

**EXHIBIT NO. ___(JAH-3)
DOCKET NO. UE-06___/UG-06___
2006 PSE GENERAL RATE CASE
WITNESS: JAMES A. HEIDELL**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

**Docket No. UE-06___
Docket No. UG-06___**

**SECOND EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF
JAMES A. HEIDELL
ON BEHALF OF PUGET SOUND ENERGY, INC.**

FEBRUARY 15, 2006

Puget Sound Energy
 Electric Cost of Service
 Derivation of Peak Credit

PEAK CREDIT METHOD FOR 2006 COST OF SERVICE STUDY
 Peak Credit uses a modified version of the UE-920499 Methodology

Combined Cycle Plant (Nominal \$)							
Year	Capital Cost \$/MWH Yr	Fixed O&M \$/MWH	Variable O&M \$/MWH	Gas \$/MMBTU	Gas \$/MWH	Total \$/MWH	Annual Inflation
2006	\$13.11	4.89	2.39	\$9.84	66.07	86.46	0.00%
2007	\$13.11	5.01	2.45	\$8.57	66.07	86.64	2.50%
2008	\$13.11	5.14	2.51	\$7.64	57.53	78.29	2.50%
2009	\$13.11	5.27	2.57	\$6.09	51.28	72.23	2.50%
2010	\$13.11	5.4	2.63	\$5.87	40.87	62.01	2.50%
2011	\$13.11	5.54	2.7	\$5.73	39.41	60.76	2.50%
2012	\$13.11	5.68	2.77	\$5.80	38.44	60.00	2.50%
2013	\$13.11	5.82	2.84	\$6.04	38.90	60.67	2.50%
2014	\$13.11	5.97	2.91	\$6.07	40.52	62.51	2.50%
2015	\$13.11	6.12	2.98	\$5.98	40.74	62.95	2.50%
2016	\$13.11	6.27	3.05	\$6.05	40.12	62.55	2.50%
2017	\$13.11	6.43	3.13	\$6.29	40.59	63.26	2.50%
2018	\$13.11	6.59	3.21	\$6.70	42.23	65.14	2.50%
2019	\$13.11	6.75	3.29	\$7.08	44.97	68.12	2.50%
2020	\$13.11	6.92	3.37	\$7.33	47.50	70.90	2.50%
2021	\$13.11	7.09	3.45	\$7.72	49.17	72.82	2.50%
2022	\$13.11	7.27	3.54	\$8.04	51.79	75.71	2.50%
2023	\$13.11	7.45	3.63	\$8.36	53.95	78.14	2.50%
2024	\$13.11	7.64	3.72	\$8.76	56.08	80.55	2.50%
2025	\$13.11	7.83	3.81	\$9.19	58.76	83.51	2.50%
2026	\$13.11	8.03	3.91	\$9.42	61.69	86.74	2.50%
2027	\$13.11	8.23	4.01	\$9.66	63.23	88.58	2.50%
2028	\$13.11	8.44	4.11	\$9.90	64.81	90.47	2.50%
2029	\$13.11	8.65	4.21	\$10.15	66.43	92.40	2.50%
2030	\$13.11	8.87	4.32	\$10.40	68.09	94.39	2.50%
2031	\$13.11	9.09	4.43	\$10.66	69.80	96.43	2.50%
2032	\$13.11	9.32	4.54	\$10.93	71.54	98.51	2.50%
2033	\$13.11	9.55	4.65	\$11.20	73.33	100.64	2.50%
2034	\$13.11	9.79	4.77	\$11.48	75.16	102.83	2.50%
2035	\$13.11	10.03	4.89	\$11.77	77.04	105.07	2.50%

