

e-FILING REPORT COVER SHEET

REPORT NAME: Oregon Solar Incentive Program Resource Value Report

COMPANY NAME: PacifiCorp d/b/a/ Pacific Power

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes

If yes, please submit only the cover letter electronically. Submit confidential information as directed OAR 860-001-0070 or the terms of an applicable protective order.

If known, please select designation: RE (Electric) RG (Gas) RW (Water)
 RO (Other)

Report is required by: OAR 860-084-0370
 Statute
 Order
 Other

Is this report associated with a specific docket/case? No Yes
If Yes, enter docket number: RE 98

Key words: Oregon Solar Incentive Program Resource Value Report

If known, please select the PUC Section to which the report should be directed:

- Corporate Analysis and Water Regulation
- Economic and Policy Analysis
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- Electric Rates and Planning
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November 3, 2014

VIA ELECTRONIC FILINGPublic Utility Commission of Oregon
3930 Fairview Industrial Drive SE
Salem, OR 97302-1166

Attn: Filing Center

Re: RE 98—Oregon Solar Incentive Program Resource Value Report

In accordance with OAR 860-084-0370(1) and the provisions of Order No. 12-396 in Docket No. UM-1559, dated October 18, 2012 (Order), PacifiCorp d/b/a Pacific Power (PacifiCorp or Company) encloses for filing its Oregon Solar Incentive Program Resource Value Report.

In compliance with the Order, the Company has calculated the solar resource value and nominal levelized rate based on the Commission's three requested methods: Standard Avoided Cost, Renewable Avoided Cost, and an Integrated Resource Plan (IRP) modeling methodology. The report allows the comparison of a "variety of methods" from which the Commission can "track changes in the estimates of the components of the resource value for SPV systems¹."

The Company's IRP avoided cost methodology used in this filing was based on the methodology used by PacifiCorp in its Idaho, Utah and Wyoming jurisdictions, known as the Partial Displacement Differential Revenue Requirement (PDDRR) method. The PDDRR method uses two production cost model simulations to determine the energy value of a resource, and the capacity value is based on partial displacement of the next deferrable resource outlined in the Company's IRP. The Company calculated the effective load carrying capability based on a historical measure of solar output for distributed fixed panel solar array throughout the Company's system.

The table below provides a summary of results from the attached Resource Value Report.

Resource Value Methods	Resource Value (\$000)	Nominal Levelized Rate (2010 \$/kWh)
Standard Avoided Cost	\$6,150.1	\$0.04489
Renewable Avoided Cost	\$7,464.3	\$0.05543
IRP Method Avoided Cost	\$6,222.4	\$0.04626

¹ Order No. 12-396 at 4.

It is respectfully requested that all formal data requests regarding this filing be addressed to:

By e-mail (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, Oregon 97232

Informal inquiries regarding this filing may be directed to Natasha Siores, Director, Regulatory Affairs & Revenue Requirement at (503) 813-6583.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Bryce Dalley", with a long horizontal flourish extending to the right.

R. Bryce Dalley
Vice President, Regulation

Enclosures

Oregon Solar Incentive Program: Resource Value Report

(per OAR 860-084-0370(1) in accordance with the provisions of Order No. 12-396)

Estimated Resource Value #1:

Standard Avoided Cost

**Estimated Resource Value #1 - Standard Avoided Cost
November 1, 2014**

Year	KWH *	Nominal Cost (\$/KWH)	(KWH * RV KWH) Resource Value
2011	967,154	\$0.0306	\$29,602
2012	4,175,261	\$0.0239	\$99,977
2013	7,519,620	\$0.0395	\$297,024
2014	12,067,617	\$0.0423	\$510,554
2015	15,111,897	\$0.0423	\$639,472
2016	16,637,901	\$0.0415	\$690,561
2017	16,637,901	\$0.0438	\$728,276
2018	16,637,901	\$0.0466	\$775,405
2019	16,637,901	\$0.0490	\$816,045
2020	16,637,901	\$0.0519	\$864,026
2021	16,637,901	\$0.0540	\$898,549
2022	16,637,901	\$0.0612	\$1,018,554
2023	16,637,901	\$0.0635	\$1,057,066
2024	16,637,901	\$0.0477	\$793,645
2025	16,637,901	\$0.0488	\$811,967
2026	15,670,747	\$0.0504	\$789,121
2027	12,462,640	\$0.0522	\$650,459
2028	9,118,281	\$0.0540	\$492,652
2029	4,570,284	\$0.0563	\$257,328
2030	1,526,004	\$0.0585	\$89,293
Net Present Value at 6.882% Discount Rate			\$6,150,079

