

**EXH. CLS-9C
DOCKET UE-200115
COLSTRIP UNIT 4 SALE
WITNESS: CINDY L. SONG**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**In the Matter of the Application of
PUGET SOUND ENERGY**

**For an Order Authorizing the Sale of
All of Puget Sound Energy's Interests
in Colstrip Unit 4 and Certain of
Puget Sound Energy's Interests in
the Colstrip Transmission System**

Docket UE-200115

**FIRST EXHIBIT (CONFIDENTIAL) TO THE
PREFILED SUPPLEMENTAL DIRECT TESTIMONY OF
CINDY L. SONG
ON BEHALF OF PUGET SOUND ENERGY**

**REDACTED
VERSION**

AUGUST 20, 2020

PSE Quantitative Analysis Comparing "Business as Usual" Scenario and the "Proposed Sale" Scenario

	(A)	(B)	(C)
		Scenario 1	Scenario 2
		No hedging	Hedge 95MW
<u>Line</u>			
1	Operational cost (\$ in millions)		
2	Colstrip unit 4 continuing operations	\$171 M	\$171 M
3	90MW 5-year PPA + 95MW replacement	\$138 M	\$166 M
4	PPA Savings NPV	\$33 M	\$6 M
5			
6	Operational cost (\$/MWh)		
7	Colstrip unit 4 continuing operations	\$40.5/MWh	\$40.5/MWh
8	90MW 5-year PPA + 95MW replacement	\$32.8/MWh	\$39.4/MWh
9	Savings \$/MWh	\$7.7/MWh	\$1.1/MWh

**PSE Quantitative Analysis Comparing "Business
as Usual" Scenario and the "Proposed Sale" Scenario
Five-Year Comparison**

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	
			12/17/2020 - 12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025
Line								
	Scenario 1 - No hedging							
1		Present Value						
2	Operational cost (\$ in millions)	\$171 M						
3	Colstrip unit 4 continuing operations	\$138 M	\$2 M	\$41 M	\$35 M	\$37 M	\$49 M	\$45 M
4	90MW 5-year PPA + 95MW replacement	\$33 M	\$2 M	\$33 M	\$32 M	\$32 M	\$33 M	\$36 M
5	PPA savings		(\$0)	\$8 M	\$3 M	\$5 M	\$16 M	\$9 M
6		Average						
7	Operational cost (\$/MWh)	\$40.5/MWh	\$33.3/MWh	\$39.3/MWh	\$35.0/MWh	\$36.8/MWh	\$49.2/MWh	\$42.8/MWh
8	Colstrip unit 4 continuing operations	\$32.8/MWh	\$35.0/MWh	\$31.6/MWh	\$31.7/MWh	\$31.8/MWh	\$33.3/MWh	\$35.8/MWh
9	90MW 5-year PPA + 95MW replacement	\$7.7/MWh	(\$1.7)	\$7.7/MWh	\$3.3/MWh	\$5.0/MWh	\$15.9/MWh	\$7.0/MWh
10	Savings \$/MWh							
11	Scenario 2 - Hedge 95MW							
12	<i>\$ in millions</i>							
13		Present Value						
14	Operational cost	\$171 M	\$2 M	\$41 M	\$35 M	\$37 M	\$49 M	\$45 M
15	Colstrip unit 4 continuing operations	\$166 M	\$2 M	\$40 M	\$39 M	\$39 M	\$39 M	\$42 M
16	90MW 5-year PPA + 95MW replacement	\$6 M	(\$0)	\$1 M	(\$4) M	(\$2)	\$10 M	\$3 M
17	PPA savings							
18		Average						
19	Operational cost (\$/MWh)	\$40.5/MWh	\$33.3/MWh	\$39.3/MWh	\$35.0/MWh	\$36.8/MWh	\$49.2/MWh	\$42.8/MWh
20	Colstrip unit 4 continuing operations	\$39.4/MWh	\$35.0/MWh	\$38.3/MWh	\$38.7/MWh	\$38.7/MWh	\$39.3/MWh	\$41.8/MWh
21	90MW 5-year PPA + 95MW replacement	\$1.1/MWh	(\$1.7)	\$1.0/MWh	(\$3.7)/MWh	(\$1.9)/MWh	\$9.9/MWh	\$1.0/MWh
22	Savings \$/MWh							

