

EXHIBIT NO. __ (RG-16)
DOCKET NO. UE-121373
WITNESS: ROGER GARRATT

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

Petition of

PUGET SOUND ENERGY, INC.

**for Approval of a Power Purchase Agreement
for Acquisition of Coal Transition Power, as
Defined in RCW 80.80.010, and the Recovery
of Related Acquisition Costs**

Docket No. UE-121373

**FIRST EXHIBIT (NONCONFIDENTIAL) TO THE PREFILED
SUPPLEMENTAL TESTIMONY OF
ROGER GARRATT
ON BEHALF OF PUGET SOUND ENERGY, INC.**

NOVEMBER 19, 2012

Equity Return Calculation for Coal Transition PPA

Assumptions Used to Find an Equity Return on an Equivalent Plant

346 Capacity of an Equivalent Plant (MW)
\$215 Capital Cost Equivalent Plant \$MM
31-Dec-14 Start Date
31-Dec-25 Stop date
133 PPA Term months 11.08333333 Yrs
7.80% WACC and Discount Rate
9.80% Equity Cost
48.0% Equity Ratio
7.24% Weighted Pre-tax Equity Return (Revenue Required)

Table 1. Summary of Pre-Tax Equity Return Results Commission Staff Method

	<i>B</i>	<i>C</i>	<i>D</i>
15	\$86.22	Nominal Total \$MM	
16	\$66.76	PV Total \$MM @7.8%	
17	<i>\$0.65</i>	"Levelized" \$MM Monthly	Update by Gomez
18	<i>\$0.65</i>	Average \$MM Monthly	= B15 / 133
19	\$7.78	"Levelized" \$MM Annual	
20	346	MW	
21	\$1.88	"Levelized" Monthly \$/kW	
22	\$22.50	"Levelized" Annual \$/kW	
23	\$2.57	"Levelized" \$/MWh	
24	33,595,680	Contract MWh	
25	\$86.30	Nominal Total \$MM- Levelized return	
26	\$57.39	PV "Levelized \$/MWh" Return \$MM	
27	\$2.57	Simple Average = Nominal \$/MWh	
28	\$57.34	PV "Levelized \$/kW" Return \$MM	

Equity Return Calculation for Coal Transition PPA

Assumptions Used to Find an Equity Return on an Equivalent Plant

- 346 Capacity of an Equivalent Plant (MW)
- \$215 Capital Cost Equivalent Plant \$MM
- 31-Dec-14 Start Date
- 31-Dec-25 Stop date
- 133 PPA Term months
- 11.08333333 Yrs
- 7.80% WACC and Discount Rate
- 9.80% Equity Cost
- 48.0% Equity Ratio
- 7.24% Weighted Pre-tax Equity Return (Revenue Required)

