.16	54.40	54.64	54.89	55.63	59.15	62.48
2031	61.66	61.35	57.65	55.36	55.05	55.30	55.54	55.79	56.04	56.80	60.38	61.52
2032	62.85	62.54	58.76	56.43	56.12	56.37	56.62	56.87	57.13	57.90	61.55	62.71
2033	64.18	63.86	60.01	57.63	57.31	57.57	57.82	58.07	58.34	59.13	62.85	64.04
2034	65.42	65.10	61.16	58.74	58.41	58.68	58.94	59.19	59.47	60.27	64.07	65.27
2035	66.86	66.53	62.52	60.05	59.72	59.99	60.25	60.51	60.79	61.61	65.48	66.72
2036	68.46	68.13	64.04	61.52	61.18	61.45	61.72	61.99	62.27	63.10	67.05	68.31
2037	70.11	69.77	65.60	63.03	62.68	62.97	63.23	63.51	63.80	64.65	68.68	69.96
2038	71.80	71.45	67.20	64.58	64.23	64.52	64.79	65.07	65.36	66.23	70.34	71.64
2039	73.35	72.99	68.66	65.99	65.62	65.92	66.20	66.48	66.78	67.67	71.86	73.19
2040	75.22	74.85	70.43	67.71	67.34	67.64	67.93	68.22	68.52	69.42	73.70	75.05

					T/	ABLE 3b						
					Avoi	ded Cost	ts					
				Standard	d Fixed P	rice Optio	on for So	lar QF				
				0	ff-Peak F	orecast (	<u>\$/MWH)</u>					
	-								-			_
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	26.88	20.38	20.88	15.88	17.88	19.13	23.88	26.13	25.63	23.13	25.38	28.38
2016	27.06	25.99	23.32	18.54	16.65	13.43	23.13	27.74	25.51	27.30	27.97	30.11
2017	30.27	29.06	26.04	21.47	19.23	15.43	25.37	30.49	28.02	29.93	30.67	33.03
2018	32.60	31.29	28.03	22.20	19.89	15.96	27.80	33.43	30.71	32.89	33.71	36.32
2019	34.42	33.04	29.59	23.42	20.98	16.82	29.35	35.30	32.42	34.73	35.60	38.36
2020	36.91	35.42	31.72	25.08	22.46	17.99	31.45	37.85	34.75	37.24	38.17	41.14
2021	40.14	39.89	35.57	34.63	34.78	34.93	35.08	35.23	35.39	35.54	37.55	38.87
2022	40.62	40.79	39.46	37.50	37.28	37.35	37.52	37.68	37.85	38.49	41.22	42.36
2023	42.75	42.77	40.39	38.92	38.33	38.34	38.51	38.68	38.85	39.58	42.30	43.25
2024	44.40	43.85	42.14	40.39	39.59	39.25	39.42	39.59	39.77	41.03	43.30	44.26
2025	45.86	45.42	43.61	42.26	41.96	42.16	42.35	42.54	42.74	43.41	46.53	47.52
2026	51.31	51.54	50.79	49.19	48.95	49.19	49.41	49.65	49.89	50.69	54.00	54.64
2027	55.74	55.98	50.87	49.26	49.00	49.24	49.46	49.69	49.93	50.62	53.97	55.02
2028	55.58	55.83	51.18	49.58	49.32	49.56	49.78	50.01	50.25	50.96	54.47	55.54
2029	57.23	56.59	53.51	51.59	51.14	51.38	51.61	51.85	52.10	52.83	56.29	58.50
2030	58.68	58.33	53.77	51.92	51.63	51.88	52.12	52.36	52.61	53.35	56.87	60.20
2031	59.33	59.03	55.32	53.04	52.73	52.98	53.22	53.46	53.72	54.48	58.06	59.20
2032	60.50	60.19	56.41	54.08	53.76	54.02	54.26	54.51	54.77	55.54	59.20	60.36
2033	61.76	61.44	57.59	55.21	54.89	55.15	55.40	55.66	55.92	56.71	60.43	61.62
2034	62.95	62.62	58.69	56.27	55.94	56.21	56.46	56.72	56.99	57.80	61.59	62.80
2035	64.35	64.02	60.01	57.54	57.21	57.48	57.74	58.00	58.28	59.10	62.97	64.20
2036	65.90	65.57	61.48	58.96	58.62	58.90	59.16	59.43	59.72	60.55	64.50	65.76
2037	67.50	67.15	62.99	60.42	60.07	60.35	60.62	60.90	61.18	62.03	66.06	67.34
2038	69.14	68.79	64.54	61.92	61.56	61.85	62.12	62.41	62.70	63.57	67.67	68.98
2039	70.63	70.28	65.94	63.27	62.91	63.20	63.48	63.77	64.07	64.95	69.14	70.47
2040	72.44	72.08	67.66	64.94	64.57	64.87	65.16	65.45	65.75	66.65	70.93	72.28