Tab: 5-year Comparison

Colstrip Unit 4 - Continuing Operations

Line	\$ in millions	12/17/2020-12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	Average
1	PSE's share of unit 4 capacity	185 MW	185 MW	185 MW	185 MW	185 MW	185 MW	185 MW
2	PSE's take (MWh)	60,101	1,043,373	999,978	1,005,609	995,692	1,051,979	1,019,326
3								
4	Net capacity factor	80%	64%	62%	62%	61%	65%	63%
5								
6	Colstrip unit 4 operating cost							
7	Fixed operating expenses	\$0.5 M	\$13 M	\$12 M	\$13 M	\$13 M	\$14 M	\$13 M
8	Overhaul	\$0.0 M	\$0 M	\$0 M	\$0 M	\$6 M	\$0 M	\$1 M
9	Capital	\$0.0 M	\$6 M	\$0 M	\$2 M	\$7 M	\$7 M	\$5 M
10	Dispatch cost	\$1.1 M	\$20 M	\$20 M	\$20 M	\$20 M	\$21 M	\$20 M
11	Colstrip unit 4 operating cost	\$1.6 M	\$38 M	\$32 M	\$35 M	\$46 M	\$42 M	\$39 M
12								
13	Property Tax	\$0.1 M	\$3 M	\$3 M	\$3 M	\$3 M	\$3 M	\$3 M
14								
15	Total cost (line 11 +13)	\$2.0 M	\$41 M	\$35 M	\$37 M	\$49 M	\$45 M	\$41 M
16								
17	Dispatch cost (line 10 / 2)	\$18.3/MWh	\$19.5/MWh	\$19.6/MWh	\$19.7/MWh	\$19.8/MWh	\$19.9/MWh	\$19.7/MWh
18	Cost \$/MWh (line 15 / 2)	\$33.3/MWh	\$39.3/MWh	\$35.0/MWh	\$36.8/MWh	\$49.2/MWh	\$42.8/MWh	\$40.2/MWh
19								
20	Total cost NPV (line 15)		\$171 M					
21	Cost \$/MWh (5-year average)		\$40.5/MWh					

Scenario 1 - No Hedging

Line		12/17/2020- 12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	1/1/2025- 12/2/2025
1	90 MW NEW PPA						
2	NW + Talen PPA capacity	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW
3							
4	Energy (MWh)	29,238	507,587	486,476	489,215	484,391	454,852
5	PPA price (\$/MWh)	\$25.8/MWh	\$25.9/MWh	\$25.9/MWh	\$25.8/MWh	\$26.0/MWh	\$26.6/MWh
6	PPA cost	\$1 M	\$13 M	\$13 M	\$13 M	\$13 M	\$12 M
7	Base O&M	\$0 M	\$6 M	\$6 M	\$6 M	\$6 M	\$6 M
8	Total PPA (line 6+7)	\$1 M	\$19 M	\$19 M	\$19 M	\$19 M	\$18 M
9							
10	95 MW Replacement						
11	Replacement energy post PPA						
12	Replacement energy (MWh)	30,862	535,786	513,502	516,394	511,301	540,205
13	Mid-C price (\$/MWh)	\$25.2/MWh	\$24.7/MWh	\$24.2/MWh	\$23.8/MWh	\$25.5/MWh	\$26.7/MWh
14	Energy replacement	\$1 M	\$13 M	\$12 M	\$12 M	\$13 M	\$14 M
15							
16	Replacement capacity winter only						
17	Capacity (MW)	95 MW	95 MW	95 MW	95 MW	95 MW	95 MW
18	Capacity charge \$/KW-yr	\$12.0/kw-yr	\$12.0/kw-yr	\$12.3/kw-yr	\$12.6/kw-yr	\$12.9/kw-yr	\$13.2/kw-yr
19	Capacity replacement cost	\$0 M	\$1 M	\$1 M	\$1 M	\$1 M	\$1 M
20							

Scenario 2 - Hedge 95MW

Line	12/17/2020-12/31/2020		12/31/2021		12/31/2022		12/31/2023		12/31/2024		1/1/2025-12/2/2025	
1	90 MW NEW PPA											
2	NW + Talen PPA capacity	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW	90 MW
3												
4	Energy (MWh)	29,238	507,587	486,476	489,215	484,391	454,852					
5	PPA price (\$/MWh)	\$25.8/MWh	\$25.9/MWh	\$25.9/MWh	\$25.8/MWh	\$26.0/MWh	\$26.6/MWh					
6	PPA cost	\$1 M	\$13 M	\$13 M	\$13 M	\$13 M	\$12 M					
7	Base O&M	\$0 M	\$6 M	\$6 M	\$6 M	\$6 M	\$6 M					
8	Total PPA (line 6+7)	\$1 M	\$19 M	\$19 M	\$19 M	\$19 M	\$18 M					
9												
10	95 MW Replacement											
11	Replacement energy post PPA											
12	Replacement energy (MWh)	30,862	535,786	513,502	516,394	511,301	540,205					
13	Mid-C price (\$/MWh)	\$36.6/MWh	\$36.6/MWh	\$36.6/MWh	\$36.6/MWh	\$36.6/MWh	\$36.6/MWh					
14	Energy replacement	\$1 M	\$20 M	\$19 M	\$19 M	\$19 M	\$20 M					
15												
16	Replacement capacity winter only											
17	Capacity (MW)	95 MW	95 MW	95 MW	95 MW	95 MW	95 MW					
18	Capacity charge \$/KW-yr	\$12.0/kw-yr	\$12.0/kw-yr	\$12.3/kw-yr	\$12.6/kw-yr	\$12.9/kw-yr	\$12.9/kw-yr					
19	Capacity replacement cost	\$0 M	\$1 M	\$1 M	\$1 M	\$1 M	\$1 M					
20												

