

**REDACTED**

Rocky Mountain Power  
Exhibit RMP\_\_\_(CCP-5)  
Docket No. 10-035-124  
Witness: C. Craig Paice

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

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**REDACTED**

Exhibit Accompanying Direct Testimony of C. Craig Paice

Marginal Cost Study

January 2011

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Table 1

PacifiCorp  
 Utah Marginal Cost Study  
 Summary of Marginal Costs  
 Demand & Energy in Mills/kWh  
 June 2012 Dollars

Line	Description	Energy			Demand & Energy		
		(A) 1 Year	(B) 10 Year	(C) 20 Year	(D) 1 Year	(E) 10 Year	(F) 20 Year
1	Res - Schedule 1	55.61	66.05	67.33	55.61	135.32	138.03
2							
3	GS - Schedule 23	55.61	66.05	67.33	55.61	128.28	130.33
4							
5	GS - Schedule 6	55.56	66.00	67.27	55.56	123.79	125.47
6							
7	LGS - Schedule 8	54.97	65.30	66.55	54.97	117.21	118.44
8							
9	LGS - Schedule 9	52.97	62.92	64.14	52.97	96.13	97.38
10							
11	Special Contracts						
12	Customer A	52.97	62.92	64.14	52.97	93.44	94.69
13	Customer B	52.97	62.92	64.14	52.97	79.35	80.58
14	Customer C	52.97	62.92	64.14	52.97	87.83	89.07
15							
16	Street & Area Lighting						
17	Schedules 11,12	55.61	66.05	67.33	55.61	91.22	93.14
18	Traffic Signals	55.61	66.05	67.33	55.61	110.37	111.77
19	Outdoor Lighting	55.61	66.05	67.33	55.61	90.73	92.86
20							
21	Irrigation - Schedule 10	55.61	66.05	67.33	55.61	121.19	125.35

**Table 2**

PacifiCorp  
Utah Marginal Cost Study  
Summary of Marginal Costs  
Commitment and Billing in \$ / Customer / Month  
June 2012 Dollars

Line	Description	(A)		(B)
		1 Year	10 & 20 Year	
		1&3 Phase	1&3 Phase	
1	Res - Schedule 1	\$12.16	\$28.59	
2				
3	GS - Schedule 23	\$15.90	\$54.48	
4				
5	GS - Schedule 6	\$46.83	\$143.76	
6				
7	LGS - Schedule 8	\$227.84	\$352.21	
8				
9	LGS - Schedule 9	\$406.17	\$406.17	
10				
11	Special Contracts			
12	Customer A	\$4,276.73	\$4,276.73	
13	Customer B	\$4,716.78	\$4,716.78	
14	Customer C	\$4,573.03	\$4,573.03	
15				
16	Street & Area Lighting			
17	Schedules 11,12	\$11.43	\$314.99	
18	Traffic Signals	\$13.24	\$36.94	
19	Outdoor Lighting	\$13.24	\$36.94	
20				
21	Irrigation - Schedule 10	\$9.04	\$132.81	

Footnote:  
Short-run commitment and billing costs include the cost of metering, meter overhead and maintenance, service drops, service drop overhead and maintenance, customer accounting and informational expenses, and billing expenses.

**Table 3**  
 PacifiCorp  
 Utah Marginal Cost Study  
 20 Year Costing Inputs and Customer Data  
 Marginal Unit Costs  
 June 2012 Dollars

Line	Description	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
		Residential	Sch 23	Sch 6	Sch 8	Sch 9	Sch 10	Streetlighting Sch 11, 12	Sch 15 Traffic Signals	Sch 15 Outdoor Lighting	Cust A	Cust B	Cust C
	Billing Units												
1	Peak MW @ Meter	1,196	225	944	296	569	22	3	1	1	28	55	52
2	System Distribution Transformer	1,313	236	945	296	0	22	7	1	2	0	0	0
3		3,963	524	1,562	251	0	173	19	1	6	0	0	0
4	Demand Loss Factor	1,1035	1,1035	1,10270	1,09250	1,0498	1,1035	1,1035	1,1035	1,1035	1,0498	1,0498	1,0498
5	Peak MW @ Generator	1,320	248	1,041	323	597	24	4	1	1	29	58	55
6	System Distribution Transformer	1,449	260	1,042	324	0	25	8	1	2	0	0	0
7		4,374	578	1,723	274	0	190	21	1	6	0	0	0
8	Energy - Annual MWh	6,841,616	1,413,674	6,177,171	2,167,936	4,647,035	187,460	67,384	5,514	16,986	246,723	906,891	566,032
9	Energy Loss Factor	1,08757	1,08757	1,08668	1,07512	1,03605	1,08757	1,08757	1,08757	1,08757	1,03605	1,03605	1,03605
10	Energy - Annual MWh	7,440,737	1,537,470	6,712,590	2,330,797	4,814,561	203,876	73,285	5,996	18,473	255,618	939,584	586,437
11	Customer	719,632	79,902	15,286	295	160	2,865	1,529	2,244	472	1	1	1
12	Annual Customers						1,501						
13	Average Customers												
14	Unit Costs												
15	Generation	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14	\$100.14
16	Transmission	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63
17	Poles, Cond., Subst.	\$88.42	\$88.13	\$81.24	\$86.54	\$0.00	\$162.91	\$88.13	\$88.13	\$88.13	\$0.00	\$0.00	\$0.00
18	Transformers	\$3.22	\$3.22	\$3.22	\$3.22	\$0.00	\$3.22	\$3.22	\$3.22	\$3.22	\$0.00	\$0.00	\$0.00
19	Energy - @ Generator	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719	\$0.05719
20	Generation	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471	\$0.00471
21	Transmission	\$85.94	\$87.28	\$69.84	\$94.62	\$0.00	\$274.49	\$87.28	\$87.28	\$87.28	\$0.00	\$0.00	\$0.00
22	Conductor	\$32.30	\$32.80	\$26.24	\$31.80	\$0.00	\$103.14	\$32.80	\$32.80	\$32.80	\$0.00	\$0.00	\$0.00
23	Transformers	\$78.97	\$342.86	\$1,067.10	\$1,376.06	\$0.00	\$1,107.57	\$164.40	\$164.40	\$164.40	\$0.00	\$0.00	\$0.00
24	Service Drop	\$71.90	\$108.44	\$347.57	\$1,039.02	\$0.00	\$0.00	\$92.86	\$92.86	\$92.86	\$0.00	\$0.00	\$0.00
25	Meters	\$15.14	\$25.95	\$113.60	\$751.81	\$3,874.38	\$15.48	\$0.00	\$14.43	\$14.43	\$48,343.42	\$48,343.42	\$48,343.42
26	Meter Reading	\$6.79	\$10.30	\$14.05	\$222.61	\$286.00	\$31.71	\$0.00	\$7.56	\$7.56	\$214.56	\$834.22	\$834.22
27	Billing & Collections	\$34.44	\$32.38	\$34.79	\$254.18	\$254.18	\$35.13	\$31.69	\$31.69	\$31.69	\$254.18	\$254.18	\$254.18
28	Uncollectibles	\$5.83	\$2.08	\$37.91	\$407.13	\$397.20	\$12.52	\$1.56	\$0.88	\$0.88	\$2,340.08	\$6,717.47	\$5,085.12
29	Customer Service / Other	\$11.82	\$11.69	\$14.07	\$59.31	\$62.34	\$13.65	\$11.04	\$11.43	\$11.43	\$168.53	\$452.08	\$359.45
30	Total Commitment & Billing	\$343.14	\$653.77	\$1,725.16	\$4,226.53	\$4,874.10	\$1,593.70	\$421.63	\$443.33	\$443.33	\$51,320.76	\$56,601.37	\$54,876.40