*: 2011-2014 values are Actual Production

**Estimated Resource Value Calculation #1 - Standard Avoided Cost
November 1, 2014**

Year	On-Peak Sch 37	Off-Peak Sch 37	6/7 On-Peak	1/7 Off-Peak	On-Peak Allocation	Off-Peak Allocation	Calculated	Line Loss	Resource Value
	(a)	(b)	(c) =6/7	(d) =1/7	(e) (a) x (c)	(f) (b) x (d)	(g) (e) + (f)	(h)	(i) (g) / 100 x (1+(h))
2011	\$2.91	\$1.68	86%	14%	\$ 2.49	\$ 0.24	\$ 2.74	11.90%	\$ 0.0306
2012	\$2.25	\$1.47	86%	14%	\$ 1.93	\$ 0.21	\$ 2.14	11.90%	\$ 0.0239
2013	\$3.68	\$2.64	86%	14%	\$ 3.15	\$ 0.38	\$ 3.53	11.90%	\$ 0.0395
2014	\$3.98	\$2.62	86%	14%	\$ 3.41	\$ 0.37	\$ 3.78	11.90%	\$ 0.0423
2015	\$3.94	\$2.86	86%	14%	\$ 3.37	\$ 0.41	\$ 3.78	11.90%	\$ 0.0423
2016	\$3.85	\$2.84	86%	14%	\$ 3.30	\$ 0.41	\$ 3.71	11.90%	\$ 0.0415
2017	\$4.06	\$3.01	86%	14%	\$ 3.48	\$ 0.43	\$ 3.91	11.90%	\$ 0.0438
2018	\$4.33	\$3.20	86%	14%	\$ 3.71	\$ 0.46	\$ 4.16	11.90%	\$ 0.0466
2019	\$4.55	\$3.41	86%	14%	\$ 3.90	\$ 0.49	\$ 4.38	11.90%	\$ 0.0490
2020	\$4.78	\$3.84	86%	14%	\$ 4.09	\$ 0.55	\$ 4.64	11.90%	\$ 0.0519
2021	\$4.92	\$4.25	86%	14%	\$ 4.22	\$ 0.61	\$ 4.83	11.90%	\$ 0.0540
2022	\$5.58	\$4.83	86%	14%	\$ 4.78	\$ 0.69	\$ 5.47	11.90%	\$ 0.0612
2023	\$5.79	\$5.02	86%	14%	\$ 4.96	\$ 0.72	\$ 5.68	11.90%	\$ 0.0635
2024	\$4.32	\$3.91	86%	14%	\$ 3.70	\$ 0.56	\$ 4.26	11.90%	\$ 0.0477
2025	\$4.42	\$4.00	86%	14%	\$ 3.79	\$ 0.57	\$ 4.36	11.90%	\$ 0.0488
2026	\$4.56	\$4.13	86%	14%	\$ 3.91	\$ 0.59	\$ 4.50	11.90%	\$ 0.0504
2027	\$4.73	\$4.29	86%	14%	\$ 4.05	\$ 0.61	\$ 4.66	11.90%	\$ 0.0522
2028	\$4.89	\$4.44	86%	14%	\$ 4.19	\$ 0.63	\$ 4.83	11.90%	\$ 0.0540
2029	\$5.10	\$4.64	86%	14%	\$ 4.37	\$ 0.66	\$ 5.03	11.90%	\$ 0.0563
2030	\$5.30	\$4.83	86%	14%	\$ 4.54	\$ 0.69	\$ 5.23	11.90%	\$ 0.0585
Nominal Levelized Cost (2010 \$)									\$0.04489

Oregon Solar Incentive Program: Resource Value Report

(per OAR 860-084-0370(1) in accordance with the provisions of Order No. 12-396)

Estimated Resource Value #2:

Renewable Avoided Cost

Estimated Resource Value #2 - Renewable Avoided Cost
November 1, 2014

Year	KWH*	Nominal Cost (\$/KWH)	(KWH * RV KWH) Resource Value
2011	967,154	\$0.0306	\$29,602
2012	4,175,261	\$0.0239	\$99,977
2013	7,519,620	\$0.0395	\$297,024
2014	12,067,617	\$0.0423	\$510,554
2015	15,111,897	\$0.0423	\$639,472
2016	16,637,901	\$0.0415	\$690,561
2017	16,637,901	\$0.0438	\$728,276
2018	16,637,901	\$0.0466	\$775,405
2019	16,637,901	\$0.0490	\$816,045
2020	16,637,901	\$0.0519	\$864,026
2021	16,637,901	\$0.0540	\$898,549
2022	16,637,901	\$0.0612	\$1,018,554
2023	16,637,901	\$0.0635	\$1,057,066
2024	16,637,901	\$0.0965	\$1,606,212
2025	16,637,901	\$0.0983	\$1,636,107
2026	15,670,747	\$0.1001	\$1,569,258
2027	12,462,640	\$0.1020	\$1,271,648
2028	9,118,281	\$0.1040	\$947,950
2029	4,570,284	\$0.1058	\$483,572
2030	1,526,004	\$0.1077	\$164,364
Net Present Value at 6.882% Discount Rate			\$7,464,271