Table 3. Monthly Return Calculation

A	B	C	D	E	F	G	H	I	J	K	L	M
Month	Year	PPA Volume	Net Plant \$MM	Depreciation \$MM	Avg. Net Plant \$MM	Pre-tax Equity Return	PPA Integer Value	Contract MWH	Levelized Return Commission Method \$/MWh applied (\$MM)	Levelized Return PSE Method \$/MWh applied (\$MM)	Levelized Return Commission Method \$/KW/month applied (\$MM)	Levelized Return PSE Method \$/KW/month applied (\$MM)
0			215.0	133.0 mo		7.24%						
1	Dec-14	180	213.4	\$ 1.6	214.2	1.29	1.00	133,920	0.34	0.39	0.34	0.38
2	Jan-15	180	211.8	\$ 1.6	212.6	1.28	1.00	133,920	0.34	0.39	0.34	0.38
3	Feb-15	180	210.2	\$ 1.6	211.0	1.27	1.00	120,960	0.31	0.35	0.34	0.38
4	Mar-15	180	208.5	\$ 1.6	209.3	1.26	1.00	133,920	0.34	0.39	0.34	0.38
5	Apr-15	180	206.9	\$ 1.6	207.7	1.25	1.00	129,600	0.33	0.38	0.34	0.38
6	May-15	180	205.3	\$ 1.6	206.1	1.24	1.00	133,920	0.34	0.39	0.34	0.38
7	Jun-15	180	203.7	\$ 1.6	204.5	1.23	1.00	129,600	0.33	0.38	0.34	0.38
8	Jul-15	180	202.1	\$ 1.6	202.9	1.22	1.00	133,920	0.34	0.39	0.34	0.38
9	Aug-15	180	200.5	\$ 1.6	201.3	1.21	1.00	133,920	0.34	0.39	0.34	0.38
10	Sep-15	180	198.8	\$ 1.6	199.6	1.20	1.00	129,600	0.33	0.38	0.34	0.38
11	Oct-15	180	197.2	\$ 1.6	198.0	1.19	1.00	133,920	0.34	0.39	0.34	0.38
12	Nov-15	180	195.6	\$ 1.6	196.4	1.18	1.00	129,600	0.33	0.38	0.34	0.38
13	Dec-15	280	194.0	\$ 1.6	194.8	1.17	1.00	208,320	0.54	0.61	0.53	0.60
14	Jan-16	280	192.4	\$ 1.6	193.2	1.17	1.00	208,320	0.54	0.61	0.53	0.60
15	Feb-16	280	190.8	\$ 1.6	191.6	1.16	1.00	194,880	0.50	0.57	0.53	0.60
16	Mar-16	280	189.1	\$ 1.6	189.9	1.15	1.00	208,320	0.54	0.61	0.53	0.60
17	Apr-16	280	187.5	\$ 1.6	188.3	1.14	1.00	201,600	0.52	0.59	0.53	0.60
18	May-16	280	185.9	\$ 1.6	186.7	1.13	1.00	208,320	0.54	0.61	0.53	0.60
19	Jun-16	280	184.3	\$ 1.6	185.1	1.12	1.00	201,600	0.52	0.59	0.53	0.60
20	Jul-16	280	182.7	\$ 1.6	183.5	1.11	1.00	208,320	0.54	0.61	0.53	0.60
21	Aug-16	280	181.1	\$ 1.6	181.9	1.10	1.00	208,320	0.54	0.61	0.53	0.60