Sources:  
 Lines 1 - 3 Tab 17.3 (Cust Data 3); Customer Loads 12 Months Ended June 2012  
 Lines 5 & 13 Tab 16.1 (Losses); Loss Factors  
 Lines 12 & 17 Tab 17.1 (Cust Data 1); Customers and MWh's 12 Months Ended June 2012  
 Line 22 Tab 3.1 (Capacity); Marginal Capacity Costs Based on Avoided Capacity Costs  
 Line 23 Tab 5.1 (Transm 1); Marginal Transmission Investment and O&M Expenses  
 Line 24 Tab 2.10 (Table 10); Marginal Distribution & Billing Costs  
 Line 28 Tab 4.1 (Energy); Marginal Cost of Energy  
 Line 29 Tab 2.9 (Table 9); Marginal Cost of Transmission Investment and Associated Expenses  
 Lines 31 - 39 Tab 2.10 (Table 10); Marginal Distribution & Billing Costs

Table 4  
 PacificCorp  
 Utah Marginal Cost Study  
 20 Year Marginal Cost By Class  
 June 2012 Dollars  
 (Dollars in 000's)

Line	Description	(A) Total	(B) Residential	(C) Sch 23	(D) Sch 6	(E) Sch 8	(F) Sch 9	(G) Sch 10	(H) Streetlighting Sch 11, 12	(I) Sch 15 Traffic Signals	(J) Sch 15 Outdoor Lighting	(K) Cust A	(L) Cust B	(M) Cust C
<b>Demand Related Marginal Cost</b>														
1	Generation	\$370,459	\$132,152	\$24,865	\$104,200	\$32,344	\$69,777	\$2,423	\$383	\$70	\$94	\$2,917	\$5,773	\$5,462
2	Transmission Distribution	\$586,838	\$209,340	\$39,387	\$165,061	\$51,236	\$94,691	\$3,838	\$607	\$111	\$150	\$4,621	\$9,144	\$8,652
3	Poles	\$92,995	\$45,022	\$8,049	\$28,075	\$9,711	\$0	\$1,818	\$239	\$22	\$59	\$0	\$0	\$0
4	Conductor	\$92,235	\$44,220	\$7,916	\$28,637	\$9,621	\$0	\$1,526	\$235	\$21	\$58	\$0	\$0	\$0
5	Substations	\$83,495	\$38,897	\$6,991	\$27,978	\$8,691	\$0	\$660	\$208	\$19	\$52	\$0	\$0	\$0
6	Subtotal: Pole, Cond, Subs	\$268,725	\$128,138	\$22,955	\$84,691	\$28,024	\$0	\$4,004	\$682	\$62	\$169	\$0	\$0	\$0
7	Transformers	\$23,078	\$14,083	\$1,861	\$5,548	\$883	\$0	\$613	\$67	\$3	\$20	\$0	\$0	\$0
8	Distribution subtotal	\$291,804	\$142,221	\$24,817	\$90,238	\$28,906	\$0	\$4,617	\$750	\$64	\$190	\$0	\$0	\$0
9	Total Demand Related (Lines 1+2+9)	\$1,249,101	\$483,713	\$89,069	\$359,499	\$112,486	\$154,468	\$10,878	\$1,740	\$245	\$434	\$7,538	\$14,917	\$14,115
<b>Energy Related Marginal Cost</b>														
10	Generation Energy Related	\$1,425,142	\$425,536	\$87,928	\$383,893	\$133,298	\$275,345	\$11,660	\$4,191	\$343	\$1,056	\$14,619	\$53,735	\$33,538
11	Transmission Energy Related	\$117,473	\$35,077	\$7,248	\$31,644	\$10,988	\$22,696	\$961	\$345	\$28	\$87	\$1,205	\$4,429	\$2,765
12	Total Energy	\$1,542,615	\$460,612	\$95,176	\$415,537	\$144,286	\$298,041	\$12,621	\$4,537	\$371	\$1,144	\$15,824	\$58,164	\$36,303
<b>Customer Related Marginal Cost</b>														
13	Poles	\$71,088	\$61,864	\$6,974	\$1,067	\$25	\$0	\$786	\$133	\$196	\$41	\$0	\$0	\$0
14	Conductor	\$26,714	\$23,249	\$401	\$2,620	\$9	\$0	\$296	\$50	\$74	\$15	\$0	\$0	\$0
15	Transformers	\$104,832	\$56,848	\$27,395	\$16,311	\$406	\$0	\$3,173	\$251	\$369	\$78	\$0	\$0	\$0
16	Service Drops	\$66,430	\$51,752	\$8,664	\$5,313	\$306	\$0	\$0	\$142	\$208	\$44	\$0	\$0	\$0
17	Streetlights	\$5,135	N/A	N/A	N/A	N/A	N/A	N/A	\$5,135	N/A	N/A	N/A	N/A	N/A
18	Meters	\$15,775	\$10,895	\$2,074	\$1,736	\$222	\$620	\$44	\$48	\$32	\$7	\$48	\$48	\$48
19	Meter Reading	\$6,108	\$4,889	\$823	\$215	\$96	\$46	\$48	\$0	\$17	\$4	\$0	\$1	\$1
20	Billing & Collections	\$28,262	\$24,792	\$2,587	\$532	\$75	\$41	\$101	\$48	\$71	\$15	\$0	\$0	\$0
21	Uncollectables	\$5,184	\$4,200	\$166	\$579	\$120	\$64	\$36	\$2	\$2	\$0	\$2	\$7	\$5
22	Customer Service / Other	\$9,773	\$8,508	\$934	\$215	\$17	\$10	\$39	\$17	\$26	\$5	\$0	\$0	\$0
23	Total Commitment & Billing Rel.	\$339,301	\$246,998	\$52,238	\$26,370	\$1,246	\$780	\$4,523	\$5,779	\$996	\$209	\$51	\$57	\$55
24	Total Marginal Cost	\$1,795,601	\$557,688	\$112,792	\$488,093	\$165,642	\$335,121	\$14,063	\$4,574	\$413	\$1,151	\$17,536	\$59,507	\$39,000
25	Generation	\$704,311	\$244,416	\$46,635	\$196,705	\$62,223	\$117,387	\$4,799	\$952	\$139	\$237	\$5,826	\$13,573	\$11,417
26	Transmission	\$581,778	\$346,830	\$72,545	\$115,068	\$29,874	\$620	\$8,916	\$6,461	\$944	\$375	\$48	\$48	\$48
27	Distribution	\$49,327	\$42,389	\$4,510	\$1,541	\$278	\$160	\$223	\$68	\$116	\$24	\$3	\$8	\$7
28	Retail	\$3,131,017	\$1,191,324	\$236,483	\$801,407	\$258,018	\$453,288	\$28,021	\$12,056	\$1,611	\$1,787	\$23,413	\$73,137	\$50,472
29	Total													