#### 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.

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 during the Renewable Resource Deficiency Period.

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 5%. The capacity contribution for Solar QF resources (Tables 6a and 6b) is assumed to be 5%. 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.

Sellers with PPAs exceeding 15 years will receive pricing equal to the Mid-C Index Price and will retain all Environmental Attributes generated by the facility for all years up to five in excess of the initial 15.

					Т	ABLE 4a									
				F	Renewabl	e Avoide	d Costs								
			Rer	newable F	Fixed Price	ce Option	for Base	e Load Q	F						
				0	n-Peak F	orecast (	\$/MWH)								
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
2015	31.13	25.13	26.13	21.88	22.88	25.13	33.13	34.73	29.63	27.38	28.88	33.13			
2016	31.43	30.01	26.93	25.51	24.81	23.06	31.90	36.26	32.22	30.97	31.97	34.43			
2017	34.12	32.56	29.20	28.13	27.35	25.40	34.51	39.26	34.86	33.83	34.92	37.63			
2018	36.46	34.80	31.19	29.53	28.71	26.67	37.01	42.11	37.38	35.92	37.09	39.97			
2019	38.14	36.40	32.63	30.89	30.03	27.89	38.72	44.06	39.11	37.58	38.80	41.81			
2020	125.74	126.53	125.41	127.03	140.05	145.57	127.38	130.51	126.75	126.47	126.82	126.50			
2021	128.18	129.01	128.18	130.15	141.81	147.45	129.70	133.53	129.93	129.92	129.25	129.25			
2022															
2023															
2024	135.86	136.38	135.36	136.28	146.93	155.96	135.98	140.58	138.31	137.11	136.55	136.70			
2025	138.62	138.64	137.83	139.58	150.44	158.68	138.76	145.07	140.30	139.79	139.31	139.77			
2026	140.87	141.39	139.68	141.34	152.50	159.44	142.48	146.95	142.42	141.35	141.73	141.93			
2027	143.35	143.68	141.92	144.13	156.12	161.22	143.98	150.23	144.81	144.21	143.23	143.91			
2028	145.59	145.24	143.77	146.24	154.86	164.58	146.34	151.58	146.46	147.03	145.51	146.47			
2029	148.52	148.11	146.70	148.71	156.81	166.96	149.67	154.97	151.19	148.80	148.14	148.56			
2030	150.70	150.10	149.63	151.33	158.53	171.27	151.96	157.20	152.65	150.63	150.43	151.36			
2031	153.13	152.24	151.91	153.77	160.72	172.88	154.08	160.45	154.91	153.55	152.94	154.66			
2032	155.39	155.13	153.42	156.21	163.63	173.43	156.94	163.70	156.96	155.52	155.35	156.18			
2033	159.11	157.29	156.26	159.12	166.65	175.17	159.51	166.08	159.59	158.06	158.73	159.11			
2034	162.00	160.14	158.93	162.71	168.39	179.93	162.85	168.61	162.36	161.53	161.50	162.49			
2035	165.29	162.52	161.82	165.46	170.12	180.84	166.22	172.80	165.75	163.86	164.19	165.36			
2036	167.06	164.63	164.72	168.74	172.98	183.24	169.29	177.62	168.66	165.76	166.45	167.44			
2037	169.87	168.42	167.79	172.22	176.16	185.49	173.84	181.72	173.07	168.66	170.66	170.35			
2038	173.31	171.82	170.94	175.63	180.61	188.47	176.69	185.88	174.80	172.08	173.45	173.29			
2039	176.00	174.40	173.68	177.96	184.42	192.12	178.50	185.19	176.58	175.25	176.42	176.04			
2040	178.64	177.31	176.42	181.75	186.84	195.04	182.42	188.36	179.69	178.02	179.69	179.60			