22	Sep-16	2016	280	179.4	\$	1.6	180.2	1.09	1.00	201,600	0.52	0.59	0.53	0.60
23	Oct-16	2016	280	177.8	\$	1.6	178.6	1.08	1.00	208,320	0.54	0.61	0.53	0.60
24	Nov-16	2016	280	176.2	\$	1.6	177.0	1.07	1.00	201,600	0.52	0.59	0.53	0.60
25	Dec-16	2016	380	174.6	\$	1.6	175.4	1.06	1.00	282,720	0.73	0.83	0.71	0.81
26	Jan-17	2017	380	173.0	\$	1.6	173.8	1.05	1.00	282,720	0.73	0.83	0.71	0.81
27	Feb-17	2017	380	171.4	\$	1.6	172.2	1.04	1.00	255,360	0.66	0.75	0.71	0.81
28	Mar-17	2017	380	169.7	\$	1.6	170.5	1.03	1.00	282,720	0.73	0.83	0.71	0.81
29	Apr-17	2017	380	168.1	\$	1.6	168.9	1.02	1.00	273,600	0.70	0.80	0.71	0.81
30	May-17	2017	380	166.5	\$	1.6	167.3	1.01	1.00	282,720	0.73	0.83	0.71	0.81
31	Jun-17	2017	380	164.9	\$	1.6	165.7	1.00	1.00	273,600	0.70	0.80	0.71	0.81
32	Jul-17	2017	380	163.3	\$	1.6	164.1	0.99	1.00	282,720	0.73	0.83	0.71	0.81
33	Aug-17	2017	380	161.7	\$	1.6	162.5	0.98	1.00	282,720	0.73	0.83	0.71	0.81
34	Sep-17	2017	380	160.0	\$	1.6	160.8	0.97	1.00	273,600	0.70	0.80	0.71	0.81
35	Oct-17	2017	380	158.4	\$	1.6	159.2	0.96	1.00	282,720	0.73	0.83	0.71	0.81
36	Nov-17	2017	380	156.8	\$	1.6	157.6	0.95	1.00	273,600	0.70	0.80	0.71	0.81
37	Dec-17	2017	380	155.2	\$	1.6	156.0	0.94	1.00	282,720	0.73	0.83	0.71	0.81
38	Jan-18	2018	380	153.6	\$	1.6	154.4	0.93	1.00	282,720	0.73	0.83	0.71	0.81
39	Feb-18	2018	380	152.0	\$	1.6	152.8	0.92	1.00	255,360	0.66	0.75	0.71	0.81
40	Mar-18	2018	380	150.3	\$	1.6	151.1	0.91	1.00	282,720	0.73	0.83	0.71	0.81
41	Apr-18	2018	380	148.7	\$	1.6	149.5	0.90	1.00	273,600	0.70	0.80	0.71	0.81
42	May-18	2018	380	147.1	\$	1.6	147.9	0.89	1.00	282,720	0.73	0.83	0.71	0.81
43	Jun-18	2018	380	145.5	\$	1.6	146.3	0.88	1.00	273,600	0.70	0.80	0.71	0.81
44	Jul-18	2018	380	143.9	\$	1.6	144.7	0.87	1.00	282,720	0.73	0.83	0.71	0.81
45	Aug-18	2018	380	142.3	\$	1.6	143.1	0.86	1.00	282,720	0.73	0.83	0.71	0.81
46	Sep-18	2018	380	140.6	\$	1.6	141.4	0.85	1.00	273,600	0.70	0.80	0.71	0.81
47	Oct-18	2018	380	139.0	\$	1.6	139.8	0.84	1.00	282,720	0.73	0.83	0.71	0.81
48	Nov-18	2018	380	137.4	\$	1.6	138.2	0.83	1.00	273,600	0.70	0.80	0.71	0.81
49	Dec-18	2018	380	135.8	\$	1.6	136.6	0.82	1.00	282,720	0.73	0.83	0.71	0.81
50	Jan-19	2019	380	134.2	\$	1.6	135.0	0.81	1.00	282,720	0.73	0.83	0.71	0.81
51	Feb-19	2019	380	132.6	\$	1.6	133.4	0.80	1.00	255,360	0.66	0.75	0.71	0.81
52	Mar-19	2019	380	130.9	\$	1.6	131.7	0.79	1.00	282,720	0.73	0.83	0.71	0.81
53	Apr-19	2019	380	129.3	\$	1.6	130.1	0.78	1.00	273,600	0.70	0.80	0.71	0.81
54	May-19	2019	380	127.7	\$	1.6	128.5	0.78	1.00	282,720	0.73	0.83	0.71	0.81
55	Jun-19	2019	380	126.1	\$	1.6	126.9	0.77	1.00	273,600	0.70	0.80	0.71	0.81
56	Jul-19	2019	380	124.5	\$	1.6	125.3	0.76	1.00	282,720	0.73	0.83	0.71	0.81
57	Aug-19	2019	380	122.9	\$	1.6	123.7	0.75	1.00	282,720	0.73	0.83	0.71	0.81
58	Sep-19	2019	380	121.2	\$	1.6	122.0	0.74	1.00	273,600	0.70	0.80	0.71	0.81
59	Oct-19	2019	380	119.6	\$	1.6	120.4	0.73	1.00	282,720	0.73	0.83	0.71	0.81
60	Nov-19	2019	380	118.0	\$	1.6	118.8	0.72	1.00	273,600	0.70	0.80	0.71	0.81
61	Dec-19	2019	380	116.4	\$	1.6	117.2	0.71	1.00	282,720	0.73	0.83	0.71	0.81
62	Jan-20	2020	380	114.8	\$	1.6	115.6	0.70	1.00	282,720	0.73	0.83	0.71	0.81
63	Feb-20	2020	380	113.2	\$	1.6	114.0	0.69	1.00	264,480	0.68	0.77	0.71	0.81
64	Mar-20	2020	380	111.5	\$	1.6	112.3	0.68	1.00	282,720	0.73	0.83	0.71	0.81