Source: Tab 2.3 (Table 3): 20 Year Costing Inputs and Customer Data Marginal Unit Costs'

Tab 2.10 (Table 10): 'Marginal Distribution & Billing Costs'

Line 1 Generation (Table 3, Row 7) x (Table 3, Row 22)/1000  
 Line 2 Transmission (Table 3, Row 7) x (Table 3, Row 23)/1000  
 Lines 4-6 Poles, Cond, Subst. (Table 3, Row 8) x (Table 7, Row 1 - 3) x (1 + 3826) (Dist OM, Row 32)  
 Line 8 Transformers (Table 3, Row 9) x (Table 7, Row 7) x (1 + 3826) (Dist OM, Row 32)  
 Lines 15-16 Energy Related (Table 3, Row 14) x (Table 3, Row 28 - 29)  
 Lines 20-29 Commitment Related (Table 3, Row 17) x (Table 7, Row 13 - 28) including O&M Adders

Table 5

**PACIFICORP  
 STATE OF UTAH  
 Unbundled Results of Operations  
 12 Months Ended June 2012 Forecast**

Description of Account Summary:	Total	Production	Transmission	Total Distribution	Distribution	Retail	Misc
1 Total Operating Revenues	1,993,638,526	1,377,750,132	248,326,059	367,562,335	310,537,047	48,959,250	8,046,038
2 Total Operating Expenses	1,682,221,287	1,215,818,619	178,675,407	287,727,260	231,274,735	49,028,654	7,425,872
3 Operating Revenue for Return	311,417,239	161,931,513	69,650,652	79,835,075	79,282,312	(69,404)	622,167
<b>Rate Base:</b>							
4 Total Electric Plant	10,176,242,811	5,278,848,795	2,161,360,519	2,736,033,498	2,657,901,170	67,154,481	10,977,847
<b>Rate Base Deductions:</b>							
5 Total Rate Base Deductions	(4,681,428,037)	(2,421,641,301)	(932,406,623)	(1,327,380,114)	(1,259,001,037)	(68,379,077)	-
6 Total Rate Base	5,494,814,774	2,857,207,494	1,228,953,896	1,408,653,384	1,398,900,133	(1,224,596)	10,977,847
7 Target Increase	232,416,309						
8 Net to Gross Factor	61.8538%						
9 Target Return on Rate Base	8.24%						
10 Total Op. exp. Adjusted for Taxes	1,770,879,370	1,261,919,271	198,504,410	310,455,690	253,845,797	49,008,895	7,600,998
11 Revenue Credits	(291,400,695)	(252,321,975)	(28,218,480)	(10,660,241)	(3,785,204)	(6,860,670)	(14,367)
12 Total Revenue Requirements	1,934,654,140	1,246,080,570	272,089,118	416,484,452	365,941,663	42,046,783	8,496,006

Table 6

PACIFICORP  
STATE OF UTAH  
Utah Marginal Cost Study  
Removal of Excluded Customer Class Revenue  
(\$ 000 )

Line No.	Description	A	B	D	E	F	J	Total
		Production	Transmission	Distribution	Retail	Misc		
1	Total Target Functional Revenue Requirement	1,246,081	272,089	365,942	42,047	8,496	1,934,654	
2								
3	Percent of Total	64.41%	14.06%	18.92%	2.17%	0.44%	100.00%	
4								
5	Target Revenue Requirement For Classes Included in MC Study	\$1,204,333	\$262,973	\$353,682	\$40,638	\$8,211	\$1,869,838	Increase 223,994
6								
7								
8								
9								Total Increase 232,416
10	Other Revenues							
11	Sch 31					\$793	907	Increase 114
12	Sch 21					\$281	328	(Decrease) 47
13	Lighting					\$4,842	4,842	-
14	Industrial Customer					\$46,005	54,267	8,262
15	AGA					\$3,578	3,578	-
16	Total Other Revenues					\$55,499	\$63,922	\$8,423

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Rocky Mountain Power  
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Witness: C. Craig Paice



Table 7

PACIFICORP  
STATE OF UTAH  
June 2012 Unbundled Revenue Requirement Allocation by Rate Schedule