*: 2011-2014 values are Actual Production

**Estimated Resource Value Calculation #2 - Renewable Avoided Cost
November 1, 2014**

Year	On-Peak Sch 37	Off-Peak Sch 37	6/7 On-Peak	1/7 Off-Peak	On-Peak Allocation	Off-Peak Allocation	Calculated	Line Loss	Resource Value
	(a)	(b)	(c) =6/7	(d) =1/7	(e) (a) x (c)	(f) (b) x (d)	(g) (e) + (f)	(h)	(i) (g) / 100 x (1+(h))
2011	\$2.91	\$1.68	86%	14%	\$ 2.49	\$ 0.24	\$ 2.74	11.90%	\$ 0.0306
2012	\$2.25	\$1.47	86%	14%	\$ 1.93	\$ 0.21	\$ 2.14	11.90%	\$ 0.0239
2013	\$3.68	\$2.64	86%	14%	\$ 3.15	\$ 0.38	\$ 3.53	11.90%	\$ 0.0395
2014	\$3.98	\$2.62	86%	14%	\$ 3.41	\$ 0.37	\$ 3.78	11.90%	\$ 0.0423
2015	\$3.94	\$2.86	86%	14%	\$ 3.37	\$ 0.41	\$ 3.78	11.90%	\$ 0.0423
2016	\$3.85	\$2.84	86%	14%	\$ 3.30	\$ 0.41	\$ 3.71	11.90%	\$ 0.0415
2017	\$4.06	\$3.01	86%	14%	\$ 3.48	\$ 0.43	\$ 3.91	11.90%	\$ 0.0438
2018	\$4.33	\$3.20	86%	14%	\$ 3.71	\$ 0.46	\$ 4.16	11.90%	\$ 0.0466
2019	\$4.55	\$3.41	86%	14%	\$ 3.90	\$ 0.49	\$ 4.38	11.90%	\$ 0.0490
2020	\$4.78	\$3.84	86%	14%	\$ 4.09	\$ 0.55	\$ 4.64	11.90%	\$ 0.0519
2021	\$4.92	\$4.25	86%	14%	\$ 4.22	\$ 0.61	\$ 4.83	11.90%	\$ 0.0540
2022	\$5.58	\$4.83	86%	14%	\$ 4.78	\$ 0.69	\$ 5.47	11.90%	\$ 0.0612
2023	\$5.79	\$5.02	86%	14%	\$ 4.96	\$ 0.72	\$ 5.68	11.90%	\$ 0.0635
2024	\$8.84	\$7.36	86%	14%	\$ 7.58	\$ 1.05	\$ 8.63	11.90%	\$ 0.0965
2025	\$9.01	\$7.49	86%	14%	\$ 7.72	\$ 1.07	\$ 8.79	11.90%	\$ 0.0983
2026	\$9.17	\$7.64	86%	14%	\$ 7.86	\$ 1.09	\$ 8.95	11.90%	\$ 0.1001
2027	\$9.34	\$7.78	86%	14%	\$ 8.01	\$ 1.11	\$ 9.12	11.90%	\$ 0.1020
2028	\$9.52	\$7.94	86%	14%	\$ 8.16	\$ 1.13	\$ 9.29	11.90%	\$ 0.1040
2029	\$9.68	\$8.11	86%	14%	\$ 8.30	\$ 1.16	\$ 9.46	11.90%	\$ 0.1058
2030	\$9.85	\$8.28	86%	14%	\$ 8.44	\$ 1.18	\$ 9.63	11.90%	\$ 0.1077
Nominal Levelized Cost (2010-2030)									\$0.05543

Oregon Solar Incentive Program: Resource Value Report

(per OAR 860-084-0370(1) in accordance with the provisions of Order No. 12-396)

Estimated Resource Value #3:

IRP Method Avoided Cost

**Estimated Resource Value #3 - IRP Method Avoided Cost
November 1, 2014**

Year	KWH*	Nominal Cost (\$/KWH)	(KWH * RV KWH) Resource Value
2011	967,154	\$0.0306	\$29,602
2012	4,175,261	\$0.0239	\$99,977
2013	7,519,620	\$0.0395	\$297,024
2014	12,067,617	\$0.0423	\$510,554
2015	15,111,897	\$0.0394	\$595,765
2016	16,637,901	\$0.0387	\$643,300
2017	16,637,901	\$0.0390	\$648,604
2018	16,637,901	\$0.0417	\$694,196
2019	16,637,901	\$0.0430	\$714,947
2020	16,637,901	\$0.0483	\$803,999
2021	16,637,901	\$0.0505	\$839,836
2022	16,637,901	\$0.0604	\$1,004,291
2023	16,637,901	\$0.0623	\$1,036,989
2024	16,637,901	\$0.0607	\$1,009,444
2025	16,637,901	\$0.0616	\$1,024,711
2026	15,670,747	\$0.0643	\$1,006,980
2027	12,462,640	\$0.0663	\$826,164
2028	9,118,281	\$0.0687	\$626,699
2029	4,570,284	\$0.0721	\$329,696
2030	1,526,004	\$0.0747	\$113,945
Net Present Value at 6.882% Discount Rate			\$6,222,442