Puget Sound Energy
Electric Cost of Service
Derivation of Peak Credit

Combustion Turbine							
Year	Capital Cost \$/kW Yr	Fixed O&M \$/kW Yr	Variable O&M \$/kW Yr	Gas \$/kW Yr	Total \$/kW Yr	Peak Credit \$/kW Yr	Inflation
2006	\$69.74	22.3	0.35	8.25	100.64	107.08	0.00%
2007	\$69.74	22.86	0.36	7.18	100.14	106.62	2.50%
2008	\$69.74	23.43	0.37	6.40	99.94	106.46	2.50%
2009	\$69.74	24.02	0.38	5.10	99.24	105.80	2.50%
2010	\$69.74	24.62	0.39	4.92	99.67	106.27	2.50%
2011	\$69.74	25.24	0.4	4.80	100.18	106.83	2.50%
2012	\$69.74	25.87	0.41	4.86	100.88	107.57	2.50%
2013	\$69.74	26.52	0.42	5.06	101.74	108.48	2.50%
2014	\$69.74	27.18	0.43	5.08	102.43	109.22	2.50%
2015	\$69.74	27.86	0.44	5.01	103.05	109.88	2.50%
2016	\$69.74	28.56	0.45	5.07	103.82	110.70	2.50%
2017	\$69.74	29.27	0.46	5.27	104.74	111.67	2.50%
2018	\$69.74	30	0.47	5.61	105.82	112.80	2.50%
2019	\$69.74	30.75	0.48	5.93	106.90	113.93	2.50%
2020	\$69.74	31.52	0.49	6.14	107.89	114.98	2.50%
2021	\$69.74	32.31	0.5	6.46	109.01	116.16	2.50%
2022	\$69.74	33.12	0.51	6.73	110.10	117.30	2.50%
2023	\$69.74	33.95	0.52	7.00	111.21	118.47	2.50%
2024	\$69.74	34.8	0.53	7.33	112.40	119.72	2.50%
2025	\$69.74	35.67	0.54	7.70	113.65	121.03	2.50%
2026	\$69.74	36.56	0.55	7.89	114.74	122.18	2.50%
2027	\$69.74	37.47	0.56	8.09	115.86	123.36	2.50%
2028	\$69.74	38.41	0.57	8.29	117.01	124.58	2.50%
2029	\$69.74	39.37	0.58	8.50	118.19	125.83	2.50%
2030	\$69.74	40.35	0.59	8.71	119.39	127.10	2.50%
2031	\$69.74	41.36	0.6	8.93	120.63	128.41	2.50%
2032	\$69.74	42.39	0.62	9.15	121.90	129.75	2.50%
2033	\$69.74	43.45	0.64	9.38	123.21	131.13	2.50%
2034	\$69.74	44.54	0.66	9.62	124.56	132.55	2.50%
2035	\$69.74	44.54	0.66	9.86	124.80	132.80	2.50%

Puget Sound Energy
Electric Cost of Service
Derivation of Peak Credit

Exhibit No. ____ (JAH-3)
Page 3 of 6

	Combustion Turbine	Peak CT	CC CT	Peak Credit
Levelized Cost \$/mWh			80.28	
Levelized Cost \$/kW Yr	113.83	121.29	597.73	20%

Assumptions

1 Fixed Charge Rate CC:	12.36%		
2 Fixed Charge Rate CT:	13.32%		
3 Hours/Year CT Peak Operation	75	Peak Gas Adjustment	17%
4 CCCT Capacity Factor:	85%		
5 Weighted Cost of Capital CC:	8.76%		
6 Weighted Cost of Capital CT:	8.76%		
7 Full Capital & Fixed O&M For CT Used For Peak Credit Cost			

	<u>Capital</u> \$/kW	<u>Fixed O&M</u> \$/kW/yr	<u>Var O&M</u> \$/ MWh	<u>Heat Rate</u> BTU/kWh
8 Combined Cycle Combustion Turbine Plant	\$790	\$36.40	2.39	6,711
9 Simple Cycle Combustion Turbine Plant	\$524	\$22.30	4.73	9,545
10 Reserve margin	7%			
11 Debt	51.25%	6.65%	3.41%	
12 Preferred	3.75%	7.61%	0.29%	
13 Common Equity	45.00%	11.25%	5.06%	
14 TOTAL	100%		8.76%	

Puget Sound Energy
 Electric Cost of Service
 Derivation of Peak Credit

Combined Cycle Plant (Nominal \$)