					Т	ABLE 4b						
				F	Renewable	e Avoide	d Costs					
			Rei		Fixed Price			e Load Q	F			
				0	ff-Peak F	orecast (	\$/MWH)					
No. an	les.	<b>F</b> - 1-		<b>A</b>	M		l. I	A	0	0.1	Nerr	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	26.88 27.06	20.38 25.99	20.88 23.32	15.88 18.54	17.88 16.65	19.13 13.43	23.88 23.13	26.13 27.74	25.63 25.51	23.13 27.30	25.38 27.97	28.38 30.11
2016 2017	30.27	25.99	25.32	21.47	19.23	15.43	25.13	30.49	25.51	29.93	30.67	33.03
2018 2019	32.60 34.42	31.29 33.04	28.03 29.59	22.20 23.42	19.89 20.98	15.96 16.82	27.80 29.35	33.43 35.30	30.71 32.42	32.89 34.73	33.71 35.60	36.32 38.36
	-			-					-			
2020	68.58	67.81	70.03	66.95	51.47	41.59	66.31	63.57	67.34	67.56	68.43	67.52
2021	71.70	70.03	70.67	68.13 70.14	54.41 52.58	44.45	68.58	64.91	68.43	69.50	69.36	69.20 71.27
2022	72.83	72.10	72.50	-		43.90	73.59	66.03	71.26	70.61	70.94	
2023	74.08	73.80	75.03	73.19	51.34	44.74	74.72	68.53	72.72	72.11	72.75	73.03
2024 2025	74.27 76.37	73.88	76.02	73.85 75.22	58.94	50.44	74.10	67.73 69.30	72.49	72.53	73.47	74.32
		76.84	78.49	-	60.00	52.58	76.18		74.23	74.75	76.80	74.78
2026	78.55 81.57	78.33 80.52	81.13	78.05	64.87 65.36	53.28	76.32	71.90 72.83	76.57 78.65	77.89 80.47	78.72 80.82	77.07 79.73
2027			82.48	79.59		56.20	79.64					
2028	83.33	83.05	84.80	82.68	69.45	56.44	82.37	73.98	81.24	81.50	82.54	82.21
2029 2030	84.45	85.45	86.98	85.41	72.98	59.37	84.03	75.52	82.32	84.06	85.12	85.43
	87.14	88.37	89.47	86.42	76.31 79.11	62.56	85.40	78.15	85.83 87.31	87.25	87.66	87.28 87.50
2031	89.62 91.36	91.21 92.90	92.09 94.09	88.87 90.37	81.83	66.01 66.80	88.30 89.22	81.26 81.75	89.34	89.03 92.12	90.93 91.54	90.26
2032 2033	91.30	92.90 96.19	94.09	90.37	84.73	71.50	93.78	83.69	92.81	92.12	91.54	90.26
2033	94.30	98.62	97.29	93.45 95.91	86.88	71.32	95.58	86.58	92.01	95.63	94.00 96.55	95.33
2034	96.65	98.62 101.39	99.97 102.07	95.91	90.58	76.12	95.58 97.06	86.87	95.37	97.26	96.55	96.04
2035	100.30	101.39	102.07	98.13	90.58	81.09	97.06	87.79	97.02	<u>99.24</u> 102.10	102.08	98.15
2036	100.30	103.84	104.15	100.80	92.11	82.63	97.21	89.65	90.23 99.63	102.10	102.08	103.24
2037	106.63	108.19	107.32	100.80	97.37	85.19	90.42 101.14	90.69	103.90	105.58	105.83	105.85
2038	106.63	108.17	112.13	102.76	97.37 98.97	86.96	101.14	90.69	103.90	1108.20	105.75	105.85
		-										
2040	112.13	113.43	114.50	108.34	100.07	89.08	107.33	97.98	110.92	112.29	110.09	110.91