**Estimated Resource Value #3 - IRP Method Avoided Cost
November 1, 2014**

Year	All-Hours IRP Method (¢/kWh)	Capacity IRP Method (\$/kW-yr)	Capacity Factor (c)	Capacity Contribution (ELCC) (d)	All-Hours (¢/kWh) (e) <small>(a) + (d) * (b) / (87.6 * (c))</small>	Line Loss (f)	Resource Value (\$/kWh) (g) <small>(e) / 100 x (1 + (f))</small>
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
2011	2.74		52.3%	13.6%	2.74	11.90%	\$ 0.0306
2012	2.14		52.3%	13.6%	2.14	11.90%	\$ 0.0239
2013	3.53		52.3%	13.6%	3.53	11.90%	\$ 0.0395
2014	3.78		52.3%	13.6%	3.78	11.90%	\$ 0.0423
2015	3.52		52.3%	13.6%	3.52	11.90%	\$ 0.0394
2016	3.46		52.3%	13.6%	3.46	11.90%	\$ 0.0387
2017	3.48		52.3%	13.6%	3.48	11.90%	\$ 0.0390
2018	3.73		52.3%	13.6%	3.73	11.90%	\$ 0.0417
2019	3.84		52.3%	13.6%	3.84	11.90%	\$ 0.0430
2020	4.32		52.3%	13.6%	4.32	11.90%	\$ 0.0483
2021	4.51		52.3%	13.6%	4.51	11.90%	\$ 0.0505
2022	5.39		52.3%	13.6%	5.39	11.90%	\$ 0.0604
2023	5.57		52.3%	13.6%	5.57	11.90%	\$ 0.0623
2024	5.01	\$140.32	52.3%	13.6%	5.42	11.90%	\$ 0.0607
2025	5.08	\$142.85	52.3%	13.6%	5.50	11.90%	\$ 0.0616
2026	5.31	\$145.55	52.3%	13.6%	5.74	11.90%	\$ 0.0643
2027	5.48	\$148.32	52.3%	13.6%	5.92	11.90%	\$ 0.0663
2028	5.69	\$151.14	52.3%	13.6%	6.14	11.90%	\$ 0.0687
2029	5.99	\$154.02	52.3%	13.6%	6.45	11.90%	\$ 0.0721
2030	6.21	\$156.95	52.3%	13.6%	6.67	11.90%	\$ 0.0747

Nominal Levelized Cost (2011 - 2030)

\$0.04626

**Table 8
Total Cost of Displaceable Resources**

Year	Estimated Capital Cost \$/kW	Fixed Capital Cost at Real Levelized \$/kW-yr	Fixed O&M \$/kW-yr	Variable O&M \$/MWh	Total O&M at Expected CF \$/kW-yr	Total Resource Fixed Costs \$/kW-yr
	(a)	(b)	(c)	(d)	(e)	(f)

SCCT Frame ("F"x1) - West Side Options (1500')

2012	\$699	\$55.60	\$ 41.29	\$9.39	\$58.56	\$114.16
2013		\$56.38	\$41.87	\$9.52	\$59.38	\$115.76
2014		\$57.23	\$42.50	\$9.66	\$60.27	\$117.50
2015		\$58.20	\$43.22	\$9.82	\$61.28	\$119.48
2016		\$59.25	\$44.00	\$10.00	\$62.40	\$121.65
2017		\$60.32	\$44.79	\$10.18	\$63.52	\$123.84
2018		\$61.41	\$45.60	\$10.36	\$64.66	\$126.07
2019		\$62.45	\$46.38	\$10.54	\$65.77	\$128.22
2020		\$63.57	\$47.21	\$10.73	\$66.95	\$130.52
2021		\$64.78	\$48.11	\$10.93	\$68.22	\$133.00
2022		\$65.95	\$48.98	\$11.13	\$69.45	\$135.40
2023		\$67.14	\$49.86	\$11.33	\$70.70	\$137.84
2024		\$68.35	\$50.76	\$11.53	\$71.97	\$140.32
2025		\$69.58	\$51.67	\$11.74	\$73.27	\$142.85
2026		\$70.90	\$52.65	\$11.96	\$74.65	\$145.55
2027		\$72.25	\$53.65	\$12.19	\$76.07	\$148.32
2028		\$73.62	\$54.67	\$12.42	\$77.52	\$151.14
2029		\$75.02	\$55.71	\$12.66	\$79.00	\$154.02
2030		\$76.45	\$56.77	\$12.90	\$80.50	\$156.95
2031		\$77.98	\$57.91	\$13.16	\$82.12	\$160.10
2032		\$79.54	\$59.07	\$13.42	\$83.76	\$163.30
2033		\$81.13	\$60.25	\$13.69	\$85.43	\$166.56
2034		\$82.75	\$61.46	\$13.96	\$87.14	\$169.89
2035		\$84.41	\$62.69	\$14.24	\$88.89	\$173.30
2036		\$86.18	\$64.01	\$14.54	\$90.76	\$176.94
2037		\$87.99	\$65.35	\$14.85	\$92.67	\$180.66
2038		\$89.84	\$66.72	\$15.16	\$94.61	\$184.45
2039		\$91.73	\$68.12	\$15.48	\$96.60	\$188.33
2040		\$93.66	\$69.55	\$15.81	\$98.63	\$192.29

Source: (a)(c)(d) Plant Costs - 2013 IRP - Table 6.1 & 6.2 - Pages 112-116

- (b) = (a) x Payment Factor
- (e) = (d) x (8.76 x 21%) + (c)
- (f) = (b) + (e)

SCCT Frame ("F"x1) - West Side Options (1500')		
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197	MW Plant capacity	MW
\$ 699	Plant capacity cost	\$/kW-yr
\$ 8.08	Fixed O&M & Capitalized O&M	\$/kW-yr
\$ 33.21	Fixed Pipeline	\$/kW-yr
\$ 41.29	Fixed O&M Including Fixed Pipeline & Capitalized	\$/kW-yr
\$ 9.39	Variable O&M and Other Costs	\$/MWh
7.954%	Payment Factor	
21%	Capacity Factor	