Year	Capital Cost \$/MWH Yr	Fixed O&M \$/MWH	Variable O&M \$/MWH	Gas \$/MMBTU	Gas \$/MWH	Total \$/MWH	Annual Inflation
2006	\$13.11	4.89	2.39	\$9.84	66.07	86.46	0.00%
2007	\$13.11	5.01	2.45	\$8.57	66.07	86.64	2.50%
2008	\$13.11	5.14	2.51	\$7.64	57.53	78.29	2.50%
2009	\$13.11	5.27	2.57	\$6.09	51.28	72.23	2.50%
2010	\$13.11	5.4	2.63	\$5.87	40.87	62.01	2.50%
2011	\$13.11	5.54	2.7	\$5.73	39.41	60.76	2.50%
2012	\$13.11	5.68	2.77	\$5.80	38.44	60.00	2.50%
2013	\$13.11	5.82	2.84	\$6.04	38.90	60.67	2.50%
2014	\$13.11	5.97	2.91	\$6.07	40.52	62.51	2.50%
2015	\$13.11	6.12	2.98	\$5.98	40.74	62.95	2.50%
2016	\$13.11	6.27	3.05	\$6.05	40.12	62.55	2.50%
2017	\$13.11	6.43	3.13	\$6.29	40.59	63.26	2.50%
2018	\$13.11	6.59	3.21	\$6.70	42.23	65.14	2.50%
2019	\$13.11	6.75	3.29	\$7.08	44.97	68.12	2.50%
2020	\$13.11	6.92	3.37	\$7.33	47.50	70.90	2.50%
2021	\$13.11	7.09	3.45	\$7.72	49.17	72.82	2.50%
2022	\$13.11	7.27	3.54	\$8.04	51.79	75.71	2.50%
2023	\$13.11	7.45	3.63	\$8.36	53.95	78.14	2.50%
2024	\$13.11	7.64	3.72	\$8.76	56.08	80.55	2.50%
2025	\$13.11	7.83	3.81	\$9.19	58.76	83.51	2.50%
2026	\$13.11	8.03	3.91	\$9.42	61.69	86.74	2.50%
2027	\$13.11	8.23	4.01	\$9.66	63.23	88.58	2.50%
2028	\$13.11	8.44	4.11	\$9.90	64.81	90.47	2.50%
2029	\$13.11	8.65	4.21	\$10.15	66.43	92.40	2.50%
2030	\$13.11	8.87	4.32	\$10.40	68.09	94.39	2.50%
2031	\$13.11	9.09	4.43	\$10.66	69.80	96.43	2.50%
2032	\$13.11	9.32	4.54	\$10.93	71.54	98.51	2.50%
2033	\$13.11	9.55	4.65	\$11.20	73.33	100.64	2.50%
2034	\$13.11	9.79	4.77	\$11.48	75.16	102.83	2.50%
2035	\$13.11	10.03	4.89	\$11.77	77.04	105.07	2.50%