					T	ABLE 5a						
				F	Renewabl	e Avoide	d Costs					
			ŀ	Renewab	le Fixed F	Price Opt	ion for W	ind QF				
				0	n-Peak F	orecast	<u>\$/MWH)</u>					
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	27.37	21.37	22.37	18.12	19.12	21.37	29.37	30.97	25.87	23.62	25.12	29.37
2016	27.59	26.17	23.09	21.67	20.97	19.22	28.06	32.42	28.38	27.13	28.13	30.59
2017	30.21	28.65	25.29	24.22	23.44	21.49	30.60	35.35	30.95	29.92	31.01	33.72
2018	32.47	30.81	27.20	25.54	24.72	22.68	33.02	38.12	33.39	31.93	33.10	35.98
2019	34.07	32.33	28.56	26.82	25.96	23.82	34.65	39.99	35.04	33.51	34.73	37.74
2020	85.86	86.65	85.54	87.16	100.18	105.69	87.50	90.64	86.87	86.60	86.95	86.62
2021	87.40	88.23	87.41	89.37	101.03	106.68	88.92	92.76	89.15	89.14	88.47	88.47
2022	89.35	89.45	88.82	90.65	105.32	109.82	88.76	93.49	89.83	91.11	90.06	89.71
2023	91.25	91.00	89.77	92.10	106.88	112.00	90.75	94.46	91.55	92.81	91.53	92.08
2024	92.74	93.26	92.24	93.16	103.81	112.84	92.86	97.46	95.19	93.99	93.43	93.58
2025	94.53	94.55	93.74	95.49	106.35	114.59	94.67	100.98	96.21	95.70	95.22	95.68
2026	95.91	96.43	94.72	96.38	107.54	114.49	97.52	101.99	97.46	96.39	96.77	96.97
2027	97.49	97.83	96.07	98.27	110.27	115.36	98.12	104.38	98.96	98.36	97.37	98.06
2028	98.83	98.49	97.01	99.48	108.10	117.82	99.59	104.83	99.70	100.27	98.75	99.71
2029	100.84	100.43	99.01	101.03	109.12	119.27	101.99	107.29	103.51	101.12	100.45	100.88
2030	102.09	101.49	101.02	102.72	109.91	122.66	103.35	108.59	104.04	102.01	101.81	102.75
2031	103.55	102.66	102.33	104.19	111.14	123.30	104.50	110.88	105.33	103.98	103.36	105.08
2032	105.12	104.87	103.15	105.94	113.37	123.17	106.67	113.43	106.70	105.25	105.09	105.92
2033	107.55	105.73	104.70	107.57	115.10	123.61	107.96	114.52	108.04	106.50	107.17	107.56
2034	109.28	107.42	106.21	109.99	115.67	127.21	110.13	115.89	109.64	108.81	108.77	109.77
2035	111.68	108.91	108.21	111.85	116.51	127.23	112.61	119.19	112.14	110.25	110.58	111.75
2036	112.55	110.12	110.20	114.23	118.47	128.73	114.78	123.11	114.15	111.25	111.94	112.93
2037	114.13	112.67	112.05	116.48	120.41	129.75	118.09	125.98	117.33	112.92	114.91	114.61
2038	116.47	114.98	114.10	118.79	123.77	131.63	119.85	129.04	117.96	115.24	116.60	116.45
2039	118.03	116.44	115.72	119.99	126.46	134.15	120.53	127.22	118.62	117.28	118.45	118.07
2040	119.52	118.20	117.31	122.64	127.73	135.93	123.31	129.24	120.58	118.91	120.58	120.48