Table 8
Total Cost of Displaceable Resources

Year	Estimated Capital Cost \$/kW	Fixed Capital Cost at Real Levelized \$/kW-yr	Fixed O&M \$/kW-yr	Variable O&M \$/MWh	Total O&M at Expected CF \$/kW-yr	Total Resource Fixed Costs \$/kW-yr	Fuel Cost \$/MMBtu	IRP Resource Energy Cost \$/MWh	Total Avoided Costs \$/MWh
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
CCCT (Dry "J" Adv 1x1) - West Side Options (1500')									
2012	\$918	\$72.39	\$31.06	\$2.36	\$41.87	\$114.26			
2013		\$73.41	\$31.49	\$2.39	\$42.44	\$115.85			
2014		\$74.51	\$31.96	\$2.43	\$43.09	\$117.60			
2015		\$75.78	\$32.50	\$2.47	\$43.82	\$119.60			
2016		\$77.14	\$33.09	\$2.51	\$44.59	\$121.73			
2017		\$78.53	\$33.69	\$2.56	\$45.42	\$123.95			
2018		\$79.94	\$34.30	\$2.61	\$46.26	\$126.20			
2019		\$81.30	\$34.88	\$2.65	\$47.02	\$128.32			
2020		\$82.76	\$35.51	\$2.70	\$47.88	\$130.64			
2021		\$84.33	\$36.18	\$2.75	\$48.78	\$133.11			
2022		\$85.85	\$36.83	\$2.80	\$49.66	\$135.51			
2023		\$87.40	\$37.49	\$2.85	\$50.55	\$137.95			
2024		\$88.97	\$38.16	\$2.90	\$51.45	\$140.42	\$5.96	\$39.04	\$69.69
2025		\$90.57	\$38.85	\$2.95	\$52.37	\$142.94	\$6.10	\$39.96	\$71.16
2026		\$92.29	\$39.59	\$3.01	\$53.38	\$145.67	\$6.30	\$41.27	\$73.07
2027		\$94.04	\$40.34	\$3.07	\$54.41	\$148.45	\$6.54	\$42.84	\$75.24
2028		\$95.83	\$41.11	\$3.13	\$55.45	\$151.28	\$6.78	\$44.41	\$77.43
2029		\$97.65	\$41.89	\$3.19	\$56.50	\$154.15	\$7.08	\$46.37	\$80.02
2030		\$99.51	\$42.69	\$3.25	\$57.58	\$157.09	\$7.37	\$48.27	\$82.56
2031		\$101.50	\$43.54	\$3.32	\$58.75	\$160.25	\$7.52	\$49.26	\$84.24
2032		\$103.53	\$44.41	\$3.39	\$59.94	\$163.47	\$7.67	\$50.24	\$85.92
2033		\$105.60	\$45.30	\$3.46	\$61.15	\$166.75	\$7.82	\$51.22	\$87.62
2034		\$107.71	\$46.21	\$3.53	\$62.38	\$170.09	\$7.98	\$52.27	\$89.40
2035		\$109.86	\$47.13	\$3.60	\$63.62	\$173.48	\$8.13	\$53.25	\$91.12
2036		\$112.17	\$48.12	\$3.68	\$64.98	\$177.15	\$8.30	\$54.37	\$93.04
2037		\$114.53	\$49.13	\$3.76	\$66.36	\$180.89	\$8.48	\$55.54	\$95.02
2038		\$116.94	\$50.16	\$3.84	\$67.75	\$184.69	\$8.66	\$56.72	\$97.03
2039		\$119.40	\$51.21	\$3.92	\$69.17	\$188.57	\$8.84	\$57.90	\$99.06
2040		\$121.91	\$52.29	\$4.00	\$70.62	\$192.53	\$9.02	\$59.08	\$101.10

**Table 8
Total Cost of Displaceable Resources**

Sources, Inputs and Assumptions

- Source: (a)(c)(d) Plant Costs - 2013 IRP - Table 6.1 & 6.2 - Pages 112-116
 (b) = (a) x 0.07886
 (e) = (d) x (8.76 x 52.3%) + (c)
 (f) = (b) + (e)
 (g) Gas Price Forecast
 (h) = 6550 x (g) / 1000
 (i) = (f) / (8.76 x 'Capacity Factor') + (h)

CCCT (Dry "J" Adv 1x1) - West Side Options (1500')

CCCT Statistics	MW	Percent	Cap Cost	Fixed
CCCT (Dry "J" Adv 1x1)	425	90.8%	\$962	\$31.29
CCCT Duct Firing (Dry "J" Adv 1x1)	43	9.2%	\$486	\$28.74
Capacity Weighted	468	100.0%	\$918	\$31.06

CCCT Statistics	MW	CF	aMW	Percent	Variable	Heat Rate
CCCT (Dry "J" Adv 1x1)	425	56.0%	238	97.2%	\$2.43	6,495
CCCT Duct Firing (Dry "J" Adv 1x1)	43	16.0%	7	2.8%	0.08	8,611
Energy Weighted	468	52.3%	245	100.0%	\$2.36	6,550

Rounded

CCCT	Duct Firing	Plant Costs - 2013 IRP - Table 6.1 & 6.2 - Pages 112-116
425	43	MW Plant capacity
\$962	\$486	Plant capacity cost
\$9.61	\$0.00	Fixed O&M & Capitalized O&M
<u>\$21.68</u>	<u>\$28.74</u>	Fixed Pipeline
\$31.29	\$28.74	Fixed O&M Including Fixed Pipeline & Capitalized O&M (\$/kW-Yr)
\$2.43	\$0.08	Variable O&M and Other Costs
6,495	8,611	Heat Rate in btu/kWh
7.886%	7.886%	Payment Factor
56%	16%	Capacity Factor
	52.3%	Energy Weighted Capacity Factor
	91.8%	Capacity Factor - On-peak 52.3% / 57% (percent of hours on-peak)