Line	Description	(B) Residential		(C)	(D)	(E)	(F)	(G)	(H)	(I) Sch 15		(J)	(K)	(L)	(M)
		Sch 23	Sch 6	Sch 8	Sch 9	Sch 10	Streetlighting Sch 11, 12	Traffic Signals	Outdoor Lighting	Sch 15	Cust A	Cust B	Cust C		
1	Total Operating Revenues	\$1,645,844	\$623,014	\$121,790	\$459,954	\$138,877	\$215,590	\$12,158	\$8,914	\$1,218	\$521	\$1,151	\$10,558	\$30,307	\$22,943
2	MWH	23,244,422	6,841,616	1,413,674	6,177,171	2,167,936	4,647,035	187,460	67,384	16,986	5,514		246,723	906,891	566,032
3	Functionalized 20 Year Full Marginal Costs - Class S														
4	Generation	\$1,795,601	\$557,688	\$112,792	\$488,093	\$165,642	\$335,121	\$14,083	\$4,574	\$1,151	\$413	\$1,151	\$17,536	\$59,507	\$39,000
5	Transmission	\$704,311	\$244,416	\$46,655	\$196,705	\$62,223	\$117,387	\$4,799	\$952	\$237	\$139	\$237	\$5,826	\$13,573	\$11,417
6	Distribution - Total	\$631,105	\$389,219	\$77,055	\$116,608	\$30,152	\$780	\$9,139	\$6,529	\$399	\$1,059	\$399	\$51	\$57	\$55
7	Distribution - Retail	\$381,778	\$346,830	\$72,545	\$115,068	\$29,874	\$620	\$8,916	\$6,461	\$375	\$48	\$375	\$48	\$48	\$48
8	Distribution - Misc. (mWh)	\$49,327	\$42,389	\$4,510	\$1,541	\$278	\$160	\$223	\$68	\$24	\$116	\$24	\$2	\$8	\$7
9	Total	\$3,131,017	\$1,191,324	\$236,483	\$801,407	\$258,018	\$453,289	\$28,021	\$12,056	\$1,787	\$1,611	\$1,787	\$23,413	\$73,137	\$50,472
10	Functional Revenue Requirement Allocation Factors														
11	Functionalized 20 Year Full Marginal Costs - Class % of Total														
12	Generation	100.00%	31.06%	6.28%	27.18%	9.22%	18.66%	0.78%	0.25%	0.06%	0.02%	0.06%	0.98%	3.31%	2.17%
13	Transmission	100.00%	34.70%	6.62%	27.93%	8.83%	16.67%	0.68%	0.14%	0.03%	0.03%	0.03%	0.83%	1.93%	1.62%
14	Distribution - Total	100.00%	61.67%	12.21%	18.48%	4.78%	0.12%	1.45%	1.03%	0.06%	0.17%	0.06%	0.01%	0.01%	0.01%
15	Distribution - Retail	100.00%	59.62%	12.47%	19.78%	5.14%	0.11%	1.53%	1.11%	0.06%	0.16%	0.06%	0.01%	0.01%	0.01%
16	Distribution - Misc. (mWh)	100.00%	85.93%	9.14%	3.12%	0.56%	0.32%	0.45%	0.14%	0.05%	0.23%	0.05%	0.01%	0.02%	0.01%
17	Total	100.00%	29.43%	6.08%	26.57%	9.33%	19.99%	0.81%	0.29%	0.07%	0.02%	0.07%	1.06%	3.90%	2.44%
18	Functionalized Class Revenue Requirement - (Target)														
19	Generation	\$1,204,333	\$374,049	\$75,651	\$327,370	\$111,099	\$224,770	\$9,445	\$3,068	\$772	\$277	\$772	\$11,761	\$39,912	\$26,158
20	Transmission	\$267,973	\$91,259	\$17,413	\$73,445	\$23,233	\$43,830	\$1,792	\$356	\$88	\$52	\$88	\$2,175	\$5,068	\$4,263
21	Distribution - Total	\$353,682	\$210,849	\$44,102	\$69,953	\$18,162	\$377	\$5,420	\$3,928	\$228	\$574	\$228	\$29	\$29	\$29
22	Distribution - Retail	\$40,638	\$34,922	\$3,716	\$1,269	\$229	\$132	\$184	\$56	\$20	\$95	\$20	\$2	\$7	\$5
23	Distribution - Misc. (mWh)	\$8,211	\$2,417	\$499	\$2,182	\$766	\$1,642	\$66	\$24	\$6	\$2	\$6	\$87	\$320	\$200
24	Total	\$1,869,838	\$713,496	\$141,381	\$474,220	\$153,488	\$270,750	\$16,908	\$7,431	\$1,114	\$1,000	\$1,114	\$14,056	\$45,337	\$30,656
25	Ratio of Operating Revn to Revenue Requirement-(Target)														
26	(Line 1 / Line 27)	88.02%	87.32%	86.14%	96.99%	90.48%	79.63%	71.91%	119.95%	109.33%	52.14%	109.33%	75.11%	66.85%	74.84%
27	Increase or (Decrease)														
28	(Line 27 - Line 1)	\$223,994	\$90,482	\$19,591	\$14,267	\$14,611	\$55,160	\$4,750	(\$1,483)	(\$104)	\$478	(\$104)	\$3,498	\$15,030	\$7,713
29	Percent Increase (Decrease)	13.61%	14.52%	16.09%	3.10%	10.52%	25.59%	39.07%	-16.63%	-8.53%	33.13%	49.59%	33.62%	33.62%	33.62%
30															
31															
32															
33															
34															
35															
36															
37															

**Table 8**

PacifiCorp  
Utah Marginal Cost Study  
Summary of Marginal Generation Costs  
In Nominal Dollars

Year	(A) Resource Cost (Mills / kWh) (B) + (C)	(B) Energy Only (Mills / kWh)	(C) Capacity Only (Mills / kWh)	(D) Capacity Only (\$ / kW)
2012	73.58	51.13	22.45	\$99.31
2013	75.84	52.94	22.90	\$101.29
2014	78.57	55.24	23.33	\$103.22
2015	81.41	57.67	23.74	\$105.02
2016	85.41	61.25	24.16	\$106.87
2017	89.27	64.69	24.58	\$108.74
2018	92.00	66.99	25.01	\$110.65
2019	91.37	65.92	25.45	\$112.59
2020	92.48	66.58	25.90	\$114.57
2021	96.32	69.97	26.35	\$116.58
2022	100.88	74.07	26.81	\$118.62
2023	98.30	71.02	27.28	\$120.70
2024	97.52	69.76	27.76	\$122.82
2025	101.34	73.09	28.25	\$124.98
2026	103.88	75.13	28.75	\$127.17
2027	103.57	74.32	29.25	\$129.40
2028	106.21	76.45	29.76	\$131.67
2029	109.30	79.01	30.29	\$133.98
2030	111.75	80.93	30.82	\$136.33
2031	113.71	82.35	31.36	\$138.72
<b>2012</b>	<b>73.58</b>	<b>51.13</b>	<b>22.45</b>	<b>\$99.31</b>
<b>1 year -</b>	<b>Sum of PV Costs</b>	<b>@ 8.24%</b>		
<b>2012 - 2016</b>	<b>337.11</b>	<b>237.27</b>	<b>99.84</b>	<b>\$441.64</b>
<b>5 year -</b>	<b>Sum of PV Costs</b>	<b>@ 8.24%</b>		
	<b>Annual Cost</b>	<b>@ 22.57%</b>	<b>22.53</b>	<b>\$99.68</b>
<b>2012 - 2021</b>	<b>603.17</b>	<b>429.95</b>	<b>173.22</b>	<b>\$766.24</b>
<b>10 years -</b>	<b>Sum of PV Costs</b>	<b>@ 8.24%</b>		
	<b>Annual Cost</b>	<b>@ 13.03%</b>	<b>22.57</b>	<b>\$99.84</b>
<b>2012 - 2031</b>	<b>940.24</b>	<b>673.59</b>	<b>266.65</b>	<b>\$1,179.55</b>
<b>20 years -</b>	<b>Sum of PV Costs</b>	<b>@ 8.24%</b>		
	<b>Annual Cost</b>	<b>@ 8.49%</b>	<b>22.64</b>	<b>\$100.14</b>

**Footnotes:**

- (B) Tab 4.1 (Energy): 'Marginal Generation Energy Costs'
- (C) Tab 3.1 (Capacity): 'Marginal Capacity Costs Based on Avoided Capacity Costs'
- (D) Tab 3.1 (Capacity): 'Marginal Capacity Costs Based on Avoided Capacity Costs'