65	Apr-20	2020	380	109.9	\$	1.6	110.7	0.67	1.00	273,600	0.70	0.80	0.71	0.81
66	May-20	2020	380	108.3	\$	1.6	109.1	0.66	1.00	282,720	0.73	0.83	0.71	0.81
67	Jun-20	2020	380	106.7	\$	1.6	107.5	0.65	1.00	273,600	0.70	0.80	0.71	0.81
68	Jul-20	2020	380	105.1	\$	1.6	105.9	0.64	1.00	282,720	0.73	0.83	0.71	0.81
69	Aug-20	2020	380	103.5	\$	1.6	104.3	0.63	1.00	282,720	0.73	0.83	0.71	0.81
70	Sep-20	2020	380	101.8	\$	1.6	102.7	0.62	1.00	273,600	0.70	0.80	0.71	0.81
71	Oct-20	2020	380	100.2	\$	1.6	101.0	0.61	1.00	282,720	0.73	0.83	0.71	0.81
72	Nov-20	2020	380	98.6	\$	1.6	99.4	0.60	1.00	273,600	0.70	0.80	0.71	0.81
73	Dec-20	2020	380	97.0	\$	1.6	97.8	0.59	1.00	282,720	0.73	0.83	0.71	0.81
74	Jan-21	2021	380	95.4	\$	1.6	96.2	0.58	1.00	282,720	0.73	0.83	0.71	0.81
75	Feb-21	2021	380	93.8	\$	1.6	94.6	0.57	1.00	255,360	0.66	0.75	0.71	0.81
76	Mar-21	2021	380	92.1	\$	1.6	93.0	0.56	1.00	282,720	0.73	0.83	0.71	0.81
77	Apr-21	2021	380	90.5	\$	1.6	91.3	0.55	1.00	273,600	0.70	0.80	0.71	0.81
78	May-21	2021	380	88.9	\$	1.6	89.7	0.54	1.00	282,720	0.73	0.83	0.71	0.81
79	Jun-21	2021	380	87.3	\$	1.6	88.1	0.53	1.00	273,600	0.70	0.80	0.71	0.81
80	Jul-21	2021	380	85.7	\$	1.6	86.5	0.52	1.00	282,720	0.73	0.83	0.71	0.81
81	Aug-21	2021	380	84.1	\$	1.6	84.9	0.51	1.00	282,720	0.73	0.83	0.71	0.81
82	Sep-21	2021	380	82.4	\$	1.6	83.3	0.50	1.00	273,600	0.70	0.80	0.71	0.81
83	Oct-21	2021	380	80.8	\$	1.6	81.6	0.49	1.00	282,720	0.73	0.83	0.71	0.81
84	Nov-21	2021	380	79.2	\$	1.6	80.0	0.48	1.00	273,600	0.70	0.80	0.71	0.81
85	Dec-21	2021	380	77.6	\$	1.6	78.4	0.47	1.00	282,720	0.73	0.83	0.71	0.81
86	Jan-22	2022	380	76.0	\$	1.6	76.8	0.46	1.00	282,720	0.73	0.83	0.71	0.81
87	Feb-22	2022	380	74.4	\$	1.6	75.2	0.45	1.00	255,360	0.66	0.75	0.71	0.81
88	Mar-22	2022	380	72.7	\$	1.6	73.6	0.44	1.00	282,720	0.73	0.83	0.71	0.81
89	Apr-22	2022	380	71.1	\$	1.6	71.9	0.43	1.00	273,600	0.70	0.80	0.71	0.81
90	May-22	2022	380	69.5	\$	1.6	70.3	0.42	1.00	282,720	0.73	0.83	0.71	0.81
91	Jun-22	2022	380	67.9	\$	1.6	68.7	0.41	1.00	273,600	0.70	0.80	0.71	0.81
92	Jul-22	2022	380	66.3	\$	1.6	67.1	0.40	1.00	282,720	0.73	0.83	0.71	0.81
93	Aug-22	2022	380	64.7	\$	1.6	65.5	0.39	1.00	282,720	0.73	0.83	0.71	0.81
94	Sep-22	2022	380	63.0	\$	1.6	63.9	0.39	1.00	273,600	0.70	0.80	0.71	0.81
95	Oct-22	2022	380	61.4	\$	1.6	62.2	0.38	1.00	282,720	0.73	0.83	0.71	0.81
96	Nov-22	2022	380	59.8	\$	1.6	60.6	0.37	1.00	273,600	0.70	0.80	0.71	0.81
97	Dec-22	2022	380	58.2	\$	1.6	59.0	0.36	1.00	282,720	0.73	0.83	0.71	0.81
98	Jan-23	2023	380	56.6	\$	1.6	57.4	0.35	1.00	282,720	0.73	0.83	0.71	0.81
99	Feb-23	2023	380	55.0	\$	1.6	55.8	0.34	1.00	255,360	0.66	0.75	0.71	0.81
100	Mar-23	2023	380	53.3	\$	1.6	54.2	0.33	1.00	282,720	0.73	0.83	0.71	0.81
101	Apr-23	2023	380	51.7	\$	1.6	52.5	0.32	1.00	273,600	0.70	0.80	0.71	0.81
102	May-23	2023	380	50.1	\$	1.6	50.9	0.31	1.00	282,720	0.73	0.83	0.71	0.81
103	Jun-23	2023	380	48.5	\$	1.6	49.3	0.30	1.00	273,600	0.70	0.80	0.71	0.81
104	Jul-23	2023	380	46.9	\$	1.6	47.7	0.29	1.00	282,720	0.73	0.83	0.71	0.81
105	Aug-23	2023	380	45.3	\$	1.6	46.1	0.28	1.00	282,720	0.73	0.83	0.71	0.81
106	Sep-23	2023	380	43.6	\$	1.6	44.5	0.27	1.00	273,600	0.70	0.80	0.71	0.81
107	Oct-23	2023	380	42.0	\$	1.6	42.8	0.26	1.00	282,720	0.73	0.83	0.71	0.81