Company Official Inflation Forecast - Dated March 2014

2011	2.6%	2017	1.8%	2023	1.8%	2029	1.9%	2035	2.0%
2012	1.9%	2018	1.8%	2024	1.8%	2030	1.9%	2036	2.1%
2013	1.4%	2019	1.7%	2025	1.8%	2031	2.0%	2037	2.1%
2014	1.5%	2020	1.8%	2026	1.9%	2032	2.0%	2038	2.1%
2015	1.7%	2021	1.9%	2027	1.9%	2033	2.0%	2039	2.1%
2016	1.8%	2022	1.8%	2028	1.9%	2034	2.0%	2040	2.1%

Table 1
IRP Preferred Portfolio
Excerpt from 2013 IRP Preferred Portfolio, Table 8.7

		Capacity (MW)												
Resource		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
East	Existing Plant Retirements/Conversions													
	Carbon1 (Early Retirement/Conversion)	-	-	(67)	-	-	-	-	-	-	-	-	-	
	Carbon2 (Early Retirement/Conversion)	-	-	(105)	-	-	-	-	-	-	-	-	-	
	Naughton3 (Early Retirement/Conversion)	-	-	(330)	-	-	-	-	-	-	-	-	-	
	Coal Ret_WY - Gas RePower	-	-	338	-	-	-	-	-	-	-	-	-	
	Expansion Resources													
	CCCT J 1x1	-	-	-	-	-	-	-	-	-	-	-	-	423
	Lake Side II	-	645	-	-	-	-	-	-	-	-	-	-	-
	Coal Plant Turbine Upgrades	1.8	-	-	-	-	-	-	-	-	-	-	-	-
	Wind, Wyoming, 40	-	-	-	-	-	-	-	-	-	-	-	-	432
	CHP - Biomass	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CHP - Other	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	DSM, Class 1 Total	-	-	-	-	-	-	-	-	-	-	-	-	-
	DSM, Class 2 Total	69	67	61	60	59	57	58	52	52	51	39	42	
	Micro Solar - PV	7.11	11.0	14.2	16.4	17.0	13.1	13.1	13.1	13.1	13.1	13.1	13.1	
	Micro Solar - Water Heating	-	-	-	-	0.8	0.4	0.5	0.6	2.4	2.4	2.4	2.4	
	FOT Mona Q3	-	-	-	-	-	37	151	248	19	161	255	-	
West	Expansion Resources													
	Coal Plant Turbine Upgrades	12	-	-	-	-	-	-	-	-	-	-	-	
	CHP - Biomass	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	DSM, Class 1 Total	-	-	-	-	-	-	-	-	-	-	-	-	
	DSM, Class 2 Total	45	49	42	41	38	35	32	28	27	30	28	28	
	OR Solar (Util Cap Standard & Cust Incentive Prgm)	4.45	3	3	-	-	-	-	-	-	-	-	-	
	FOT COB Q3	131	130	247	262	297	297	297	297	297	297	297	237	
	FOT NOB Q3	100	100	100	100	100	100	100	100	100	100	100	100	
	FOT Mid-Columbia Q3	400	400	400	400	400	400	400	400	400	400	400	400	
	FOT Mid-Columbia Q3 - 2	19	79	98	221	305	375	375	375	375	375	375	375	
	Existing Plant Retirements/Conversions	-	-	(164)	-	-	-	-	-	-	-	-	-	
Annual Additions, Long Term Resources	141	777	121	119	116	106	104	95	96	98	84	942		
Annual Additions, Short Term Resources	650	709	845	983	1,102	1,209	1,323	1,420	1,191	1,333	1,427	1,112		
Total Annual Additions	791	1,486	966	1,102	1,218	1,315	1,427	1,515	1,287	1,431	1,511	2,054		

1/ Front office transaction amounts reflect one-year transaction periods, are not additive, and are reported as a 10/20-year annual average.