					TA	ABLE 5b						
					enewable							
				Renewab				ind QF				
				0	ff-Peak F	orecast (	\$/MWH)					
Veer	lan	Feb	Mar	Amr	Max	l	Jul	A	Com	0.04	Nev	Dee
Year 2015	Jan 23.12	16.62	17.12	Apr 12.12	May 14.12	Jun 15.37	20.12	Aug 22.37	<b>Sep</b> 21.87	Oct 19.37	<b>Nov</b> 21.62	<b>Dec</b> 24.62
2015	23.12	22.15	19.48	14.70	12.81	9.59	19.29	23.90	21.67	23.46	24.13	26.27
2010	26.36	25.15	22.13	17.56	15.32	11.52	21.46	26.58	24.11	26.02	24.13	20.27
2017	28.61	27.30	24.04	18.21	15.90	11.97	23.81	29.44	26.72	28.90	29.72	32.33
2010	30.35	28.97	25.52	19.35	16.91	12.75	25.28	31.23	28.35	30.66	31.53	34.29
2020	64.43	63.66	65.88	62.80	47.32	37.44	62.16	59.42	63.19	63.41	64.28	63.37
2020	67.47	65.80	66.44	63.90	50.18	40.22	64.35	60.68	64.20	65.27	65.13	64.97
2022	68.52	67.79	68.19	65.83	48.27	39.59	69.28	61.72	66.95	66.30	66.63	66.96
2023	69.68	69.40	70.63	68.79	46.94	40.34	70.32	64.13	68.32	67.71	68.35	68.63
2024	69.78	69.39	71.53	69.36	54.45	45.95	69.61	63.24	68.00	68.04	68.98	69.83
2025	71.80	72.27	73.92	70.65	55.43	48.01	71.61	64.73	69.66	70.18	72.23	70.21
2026	73.89	73.67	76.47	73.39	60.21	48.62	71.66	67.24	71.91	73.23	74.06	72.41
2027	76.81	75.76	77.72	74.83	60.60	51.44	74.88	68.07	73.89	75.71	76.06	74.97
2028	78.48	78.20	79.95	77.83	64.60	51.59	77.52	69.13	76.39	76.65	77.69	77.36
2029	79.50	80.50	82.03	80.46	68.03	54.42	79.08	70.57	77.37	79.11	80.17	80.48
2030	82.10	83.33	84.43	81.38	71.27	57.52	80.36	73.11	80.79	82.21	82.62	82.24
2031	84.48	86.07	86.95	83.73	73.97	60.87	83.16	76.12	82.17	83.89	85.79	82.36
2032	86.12	87.66	88.85	85.13	76.59	61.56	83.98	76.51	84.10	86.88	86.30	85.02
2033	88.95	90.84	91.94	88.10	79.38	66.15	88.43	78.34	87.46	90.28	88.65	87.98
2034	91.20	93.17	94.52	90.46	81.43	65.87	90.13	81.13	89.92	91.81	91.10	90.59
2035	91.70	95.83	96.51	92.62	85.02	70.56	91.50	81.31	92.26	93.68	93.34	92.59
2036	94.63	98.17	98.48	92.46	86.44	75.42	91.54	82.12	92.56	96.43	96.41	94.10
2037	98.12	100.41	101.54	95.02	90.94	76.85	92.64	83.87	93.85	99.80	98.05	97.46
2038	100.74	102.28	103.22	96.87	91.48	79.30	95.25	84.80	98.01	102.31	99.86	99.96
2039	103.64	105.36	106.12	100.33	92.96	80.95	100.47	90.19	102.21	104.59	102.43	102.85
2040	106.00	107.30	108.37	102.21	93.94	82.95	101.20	91.85	104.79	106.16	103.96	104.78