**Table 9**

PacifiCorp  
Utah Marginal Cost Study  
Marginal Cost of  
Transmission Investment and Associated Expenses

Line	Item	
1	Growth Related Investments - (2012 to 2016 in \$000's)	\$1,074,009
2		
3	System Growth MW's from 2012 to 2016	647 MW
4		
5	Marginal Investment (investments / kW)	\$1,659.30 / kW
6		
7	Annualized Investment x 8.71%	\$144.53 / kW
8	Admin. & General Factor x 1.43%	\$23.73 / kW
9	Annual O&M Expenses x 1.377%	\$22.85 / kW
10	Annualized Marginal Cost	\$191.11 / kW
11		
12	Marginal Cost of Demand-Related Transmission	\$158.63 / kW
13		
14	Marginal Cost of Energy-Related Transmission (Line 10 - Line 12)	\$32.47 / kW
15	Marginal Cost of Energy-Related Transmission	\$0.00471 / kWh
16	\$32.47 / (8760 x 78.63% LF))	

Sources:

Tab 5.2 (Transm2:) `2012-2016 Forecasted Transmission`

Tab 5.1 (Transm1:) `Marginal Transmission Investment and O&M Expenses`

Table 10

PacifiCorp  
 Utah Marginal Cost Study  
 Marginal Distribution & Billing Costs  
 June 2012 Dollars

Line	Description	(A) Residential	(B) Sch 23	(C) Sch 6	(D) Sch 8	(E) Sch 9	(F) Sch 10	(G) Streetlighting Sch 11, 12	(H) Sch 15 Traffic Signals	(I) Sch 15 Outdoor Lighting	(J) Cust A	(K) Cust B	(L) Cust C
	Demand Related Costs (\$/kW)												
1	Poles	22.47	22.35	19.48	21.69	-	53.52	22.35	22.35	22.35	-	-	-
2	Conductors	22.07	21.98	19.87	21.49	-	44.90	21.98	21.98	21.98	-	-	-
3	Substation	19.41	19.41	19.41	19.41	-	19.41	19.41	19.41	19.41	-	-	-
4	Dist. O&M @ of Total Investment	24.47	24.39	22.48	23.95	-	45.08	24.39	24.39	24.39	-	-	-
5	Total \$/Dist. kW	88.42	88.13	81.24	86.54	-	162.91	88.13	88.13	88.13	-	-	-
6	Transformers	2.33	2.33	2.33	2.33	-	2.33	2.33	2.33	2.33	-	-	-
7	Dist. O&M @ of Total Investment	0.89	0.89	0.89	0.89	-	0.89	0.89	0.89	0.89	-	-	-
8	Total \$/Transformer kW	3.22	3.22	3.22	3.22	-	3.22	3.22	3.22	3.22	-	-	-
9													
10													
11													
12	Commitment Related Costs (\$/Customer)												
13	Poles	62.16	63.13	50.51	61.20	-	198.53	63.13	63.13	63.13	-	-	-
14	Conductors	23.36	23.72	18.98	23.00	-	74.60	23.72	23.72	23.72	-	-	-
15	Transformers	57.12	247.98	771.81	995.27	-	801.08	118.91	118.91	118.91	-	-	-
16	Streetlights	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	-	-	N/A
17	Dist. O&M @ of Total Investment	54.57	128.11	321.88	413.01	-	410.99	78.72	78.72	78.72	-	-	-
18	Total Commitment Related	197.21	462.94	1,163.18	1,492.48	-	1,485.20	3,642.69	284.48	284.48	-	-	-
19													
20	Billing Related Costs (\$/Customer/Yr)												
21	Service Drop	52.00	78.43	251.39	751.50	-	-	67.16	67.16	67.16	-	-	-
22	Service Drop O&M @	10.93	18.74	82.03	542.90	-	11.18	25.70	25.70	25.70	-	-	-
23	Meter	4.21	7.21	31.57	208.91	-	2,797.79	10.42	10.42	10.42	-	-	-
24	Meter O&M at	6.79	10.30	14.05	222.61	-	1,076.59	4.01	4.01	4.01	-	-	-
25	Meter Reading	34.44	32.38	34.79	254.18	-	31.71	7.56	7.56	7.56	-	-	-
26	Billing & Collections	5.83	2.08	37.91	407.13	-	397.20	31.69	31.69	31.69	-	-	-
27	Uncollectibles	11.82	11.69	14.07	59.31	-	12.52	0.88	0.88	0.88	-	-	-
28	Customer Service / Other	145.93	190.84	561.98	2,734.05	-	137.14	11.43	11.43	11.43	-	-	-
29	Total Billing Related	12.16	15.90	46.83	227.94	-	9.04	13.24	13.24	13.24	-	-	-
30													
31	Monthly Billing Related (Line 28 / 12)	343.14	653.78	1,725.16	4,226.53	-	1,593.70	3,779.83	443.33	443.33	-	-	-
32	Total Distribution (Comm & Billing Costs)	28.59	54.48	143.76	352.21	-	132.81	314.99	36.94	36.94	-	-	-
33	Line 17 + Line 28												
34	Monthly Commitment & Bill (Line 33 / 12)												
35													
36													

Sources: Lines

- Line 1 - 2 Tab 7.1 (PC.1): Hypothetical Circuit Study Results Annual Demand and Commitment Costs'
- Line 3 Tab 6.1 (Dist Sub 1): Distribution Substation Costs / kW
- Line 4 Sum of lines 1 to 3 multiplied by 38.26%
- Line 7 Tab 9.1 (Dist OM): Distribution O&M Expense Loading Factor as a Percent of Dist. Plant' ( for 38.26% Factor)
- Line 13 - 14 Tab 8.2 (XFMR.2): Transformer Demand Costs'
- Line 15 Tab 7.1 (PC.1): Hypothetical Circuit Study Results Annual Demand and Commitment Costs'
- Line 20 Tab 8.1 (XFMR.1): Transformer Commitment Costs'
- Line 22 Tab 11.1 (Services 1): Weighted Average Installed Service Drop Costs'
- Line 23 Tab 10.1 (Meters 1): Weighted Average Installed Meter Costs'
- Line 24 - 27 Tab 10.4 (Meters 4): Distribution Meters Expense Loading Factor' ( for 38.48% Factor)
- Line 24 - 27 Tab 13.1 (Cust Exp Sum.): Summary of Customer Accounting Expense By Schedule'

Billing Costs

PacifiCorp  
Utah Marginal Cost Study  
Total 20 Year Demand Costs Divided by Billing kW  
June 2012 Dollars  
(Dollars in 000's)