Estimated Resource Value #3 - IRP Method Avoided Cost

November 1, 2014

Month	Avoided Cost (Includes Capacity Payment)				
	All Hours	HLH	LLH		
Jan 2011	28.01	29.29	21.35	Market Prices (Mid Columbia)	
Feb 2011	26.38	28.20	15.44		
Mar 2011	19.14	20.51	12.03		
Apr 2011	26.81	29.41	9.99		
May 2011	21.18	25.41	4.58		
Jun 2011	20.76	24.65	(1.27)		
Jul 2011	27.48	31.41	8.40		
Aug 2011	31.93	34.11	20.77		
Sep 2011	32.96	33.80	28.77		
Oct 2011	26.64	26.87	25.10		
Nov 2011	32.35	33.46	27.94		
Dec 2011	31.63	32.14	28.96		
Jan 2012	25.63	26.05	23.90		
Feb 2012	24.17	24.49	22.19		
Mar 2012	17.96	18.59	13.72		
Apr 2012	13.30	15.03	2.17		
May 2012	8.57	10.75	0.03		
Jun 2012	7.04	8.63	(1.96)		
Jul 2012	18.05	22.28	1.39		
Aug 2012	29.15	31.01	16.76		
Sep 2012	25.29	25.71	23.19		
Oct 2012	31.72	32.51	27.60		
Nov 2012	28.52	28.92	26.52		
Dec 2012	25.35	26.22	20.83		
Jan 2013	28.26	28.96	25.35		
Feb 2013	28.69	28.82	27.91		
Mar 2013	32.27	32.56	30.33		
Apr 2013	28.97	31.07	18.53		
May 2013	30.26	34.00	12.17		
Jun 2013	31.71	33.70	20.41		
Jul 2013	40.24	45.17	20.79		
Aug 2013	37.29	39.02	25.78		
Sep 2013	36.57	38.01	29.36		
Oct 2013	35.82	36.82	30.64		
Nov 2013	36.19	37.37	30.29		
Dec 2013	53.86	55.78	45.82		
Jan 2014	40.64	40.98	38.85		
Feb 2014	72.24	73.63	63.96		
Mar 2014	29.95	31.76	17.70		
Apr 2014	27.11	29.25	16.50		
May 2014	25.67	28.64	11.31	Schedule 37 Market Prices	
Jun 2014	22.45	25.05	7.68		
Jul 2014	35.73	39.84	19.53		
Aug 2014	48.63	50.78	34.33		
Sep 2014	44.38	47.05	33.71		
Oct 2014	41.77	42.84	34.52		
Nov 2014	40.72	42.03	34.18		
Dec 2014	40.26	41.76	33.99		
Jan 2015	33.25	34.24	28.16		IRP Methodology Avoided Cost
Feb 2015	32.55	33.24	28.41		
Mar 2015	34.05	34.81	30.09		
Apr 2015	26.33	27.69	17.56		
May 2015	24.80	28.35	10.92		
Jun 2015	27.51	30.78	9.01		
Jul 2015	38.83	42.39	21.50		
Aug 2015	41.54	43.93	29.26		
Sep 2015	34.52	36.19	26.20		

Month	Avoided Cost (Includes Capacity Payment)		
	All Hours	HLH	LLH
Oct 2015	29.47	30.17	24.74
Nov 2015	31.67	32.85	26.95
Dec 2015	30.97	31.64	27.51
Jan 2016	27.33	28.19	23.77
Feb 2016	30.89	31.42	27.60
Mar 2016	32.27	32.73	29.15
Apr 2016	25.13	26.30	17.59
May 2016	24.55	27.69	12.24
Jun 2016	26.12	28.90	10.39
Jul 2016	37.89	41.83	22.39
Aug 2016	41.65	43.40	30.03
Sep 2016	32.27	33.66	25.29
Oct 2016	33.25	34.09	28.89
Nov 2016	33.74	34.62	29.33
Dec 2016	32.39	32.94	29.52
Jan 2017	29.10	30.00	25.34
Feb 2017	29.48	30.00	26.35
Mar 2017	31.11	31.56	28.08
Apr 2017	24.48	25.87	17.58
May 2017	26.48	29.11	13.78
Jun 2017	27.14	29.83	11.95
Jul 2017	40.51	44.56	24.56
Aug 2017	43.10	44.86	31.39
Sep 2017	31.69	33.03	24.99
Oct 2017	28.82	29.54	25.07
Nov 2017	33.34	34.21	29.02
Dec 2017	29.05	29.65	26.54
Jan 2018	31.85	32.68	27.52
Feb 2018	27.21	27.71	24.22
Mar 2018	27.38	27.79	24.58
Apr 2018	29.74	31.38	21.55
May 2018	29.11	31.84	15.93
Jun 2018	30.65	33.48	14.63
Jul 2018	42.96	47.11	26.62
Aug 2018	45.95	47.79	33.68
Sep 2018	35.59	37.39	28.38
Oct 2018	31.95	32.60	27.58
Nov 2018	32.38	33.23	28.11
Dec 2018	31.39	32.07	28.55
Jan 2019	29.02	29.74	25.26
Feb 2019	27.01	27.49	24.19
Mar 2019	32.90	33.49	29.82
Apr 2019	28.14	29.31	20.60
May 2019	31.15	33.85	18.11
Jun 2019	32.13	35.50	17.04
Jul 2019	45.49	48.95	28.68
Aug 2019	46.72	48.51	34.81
Sep 2019	35.71	37.43	28.81
Oct 2019	35.12	35.80	30.55
Nov 2019	32.27	33.08	28.22
Dec 2019	30.92	31.56	28.25
Jan 2020	58.85	60.46	50.48
Feb 2020	28.97	29.53	25.48
Mar 2020	48.92	49.96	43.53
Apr 2020	30.69	31.99	22.30
May 2020	33.30	35.40	25.06
Jun 2020	38.01	39.98	26.90
Jul 2020	46.76	49.15	35.15
Aug 2020	48.61	50.50	38.89
Sep 2020	40.73	42.07	34.03
Oct 2020	37.33	38.07	32.36
Nov 2020	36.48	37.58	32.09