					T	ABLE 6a						
				F	Renewabl	e Avoide	d Costs					
			I	Renewab	le Fixed F	Price Opt	ion for S	olar QF				
				0	n-Peak F	orecast (	\$/MWH)					
Veen		<b>F</b> - 1		•			1.1	<b>•</b>	0	0-1	Nerr	Dee
Year	Jan	Feb 25.13	Mar	<b>Apr</b> 21.88	May 22.88	Jun	Jul	Aug	<b>Sep</b> 29.63	Oct	<b>Nov</b> 28.88	Dec 33.13
2015	31.13	25.13 30.01	26.13	25.51	22.88	25.13	33.13 31.90	34.73	29.63	27.38 30.97	28.88	33.13
2016 2017	31.43 34.12	32.56	26.93 29.20	25.51	24.01	23.06 25.40	34.51	36.26 39.26	34.86	33.83	34.92	37.63
2017	36.46	34.80	31.19	29.53	27.33	26.67	37.01	42.11	37.38	35.92	37.09	39.97
2018	38.14	36.40	32.63	30.89	30.03		38.72	44.06	39.11	37.58	38.80	41.81
2019	90.01	90.80	32.63 89.69	91.31	104.33	27.89 109.84	91.65	94.79	91.02	90.75	91.10	90.77
2020	90.01	90.80		93.60	104.33	110.91	93.15	96.99	93.38	93.37	91.10	90.77
2021	91.63	92.46	91.64 93.13	93.80	109.63	114.13	93.15	96.99	93.30	95.42	92.70	92.70
2022	95.65	95.40	93.13	94.90	111.28	116.40	95.15	98.86	94.14	97.21	94.37	94.02
2023	95.05	95.40	94.17	97.65	108.30	117.33	97.35	101.95	99.68	97.21	95.93	98.07
2024	99.10	99.12	98.31	100.06	110.92	119.16	99.24	101.95	100.78	100.27	99.79	100.25
2025	100.57	101.09	99.38	100.00	112.20	119.15	102.18	105.55	100.78	100.27	101.43	100.23
2020	100.37	101.03	100.83	101.04	115.03	120.12	102.88	100.03	102.12	101.03	101.43	101.03
2027	102.23	102.33	100.85	103.03	112.95	120.12	102.00	109.68	103.72	105.12	102.13	102.02
2020	105.79	105.38	101.00	105.98	114.07	124.22	104.44	112.24	104.35	106.07	105.40	105.83
2020	107.13	106.53	106.06	107.76	114.95	127.70	108.39	113.63	109.08	100.07	106.85	107.79
2031	107.10	107.80	107.47	109.33	116.28	128.44	109.64	116.02	110.47	107.00	108.50	110.22
2032	110.36	110.11	108.39	111.18	118.61	128.41	111.91	118.67	111.94	110.49	110.33	111.16
2033	112.90	111.08	110.05	112.92	120.45	128.96	113.31	119.87	113.39	111.85	112.52	112.91
2034	114.73	112.87	111.66	115.44	121.12	132.66	115.58	121.34	115.09	114.26	114.22	115.22
2035	117.24	114.47	113.77	117.41	122.07	132.79	118.17	124.75	117.70	115.81	116.14	117.31
2036	118.22	115.79	115.87	119.90	124.14	134.40	120.45	128.78	119.82	116.92	117.61	118.60
2037	119.91	118.45	117.83	122.26	126.19	135.53	123.87	131.76	123.11	118.70	120.69	120.39
2038	122.36	120.87	119.99	124.68	129.66	137.52	125.74	134.93	123.85	121.13	122.49	122.34
2039	124.04	122.45	121.73	126.00	132.47	140.16	126.54	133.23	124.63	123.29	124.46	124.08
2040	125.65	124.33	123.44	128.77	133.86	142.06	129.44	135.37	126.71	125.04	126.71	126.61

					T	ABLE 6b						
					Renewable							
					le Fixed F		-	olar QF				
				0	ff-Peak F	orecast (	\$/MWH)					
Year	Jan	Feb	Mar	Apr	Mav	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	26.88	20.38	20.88	15.88	17.88	19.13	23.88	26.13	25.63	23.13	25.38	28.38
2016	27.06	25.99	23.32	18.54	16.65	13.43	23.13	27.74	25.51	27.30	27.97	30.11
2017	30.27	29.06	26.04	21.47	19.23	15.43	25.37	30.49	28.02	29.93	30.67	33.03
2018	32.60	31.29	28.03	22.20	19.89	15.96	27.80	33.43	30.71	32.89	33.71	36.32
2019	34.42	33.04	29.59	23.42	20.98	16.82	29.35	35.30	32.42	34.73	35.60	38.36
2020	68.58	67.81	70.03	66.95	51.47	41.59	66.31	63.57	67.34	67.56	68.43	67.52
2021	71.70	70.03	70.67	68.13	54.41	44.45	68.58	64.91	68.43	69.50	69.36	69.20
2022	72.83	72.10	72.50	70.14	52.58	43.90	73.59	66.03	71.26	70.61	70.94	71.27
2023	74.08	73.80	75.03	73.19	51.34	44.74	74.72	68.53	72.72	72.11	72.75	73.03
2024	74.27	73.88	76.02	73.85	58.94	50.44	74.10	67.73	72.49	72.53	73.47	74.32
2025	76.37	76.84	78.49	75.22	60.00	52.58	76.18	69.30	74.23	74.75	76.80	74.78
2026	78.55	78.33	81.13	78.05	64.87	53.28	76.32	71.90	76.57	77.89	78.72	77.07
2027	81.57	80.52	82.48	79.59	65.36	56.20	79.64	72.83	78.65	80.47	80.82	79.73
2028	83.33	83.05	84.80	82.68	69.45	56.44	82.37	73.98	81.24	81.50	82.54	82.21
2029	84.45	85.45	86.98	85.41	72.98	59.37	84.03	75.52	82.32	84.06	85.12	85.43
2030	87.14	88.37	89.47	86.42	76.31	62.56	85.40	78.15	85.83	87.25	87.66	87.28
2031	89.62	91.21	92.09	88.87	79.11	66.01	88.30	81.26	87.31	89.03	90.93	87.50
2032	91.36	92.90	94.09	90.37	81.83	66.80	89.22	81.75	89.34	92.12	91.54	90.26
2033	94.30	96.19	97.29	93.45	84.73	71.50	93.78	83.69	92.81	95.63	94.00	93.33
2034	96.65	98.62	99.97	95.91	86.88	71.32	95.58	86.58	95.37	97.26	96.55	96.04
2035	97.26	101.39	102.07	98.18	90.58	76.12	97.06	86.87	97.82	99.24	98.90	98.15
2036	100.30	103.84	104.15	98.13	92.11	81.09	97.21	87.79	98.23	102.10	102.08	99.77
2037	103.90	106.19	107.32	100.80	96.72	82.63	98.42	89.65	99.63	105.58	103.83	103.24
2038	106.63	108.17	109.11	102.76	97.37	85.19	101.14	90.69	103.90	108.20	105.75	105.85
2039	109.65	111.37	112.13	106.34	98.97	86.96	106.48	96.20	108.22	110.60	108.44	108.86
2040	112.13	113.43	114.50	108.34	100.07	89.08	107.33	97.98	110.92	112.29	110.09	110.91