Line	Description	(A) Total	(B) Residential	(C) Sch. 23	(D) Sch 6	(E) Sch 8	(F) Sch 9	(G) Sch 10	(H) Streetlighting Sch 11, 12	(I) Sch 15 Traffic Signals	(J) Sch 15 Outdoor Lighting	(K) Cust. A	(L) Cust B	(M) Cust C
	<u>Demand Related Marginal Cost</u>													
1	Generation -	\$370,459	\$132,152	\$24,865	\$104,200	\$32,344	\$59,777	\$2,423	\$383	\$70	\$94	\$2,917	\$5,773	\$5,462
2	Transmission -	\$586,838	\$209,340	\$39,387	\$165,061	\$51,236	\$94,691	\$3,838	\$607	\$111	\$150	\$4,621	\$9,144	\$8,652
3														
4	Distribution -													
5	Poles, Wire, Sub	\$268,725	\$128,138	\$22,956	\$84,691	\$28,024	\$0	\$4,004	\$682	\$62	\$169	\$0	\$0	\$0
6	Transformers	\$23,078	\$14,083	\$1,861	\$5,548	\$883	\$0	\$613	\$67	\$3	\$20	\$0	\$0	\$0
7	Distribution Subtotal	\$583,607	\$291,804	\$142,221	\$24,817	\$90,238	\$28,906	\$0	\$4,617	\$750	\$64	\$190	\$0	\$0
8														
9	Total Demand Related	\$1,540,904	\$633,295	\$206,473	\$294,078	\$173,818	\$183,374	\$6,261	\$5,607	\$930	\$308	\$7,727	\$14,917	\$14,115
10														
11	Average Billing kW	9,114,279	5,215,022	581,896	1,610,446	429,527	726,569	172,552	18,979	773	5,768	45,172	148,686	158,889
12														
13	Generation -	\$25,34	\$25,34	\$42.73	\$64.70	\$75.30	\$82.27	\$14.04	\$20.19	\$90.49	\$16.38	\$64.57	\$38.82	\$34.38
14	Transmission -	\$40.14	\$40.14	\$67.69	\$102.49	\$119.28	\$130.33	\$22.24	\$31.98	\$143.34	\$25.95	\$102.29	\$61.50	\$54.46
15														
16	Distribution -													
17	Poles, Wire, Sub	\$24.57	\$24.57	\$39.45	\$52.59	\$65.24	\$0.00	\$23.20	\$35.95	\$79.64	\$29.32	\$0.00	\$0.00	\$0.00
18	Transformers	\$2.70	\$2.70	\$3.20	\$3.44	\$2.06	\$0.00	\$3.55	\$3.55	\$3.55	\$3.55	\$0.00	\$0.00	\$0.00
19	Distribution subtotal	\$27.27	\$27.27	\$42.65	\$56.03	\$67.30	\$0.00	\$26.76	\$39.50	\$83.19	\$32.87	\$0.00	\$0.00	\$0.00
20														
21														
22	Total Demand Related	\$92.75	\$92.75	\$153.07	\$223.23	\$261.88	\$212.60	\$63.04	\$91.66	\$317.02	\$75.20	\$166.86	\$100.32	\$88.83
23														
24	Monthly Demand Costs	\$7.73	\$7.73	\$12.76	\$18.60	\$21.82	\$17.72	\$5.25	\$7.64	\$26.42	\$6.27	\$13.91	\$8.36	\$7.40

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**Full MC %**

PacifiCorp  
Utah Marginal Cost Study  
Marginal Cost Percentage @ Meter  
June 2012 Dollars

Line	Description	(A) Marginal Cost (000)s	(B) Mills / kWh	(C) % of Total
<b>Demand Related Marginal Cost -</b>				
1	Generation	\$370,459	15.94	11.8%
2	Transmission	\$586,838	25.25	18.7%
3	Dist. Poles, Cond., Subst.	\$268,725	11.56	8.6%
4	Dist. Transformers	\$23,078	0.99	0.7%
5	<u>Total Demand Related</u>	<u>\$1,249,101</u>	<u>53.74</u>	<u>39.9%</u>
6				
<b>Energy Related Marginal Cost -</b>				
7				
8				
9	Generation	\$1,425,142	61.31	45.5%
10	Transmission	\$117,473	5.05	3.8%
11	<u>Total Energy Related</u>	<u>\$1,542,615</u>	<u>66.36</u>	<u>49.3%</u>
12				
<b>Commitment &amp; Billing -</b>				
13	Commitment	202,634	8.72	6.5%
14	Billing	136,668	5.88	4.4%
15	<u>Total Commitment &amp; Billing</u>	<u>\$339,301</u>	<u>14.60</u>	<u>10.8%</u>
16				
17				
18	<u>Total Marginal Cost</u>	<u>\$3,131,017</u>	<u>134.70</u>	<u>100.0%</u>
19				
20	Note: Total MWh =	23,244,422		

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PacificCorp  
Utah Marginal Cost Study  
10 Year Run Costing Inputs and Customer Data  
Marginal Unit Costs  
June 2012 Dollars

Line	Description	(A) Residential	(B) Sch 23	(C) Sch 6	(D) Sch 8	(E) Sch 9	(F) Sch 10	(G) Sch 11, 12	(H) Sch 15 Traffic Signals	(I) Sch 15 Outdoor Lighting	(J) Cust A	(K) Cust B	(L) Cust C
<b>Billing Units</b>													
<b>Demand</b>													
1	Peak MW @ Meter	1,196	225	944	296	569	22	3	1	1	28	55	52
2	System Distribution Transformer	1,313	236	945	296	0	22	7	1	2	0	0	0
3		3,963	524	1,562	251	0	173	19	1	6	0	0	0
4	Demand Loss Factor	1,1035	1,1035	1,10270	1,09250	1,0498	1,1035	1,1035	1,1035	1,1035	1,0498	1,0498	1,0498
5	Peak MW @ Generator	1,320	248	1,041	323	597	24	4	1	1	29	58	55
6	System Distribution Transformer	1,449	260	1,042	324	-	25	8	1	2	-	-	-
7		4,374	578	1,723	274	-	190	21	1	6	-	-	-
8													
9													
<b>Energy</b>													
10	Energy - Annual MWh	6,841,616	1,413,674	6,177,171	2,167,936	4,647,035	187,460	67,384	5,514	16,986	246,723	906,891	566,032
11	Energy Loss Factor	1,08757	1,08757	1,08668	1,07512	1,03605	1,08757	1,08757	1,08757	1,08757	1,03605	1,03605	1,03605
12	Energy - Annual MWh	7,440,737	1,537,470	6,712,590	2,330,797	4,814,561	203,876	73,285	5,996	18,473	255,618	939,584	586,437
13													
14													
15													
<b>Customer</b>													
16	Annual Customers	719,832	79,902	15,286	295	160	2,865	1,529	2,244	472	1	1	1
17	Average Customers						1,501						
18													
19													
<b>Unit Costs</b>													
20	Generation	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84	\$99.84
21	Transmission	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63	\$158.63
22	Poles, Cond., Subst.	\$88.42	\$88.13	\$81.24	\$86.54	\$0.00	\$162.91	\$88.13	\$88.13	\$88.13	\$0.00	\$0.00	\$0.00
23	Transformers	\$3.22	\$3.22	\$3.22	\$3.22	\$0.00	\$3.22	\$3.22	\$3.22	\$3.22	\$0.00	\$0.00	\$0.00
24	Energy @ Generator	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073	\$0.06073
25	Commitment & Billing	\$343.14	\$653.78	\$1,725.16	\$4,226.53	\$4,874.10	\$1,593.70	\$3,779.83	\$443.33	\$443.33	\$51,320.76	\$56,601.37	\$54,876.40