Month	Avoided Cost (Includes Capacity Payment)		
	All Hours	HLH	LLH
Dec 2020	35.06	35.87	30.85
Jan 2021	38.77	40.05	33.44
Feb 2021	34.05	34.79	29.62
Mar 2021	38.65	39.32	34.17
Apr 2021	37.02	38.04	30.48
May 2021	36.94	38.04	32.62
Jun 2021	41.70	42.93	34.76
Jul 2021	48.45	49.79	41.91
Aug 2021	49.29	50.74	41.81
Sep 2021	44.05	45.18	38.37
Oct 2021	40.81	41.85	35.44
Nov 2021	44.36	45.46	38.85
Dec 2021	42.75	43.97	36.40
Jan 2022	47.51	49.08	40.98
Feb 2022	45.59	46.65	39.23
Mar 2022	47.09	47.91	41.53
Apr 2022	44.54	45.11	40.89
May 2022	43.11	43.87	40.15
Jun 2022	52.32	53.48	45.76
Jul 2022	55.48	57.32	48.24
Aug 2022	58.90	60.43	48.73
Sep 2022	54.17	55.70	46.54
Oct 2022	48.99	50.37	41.84
Nov 2022	56.05	57.64	48.09
Dec 2022	53.17	54.75	44.97
Jan 2023	49.65	51.26	42.95
Feb 2023	46.58	47.67	40.07
Mar 2023	48.81	49.61	43.39
Apr 2023	46.35	47.10	42.65
May 2023	45.41	46.08	42.17
Jun 2023	51.73	52.86	45.33
Jul 2023	59.45	61.45	51.57
Aug 2023	60.87	62.40	50.67
Sep 2023	55.54	57.11	47.69
Oct 2023	52.28	53.80	44.37
Nov 2023	54.69	56.30	46.64
Dec 2023	54.57	56.38	47.01
Jan 2024	60.48	62.11	51.99
Feb 2024	54.61	55.75	47.44
Mar 2024	55.38	56.37	50.25
Apr 2024	51.40	52.11	46.81
May 2024	49.20	49.86	46.03
Jun 2024	54.50	55.68	49.21
Jul 2024	60.44	62.17	52.03
Aug 2024	61.01	62.57	50.64
Sep 2024	55.51	57.29	48.38
Oct 2024	61.93	63.23	53.15
Nov 2024	63.78	65.38	55.80
Dec 2024	64.18	66.28	55.45
Jan 2025	60.36	62.21	51.79
Feb 2025	57.46	58.71	49.94
Mar 2025	55.60	56.42	50.59
Apr 2025	51.06	51.86	46.40
May 2025	48.80	49.51	45.61
Jun 2025	56.06	57.22	49.89
Jul 2025	60.13	62.07	51.68
Aug 2025	63.92	65.58	53.61
Sep 2025	56.20	57.79	48.95
Oct 2025	64.87	66.41	55.81

Month	Avoided Cost (Includes Capacity Payment)		
	All Hours	HLH	LLH
Nov 2025	63.18	64.80	55.28
Dec 2025	66.35	68.53	56.48
Jan 2026	60.29	62.08	51.98
Feb 2026	60.82	62.10	53.13
Mar 2026	57.19	58.06	51.87
Apr 2026	53.50	54.30	48.87
May 2026	51.51	52.17	48.54
Jun 2026	59.31	60.63	52.29
Jul 2026	64.71	66.89	55.20
Aug 2026	65.73	67.44	55.15
Sep 2026	57.69	59.25	50.54
Oct 2026	66.37	67.85	57.69
Nov 2026	66.46	68.18	58.11
Dec 2026	67.02	69.21	57.12
Jan 2027	62.25	63.94	54.42
Feb 2027	64.72	66.00	57.03
Mar 2027	58.97	59.95	52.97
Apr 2027	55.76	56.59	50.94
May 2027	54.00	54.77	50.58
Jun 2027	60.67	62.11	52.99
Jul 2027	64.75	66.94	55.20
Aug 2027	67.74	69.50	56.83
Sep 2027	60.08	61.62	53.01
Oct 2027	66.78	68.21	58.31
Nov 2027	72.39	74.33	62.95
Dec 2027	69.96	72.26	59.63
Jan 2028	62.48	64.25	54.27
Feb 2028	60.21	61.26	53.63
Mar 2028	60.33	61.35	54.13
Apr 2028	57.61	58.47	52.63
May 2028	57.90	58.81	53.86
Jun 2028	63.76	65.39	55.09
Jul 2028	69.71	71.96	59.93
Aug 2028	70.07	71.93	58.54
Sep 2028	62.38	63.83	55.75
Oct 2028	68.83	70.26	60.44
Nov 2028	72.28	74.18	63.07
Dec 2028	70.08	72.31	60.03
Jan 2029	65.20	67.15	56.17
Feb 2029	62.60	63.69	56.04
Mar 2029	63.17	64.35	55.95
Apr 2029	61.16	62.05	55.97
May 2029	59.85	60.74	55.90
Jun 2029	65.57	66.92	58.41
Jul 2029	73.46	75.84	63.10
Aug 2029	74.76	76.75	62.43
Sep 2029	70.39	72.04	62.86
Oct 2029	71.08	72.44	63.04
Nov 2029	72.66	74.42	64.09
Dec 2029	67.09	69.21	57.53
Jan 2030	74.93	77.09	64.90
Feb 2030	72.38	73.52	65.54
Mar 2030	68.11	69.38	60.39
Apr 2030	62.98	63.92	57.52
May 2030	60.79	61.65	56.97
Jun 2030	66.66	67.98	59.62
Jul 2030	76.02	78.54	64.99
Aug 2030	74.72	76.61	62.99
Sep 2030	67.52	69.17	59.99
Oct 2030	73.82	75.18	65.79
Nov 2030	76.06	77.79	67.65
Dec 2030	79.35	81.74	68.54