108	Nov-23	2023	380	40.4	\$	1.6	41.2	0.25	1.00	273,600	0.70	0.80	0.71	0.81
109	Dec-23	2023	380	38.8	\$	1.6	39.6	0.24	1.00	282,720	0.73	0.83	0.71	0.81
110	Jan-24	2024	380	37.2	\$	1.6	38.0	0.23	1.00	282,720	0.73	0.83	0.71	0.81
111	Feb-24	2024	380	35.6	\$	1.6	36.4	0.22	1.00	264,480	0.68	0.77	0.71	0.81
112	Mar-24	2024	380	33.9	\$	1.6	34.8	0.21	1.00	282,720	0.73	0.80	0.71	0.81
113	Apr-24	2024	380	32.3	\$	1.6	33.1	0.20	1.00	273,600	0.70	0.80	0.71	0.81
114	May-24	2024	380	30.7	\$	1.6	31.5	0.19	1.00	282,720	0.73	0.83	0.71	0.81
115	Jun-24	2024	380	29.1	\$	1.6	29.9	0.18	1.00	273,600	0.70	0.80	0.71	0.81
116	Jul-24	2024	380	27.5	\$	1.6	28.3	0.17	1.00	282,720	0.73	0.83	0.71	0.81
117	Aug-24	2024	380	25.9	\$	1.6	26.7	0.16	1.00	282,720	0.73	0.83	0.71	0.81
118	Sep-24	2024	380	24.2	\$	1.6	25.1	0.15	1.00	273,600	0.70	0.80	0.71	0.81
119	Oct-24	2024	380	22.6	\$	1.6	23.4	0.14	1.00	282,720	0.73	0.83	0.71	0.81
120	Nov-24	2024	380	21.0	\$	1.6	21.8	0.13	1.00	273,600	0.70	0.80	0.71	0.81
121	Dec-24	2024	380	19.4	\$	1.6	20.2	0.12	1.00	282,720	0.73	0.83	0.71	0.81
122	Jan-25	2025	300	17.8	\$	1.6	18.6	0.11	1.00	223,200	0.57	0.65	0.56	0.64
123	Feb-25	2025	300	16.2	\$	1.6	17.0	0.10	1.00	201,600	0.52	0.59	0.56	0.64
124	Mar-25	2025	300	14.5	\$	1.6	15.4	0.09	1.00	223,200	0.57	0.65	0.56	0.64
125	Apr-25	2025	300	12.9	\$	1.6	13.7	0.08	1.00	216,000	0.55	0.63	0.56	0.64
126	May-25	2025	300	11.3	\$	1.6	12.1	0.07	1.00	223,200	0.57	0.65	0.56	0.64
127	Jun-25	2025	300	9.7	\$	1.6	10.5	0.06	1.00	216,000	0.55	0.63	0.56	0.64
128	Jul-25	2025	300	8.1	\$	1.6	8.9	0.05	1.00	223,200	0.57	0.65	0.56	0.64
129	Aug-25	2025	300	6.5	\$	1.6	7.3	0.04	1.00	223,200	0.57	0.65	0.56	0.64
130	Sep-25	2025	300	4.8	\$	1.6	5.7	0.03	1.00	216,000	0.55	0.63	0.56	0.64
131	Oct-25	2025	300	3.2	\$	1.6	4.0	0.02	1.00	223,200	0.57	0.65	0.56	0.64
132	Nov-25	2025	300	1.6	\$	1.6	2.4	0.01	1.00	216,000	0.55	0.63	0.56	0.64
133	Dec-25	2025	300	(0.0)	\$	1.6	0.8	0.00	1.00	223,200	0.57	0.65	0.56	0.64