Scenario 2 - Hedge 95MW

Line	<i>in millions</i>	12/17/2020- 12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	1/1/2025- 12/2/2025
21	90 MW Replacement after PPA Ends						12/3/2020- 12/31/2020
22	Replacement energy post PPA						
23	Replacement energy (MWh)						56,921
24	Mid-C price (\$/MWh)						\$36.6/MWh
25	Energy replacement						\$2 M
26							
27	Replacement capacity winter only						
28	Capacity (MW)						90 MW
29	Capacity charge \$/KW-yr						\$12.9/kw-yr
30	Capacity replacement cost						\$0 M
31							
32	Total cost (line 8+14+19+25+30)	\$2 M	\$40 M	\$39 M	\$39 M	\$39 M	\$42 M
33							
34	Total capacity	185 MW	185 MW	185 MW	185 MW	185 MW	185 MW
35	Total energy MWh	60,101	1,043,373	999,978	1,005,609	995,692	995,058
36	Cost \$/MWh (line 32 / 35)	\$35.0/MWh	\$38.3/MWh	\$38.7/MWh	\$38.7/MWh	\$39.3/MWh	\$41.8/MWh
37							
38	Total cost NPV (line 32)	\$166					
39	Cost \$/MWh (5-year average)	\$39.4/MWh					

Proposed 2020 Budget

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Line Total	2020	2021	2022	2023	2024	2025
1 Output	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
2						
3 O&M Costs	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
4 High Calcium	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
5 Startup Fuel	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
6 Pollution Control Fees	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
7 Mercury Control Fees	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
8 Water Treatment Chemicals	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
9 O&M Maintenance	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
10 Overhaul	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
11 Reserves	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
12 Total	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
13						
14 Capital	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
15						
16 Total	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
17 PSE Unit 4 Share						

Proposed 2020 Budget

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	2020	2021	2022	2023	2024	2025
18 Output	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
19	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
20	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
21 O&M Costs	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
22 High Calcuim	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
23 Startup Fuel	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
24 Pollution Control Fees	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
25 Mercury Control Fees	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
26 Water Treatment Chemicals	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
27 O&M Maintenance	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
28 Overhaul	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
29 Reserves	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
30 Total	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
31						
32 Capital	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX

Cost Breakdown

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		No Hedging					1/1/2025-
		12/17/2020-	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/2/2025
Present Value	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2024	12/2/2025
1 Cost							
2 90 MW PPA	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
3 Market Replacement	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
4 Total	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
5							
6 \$/MWh							
7 90 MW PPA	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
8 Market Replacement	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
9 Total	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
10							
11 100% Market Replacement							
12 Energy MWh	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
13 Rate	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
14 Market Value	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
15							
16 Capacity MW	95	185	185	185	185	185	185
17 Capacity charge \$/KW-yr	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX
18 Capacity Cost	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX
19							
20 Total	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
21							
22							
23 \$/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
24							

Cost Breakdown

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	Present Value	12/31/2021	12/31/2022	12/31/2023	12/31/2024	1/1/2025-12/2/2025
25						
26						
27	Cost					
28	90 MW PPA	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
29	Market Replacement	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
30	Total	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
31						
32	\$/MWh					
33	90 MW PPA	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
34	Market Replacement	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
35	Total	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
36						
37	100% Market Replacement					
38	Energy MWh	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
39	Rate	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
40	Market Value	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
41						
42	Capacity MW	185	185	185	185	185
43	Capacity charge \$/KW-yr	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX
44	Capacity Cost	\$XXX	\$XXX	\$XXX	\$XXX	\$XXX
45						
46	Total	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M	\$XXXX M
47						
48						
49	\$/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh	\$XXXX/MWh
50						

Tab: Cost Breakdown (R)

Colstrip Unit 4 Dispatch Assumptions

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Assumption Coal Contract

Line	12/17/2020-12/31/2020		2020	2021	2022	2023	2024	2025	1/1/2025-12/2/2025		1/1/2025-12/2/2025		1/1/2025-12/2/2025		2025		PPA		Replacement Power		
1	Energy (MWh)		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
2	Revenue (\$'000)		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
3	Cost (\$'000)		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
4																					
5	Market Rate (\$/MWh)		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
6	Dispatch costs (\$/MWh)		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX

O&M Adder	O&M Base Equivalent Rate	O&M Base MWh	MWh	Time Frame	PPA MWh	PPA Costs
2020	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	12/15/2020-12/31/2025	XXXXXXXXXX	XXXXXXXXXX
2021	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	2021	XXXXXXXXXX	XXXXXXXXXX
2022	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	2022	XXXXXXXXXX	XXXXXXXXXX
2023	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	2023	XXXXXXXXXX	XXXXXXXXXX
2024	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	2024	XXXXXXXXXX	XXXXXXXXXX
2025	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	1/1/2025-12/2/2025	XXXXXXXXXX	XXXXXXXXXX

PSE's Weighted Average Cost of Capital

<u>Line</u>		Ratio	Cost	Weighted Cost	Tax Rate	After-tax Weighted Cost
1						
2	Capital Structure					
3	Debt	51.5%	5.50%	2.83%	21.00%	2.24%
4	Equity	48.5%	9.40%	4.56%		4.56%
5	Total	100.0%		7.39%		6.80%