Combustion Turbine

Year	Capital Cost \$/kW Yr	Fixed O&M \$/kW Yr	Variable O&M \$/kW Yr	Fuel Oil \$/MMBTU	Fuel Oil \$/kW Yr	Gas \$/kW Yr	Total \$/kW Yr	Peak Credit \$/kW Yr	Inflation
2006	\$69.74	22.3	0.95	6.88	3.28	16.49	112.76	69.97	0.00%
2007	\$69.74	22.86	0.97	7.07	3.38	14.36	111.31	68.25	2.50%
2008	\$69.74	23.43	0.99	7.01	3.34	12.80	110.30	66.98	2.50%
2009	\$69.74	24.02	1.01	6.78	3.23	10.20	108.21	64.61	2.50%
2010	\$69.74	24.62	1.04	6.61	3.15	9.84	108.39	64.52	2.50%
2011	\$69.74	25.24	1.07	6.80	3.25	9.59	108.89	64.73	2.50%
2012	\$69.74	25.87	1.1	6.96	3.32	9.71	109.74	65.28	2.50%
2013	\$69.74	26.52	1.13	7.05	3.36	10.12	110.87	66.11	2.50%
2014	\$69.74	27.18	1.16	7.25	3.46	10.17	111.71	66.64	2.50%
2015	\$69.74	27.86	1.19	7.50	3.58	10.01	112.38	67.00	2.50%
2016	\$69.74	28.56	1.22	7.77	3.71	10.13	113.36	67.65	2.50%
2017	\$69.74	29.27	1.25	8.04	3.84	10.54	114.64	68.60	2.50%
2018	\$69.74	30	1.28	8.28	3.95	11.23	116.20	69.82	2.50%
2019	\$69.74	30.75	1.31	8.55	4.08	11.86	117.74	71.01	2.50%
2020	\$69.74	31.52	1.34	8.94	4.26	12.27	119.14	72.05	2.50%
2021	\$69.74	32.31	1.37	9.22	4.40	12.93	120.75	73.29	2.50%
2022	\$69.74	33.12	1.4	9.58	4.57	13.47	122.30	74.47	2.50%
2023	\$69.74	33.95	1.44	10.03	4.79	14.00	123.92	75.70	2.50%
2024	\$69.74	34.8	1.48	10.42	4.97	14.67	125.66	77.05	2.50%
2025	\$69.74	35.67	1.52	10.80	5.16	15.40	127.48	78.47	2.50%
2026	\$69.74	36.56	1.56	11.15	5.32	15.78	128.96	79.53	2.50%
2027	\$69.74	37.47	1.6	11.53	5.50	16.18	130.49	80.64	2.50%
2028	\$69.74	38.41	1.64	11.87	5.66	16.58	132.04	81.75	2.50%
2029	\$69.74	39.37	1.68	12.29	5.86	17.00	133.65	82.91	2.50%
2030	\$69.74	40.35	1.72	12.78	6.10	17.42	135.33	84.14	2.50%
2031	\$69.74	41.36	1.76	13.10	6.25	17.86	136.97	85.31	2.50%
2032	\$69.74	42.39	1.8	13.43	6.41	18.30	138.64	86.50	2.50%
2033	\$69.74	43.45	1.85	13.77	6.57	18.76	140.37	87.74	2.50%
2034	\$69.74	44.54	1.9	14.11	6.73	19.23	142.14	89.00	2.50%
2035	\$69.74	44.54	1.9	14.46	6.90	19.71	142.79	89.65	2.50%

Puget Sound Energy
Electric Cost of Service
Derivation of Peak Credit

	Combustion Turbine	Peak CT	CC CT	Peak Credit
Levelized Cost \$/mWh			80.28	
Levelized Cost \$/kW Yr	125.71	76.18	597.73	13%

Assumptions

1 Fixed Charge Rate CC:	12.36%		
2 Fixed Charge Rate CT:	13.32%		
3 Hours/Year CT Peak Operati	200	Peak Gas Adjustment	17%
4 CCCT Capacity Factor:	85%		
5 Weighted Cost of Capital CC:	8.76%		
6 Weighted Cost of Capital CT:	8.76%		
7 Full Capital & Fixed O&M For CT Used For Peak Credit Cost			
8 Fixed & variable O&M, gas, and fuel escalation rate beyond 2015:			2.80%
9 Hours of operation on oil:	50		

	<u>Capital</u> <u>\$/kW</u>	<u>Fixed O&M</u> <u>\$/kW/yr</u>	<u>Var O&M</u> <u>\$/ MWH</u>	<u>Heat Rate</u> <u>BTU/kWh</u>
10 Combined Cycle Combustion Turbine Plant	\$790	\$36.40	2.39	6,711
11 Simple Cycle Combustion Turbine Plant	\$524	\$22.30	4.73	9,545
12 Reserve margin	7%			
13 Debt	51.25%	6.65%	3.41%	
14 Preferred	3.75%	7.61%	0.29%	
15 Common Equity	<u>45.00%</u>	<u>11.25%</u>	<u>5.06%</u>	
16 TOTAL	100%		8.76%	