## WIND INTEGRATION

TABLE 7	
Wind Integration	
Year	Cost
2015	3.76
2016	3.84
2017	3.91
2018	3.99
2019	4.07
2020	4.15
2021	4.23
2022	4.31
2023	4.40
2024	4.49
2025	4.57
2026	4.66
2027	4.76
2028	4.85
2029	4.95
2030	5.04
2031	5.14
2032	5.24
2033	5.35
2034	5.45
2035	5.56
2036	5.67
2037	5.78
2038	5.89
2039	6.01
2040	6.13

#### 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.

## 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 PRICING UNDER THE STANDARD PPA

A QF will be eligible to receive pricing 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 10 MW.

## 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 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 pricing under the Standard PPA is sought.

## SCHEDULE 201 (Concluded)

## DEFINITION OF A SMALL COGENERATION FACILITY OR SMALL POWER PRODUCTION FACILITY ELIGIBLE TO RECEIVE PRICING UNDER THE STANDARD PPA (Continued)

## Definition of Shared Interconnection and Infrastructure

QFs otherwise meeting the above-described separate ownership test and thereby qualified for entitlement to 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 pricing under the Standard PPA so long as the use of the shared interconnection complies with the interconnecting utility's safety and reliability standards, interconnection agreement requirements and Prudent Electrical Practices as that term is defined in the interconnecting utility's approved Standard PPA.

#### OTHER DEFINITIONS

#### 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: <u>https://www.theice.com/products/OTC/Physical-Energy/Electricity</u>. 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 (C02), methane (CH4), and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere.

## SCHEDULE 201 (Concluded)

#### **OTHER DEFINITIONS (Continued)**

#### Definition of Resource Sufficiency Period

This is the period from the current year through 2020.

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

This is the period from 2021 through 2034.

#### Definition of Renewable Resource Sufficiency Period

This is the period from the current year through 2019.

#### Definition of Renewable Resource Deficiency Period

This is the period from 2020 through 2034.

#### 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 pricing under the Standard PPA. Disputes may be presented to the Commission for resolution.

#### 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.

#### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day caused **PORTLAND GENERAL ELECTRIC** 

## **COMPANY'S APPLICATION TO UPDATE SCHEDULE 201 QUALIFYING FACILITY**

**INFORMATION** to be served by electronic mail to those parties whose email addresses appear

on the attached service list for OPUC Docket No. UM 1610.

DATED at Portland, Oregon, this 1<sup>st</sup> day of May, 2015.

HANN

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CERTIFICATE OF SERVICE – PAGE 2

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