PacifiCorp  
Utah Marginal Cost Study  
10 Year Marginal Cost By Class  
June 2012 Dollars  
(Dollars in 000's)

Line	(A) Total	(B) Residential	(C) Sch 23	(D) Sch 6	(E) Sch 8	(F) Sch 9	(G) Sch 10	(H) Streetlighting Sch 11, 12	(I) Sch 15 Traffic Signals	(J) Sch 15 Outdoor Lighting	(K) Cust A	(L) Cust B	(M) Cust C
<u>Demand Related Marginal Cost</u>													
1	Generation -	\$131,756	\$24,790	\$103,888	\$32,247	\$59,597	\$2,416	\$382	\$70	\$94	\$2,908	\$5,755	\$5,446
2	Transmission -	\$209,340	\$39,387	\$165,061	\$51,236	\$94,691	\$3,838	\$607	\$111	\$150	\$4,621	\$9,144	\$8,652
3													
4	Distribution -	\$128,141	\$22,957	\$84,688	\$28,024	\$0	\$4,004	\$682	\$62	\$169	\$0	\$0	\$0
5	Poles, Conductor, Substations	\$4,666	\$839	\$3,357	\$1,043	\$0	\$79	\$25	\$2	\$6	\$0	\$0	\$0
6	Transformers	\$132,807	\$23,796	\$88,044	\$29,067	\$0	\$4,083	\$707	\$64	\$175	\$0	\$0	\$0
7	Distribution subtotal												
8	Total Demand Related (Lines 1+2+7)	\$473,903	\$87,973	\$356,993	\$112,550	\$154,288	\$10,337	\$1,696	\$244	\$419	\$7,529	\$14,899	\$14,098
9													
10													
11													
12													
13	<u>Energy Related Marginal Cost</u>												
14	Total Energy Related	\$451,907	\$93,377	\$407,683	\$141,559	\$292,408	\$12,382	\$4,451	\$364	\$1,122	\$15,525	\$57,065	\$35,617
15													
16													
17													
18	<u>Customer Related Marginal Cost</u>												
19	Commitment & Billing Rel.	\$247,002	\$52,238	\$26,370	\$1,246	\$780	\$4,566	\$5,779	\$995	\$209	\$51	\$57	\$55
20													
21													
22													
23	Total Revenue @ Full MC	\$1,172,811	\$233,588	\$791,047	\$255,355	\$447,476	\$27,285	\$11,926	\$1,604	\$1,750	\$23,105	\$72,021	\$49,770

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PacifiCorp  
Utah Marginal Cost Study  
5 Year Marginal Costs by Class  
June 2012 Dollars  
(Dollars in 000's)

Line	(A) Total	(B) Residential	(C) Sch 23	(D) Sch 6	(E) Sch 8	(F) Sch 9	(G) Sch 10	Streetlighting		(I) Sch 15 Traffic Signals	(J) Sch 15 Outdoor Lighting	(K) Cust A	(L) Cust B	(M) Cust C
	<u>Billing Units</u>													
1	System	1,196	225	944	296	569	22			1	1	28	55	52
2	Peak MW @ Meter	1,035	1,1035	1,10270	1,09250	1,0498	1,1035		3	1,1035	1,1035	1,0498	1,0498	1,0498
3	Demand Loss Factor	1,320	248	1,041	323	597	24		4	1	1	29	58	55
4	Peak MW @ Generator													
5	Energy													
6	Energy - Annual MWh @ Meter	6,841,616	1,413,674	6,177,171	2,167,936	4,647,035	187,460		67,384	5,514	16,986	246,723	906,891	566,032
7	Energy Loss Factor	1,08757	1,08757	1,08668	1,07512	1,03605	1,08757		1,08757	1,08757	1,08757	1,03605	1,03605	1,03605
8	Energy - Annual MWh @ Generator	7,440,737	1,537,470	6,712,590	2,330,797	4,814,561	203,876		73,285	5,996	18,473	255,618	939,584	586,437
9														
10	Average Customers	719,832	79,902	15,286	295	160	2,865		1,529	2,244	472	1	1	1
11							1,501							
12	Unit Costs													
13														
14														
15	Generation - \$ / System Peak kW	\$99.68	\$99.68	\$99.68	\$99.68	\$99.68	\$99.68		\$99.68	\$99.68	\$99.68	\$99.68	\$99.68	\$99.68
16	Energy @ Generator \$ / kWh	\$0.05355	\$0.05355	\$0.05355	\$0.05355	\$0.05355	\$0.05355		\$0.05355	\$0.05355	\$0.05355	\$0.05355	\$0.05355	\$0.05355
17	Billing Related Costs	\$145.93	\$190.84	\$561.98	\$2,734.05	\$4,874.10	\$108.50		\$137.14	\$158.85	\$158.85	\$51,320.76	\$56,601.37	\$54,876.40
18														
19	Marginal Costs \$000													
20														
21	Total Demand Related	\$131,545	\$24,750	\$103,721	\$32,195	\$59,502	\$2,412		\$381	\$70	\$94	\$2,904	\$5,746	\$5,437
22														
23	Total Energy Related	\$398,451	\$82,331	\$359,459	\$124,814	\$257,820	\$10,918		\$3,924	\$321	\$989	\$13,688	\$50,315	\$31,404
24														
25	Billing Related Costs	\$105,044	\$15,248	\$8,590	\$806	\$780	\$311		\$210	\$357	\$75	\$51	\$57	\$55
26														
27	Total Revenue @ Full MC	\$635,040	\$122,329	\$471,770	\$157,815	\$318,102	\$13,641		\$4,515	\$748	\$1,158	\$16,643	\$56,118	\$36,896

PacifiCorp  
Utah Marginal Cost Study  
1 Year Marginal Costs by Class  
June 2012 Dollars  
(Dollars in 000's)

Line	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
	Total	Residential	Sch 23	Sch 6	Sch 8	Sch 9	Sch 10	Streetlighting Sch 11, 12	Sch 15 Traffic Signals	Sch 15 Outdoor Lighting	Cust. A	Cust. B	Cust. C
<u>Billing Units</u>													
<u>Energy</u>													
1	23,244,422	6,841,616	1,413,674	6,177,171	2,167,936	4,647,035	187,460	67,384	5,514	16,986	246,723	906,891	566,032
2		1,087,57	1,087,57	1,086,68	1,07,512	1,036,05	1,087,57	1,087,57	1,087,57	1,087,57	1,036,05	1,036,05	1,036,05
3	24,919,424	7,440,737	1,537,470	6,712,590	2,330,797	4,814,561	203,876	73,285	5,996	18,473	255,618	939,584	586,437
4													
5	822,589	719,832	79,902	15,286	295	160	2,865	1,529	2,244	472	1	1	1
6													
7													
8													
9													
10		\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113	\$0.05113
11		\$145.93	\$190.84	\$561.98	\$2,734.05	\$4,874.10	\$108.50	\$137.14	\$158.85	\$158.85	\$51,320.76	\$56,601.37	\$54,876.40
12													
13													
14													
15													
16	\$1,274,080	\$380,430	\$78,608	\$343,201	\$119,169	\$246,159	\$10,424	\$3,747	\$307	\$944	\$13,069	\$48,039	\$29,983
17													
18	\$131,583	\$105,044	\$15,248	\$8,590	\$806	\$780	\$311	\$210	\$357	\$75	\$51	\$57	\$55
19													
20													
21	\$1,405,663	\$485,473	\$93,856	\$351,792	\$119,975	\$246,939	\$10,795	\$3,957	\$663	\$1,020	\$13,121	\$48,096	\$30,038

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Capacity

PacifiCorp  
 Utah Marginal Cost Study  
 Marginal Capacity Costs  
 Based on Avoided Capacity Costs

Calendar Year (12 Mo Ended Dec)	(A) Projected Capacity \$/kW	(B) Present Value Factors @ 8.24%	(C) PV of Capacity \$/kW (A) x (B)	(D) Capacity Mills/kWh (A) / 0.505	(E) PV of Capacity Mills/kWh (B) * (D)
2012	\$99.31	1.0000	99.31	22.45	22.45
2013	\$101.29	0.9238	93.57	22.90	21.16
2014	\$103.22	0.8535	88.10	23.33	19.91
2015	\$105.02	0.7885	82.81	23.74	18.72
2016	\$106.87	0.7285	77.85	24.16	17.60
2017	\$108.74	0.6730	73.18	24.58	16.54
2018	\$110.65	0.6217	68.79	25.01	15.55
2019	\$112.59	0.5744	64.67	25.45	14.62
2020	\$114.57	0.5307	60.80	25.90	13.75
2021	\$116.58	0.4903	57.16	26.35	12.92
2022	\$118.62	0.4530	53.73	26.81	12.14
2023	\$120.70	0.4185	50.51	27.28	11.42
2024	\$122.82	0.3866	47.48	27.76	10.73
2025	\$124.98	0.3572	44.64	28.25	10.09
2026	\$127.17	0.3300	41.97	28.75	9.49
2027	\$129.40	0.3049	39.45	29.25	8.92
2028	\$131.67	0.2817	37.09	29.76	8.38
2029	\$133.98	0.2602	34.86	30.29	7.88
2030	\$136.33	0.2404	32.77	30.82	7.41
2031	\$138.72	0.2221	30.81	31.36	6.97
2012	1 Year - Sum of PV Costs	@ 8.24%	\$/kW 99.31		mills / kWh 22.45
2012 - 2016	5 Year - Short Run - Sum of PV Costs Annual Cost of Capacity @ 22.57%	@ 8.24%	\$441.64 99.68		\$99.84 22.53
2012 - 2021	10 Years - Medium Run - Sum of PV Costs Annual Cost of Capacity @ 13.03%	@ 8.24%	\$766.24 99.84		173.22 22.57
2012 - 2031	20 Years - Long Run - Sum of PV Costs Annual Cost of Capacity @ 8.49%	@ 8.24%	\$1,179.55 100.14		266.65 22.64
Footnote:	Column A:	Total Cost of Simple Cycle: Table 8, Page 1, column (f)			

Energy  
 PacificCorp  
 Utah Marginal Cost Study  
 Marginal Generation Energy Costs  
 Nominal Mills / kWh

Calendar Year (12 Mo Ended Dec)	(A) SCCT Fixed Costs (\$/kWh-yr) (1)	(B) SCCT Fixed Costs (\$/kWh-mo) (2)	(C) CCCT Fixed Costs (\$/kWh-yr) (3)	(D) CCCT Fixed Costs (\$/kWh-mo) (4)	(E) Capitalized Energy Cost (\$/kWh-mo) (4) - (2) = (5)	(F) Capitalized Energy Cost 50.5% CF (\$/MWh) (6)	(G) Purchase Cost (\$/MWh) (7)	(H) Updated Gas Price (\$/MMBtu) (8)	(I) CCCT Energy Costs 7,160 Btu/kWh (\$/MWh) (9)	(J) Variable Avoided Energy Cost (\$/MWh) (7) + (9) = (10)	(K) Capitalized Energy Cost 50.5% CF (\$/MWh) (6) = (11)	(L) Total Avoided Energy Cost (\$/MWh) (10) + (11) = (12)	(M) Present Value Factors (13) @ 8.24%	(N) Present Value of Energy (14) (12)*(13)
2012	99.31	8.28	150.33	12.53	4.25	11.53	0.00	5.53	39.59	39.59	11.53	51.13	1.0000	51.13
2013	101.29	8.44	153.36	12.78	4.34	11.77	0.00	5.75	41.17	41.17	11.77	52.94	0.9238	48.91
2014	103.22	8.60	156.26	13.02	4.42	11.99	0.00	6.04	43.25	43.25	11.99	55.24	0.8535	47.14
2015	105.02	8.75	159.00	13.25	4.50	12.20	0.00	6.35	45.47	45.47	12.20	57.67	0.7885	45.47
2016	106.87	8.91	161.79	13.48	4.58	12.41	0.00	6.82	48.83	48.83	12.41	61.25	0.7285	44.62
2017	108.74	9.06	164.63	13.72	4.66	12.63	0.00	7.27	52.05	52.05	12.63	64.69	0.6730	43.53
2018	110.65	9.22	167.52	13.96	4.74	12.86	0.00	7.56	54.13	54.13	12.86	66.99	0.6217	41.65
2019	112.59	9.38	170.46	14.21	4.82	13.08	0.00	7.38	52.84	52.84	13.08	65.92	0.5744	37.87
2020	114.57	9.55	173.45	14.45	4.91	13.31	0.00	7.44	53.27	53.27	13.31	66.58	0.5307	35.33
2021	116.58	9.72	176.50	14.71	4.99	13.54	0.00	7.88	56.42	56.42	13.54	69.97	0.4903	34.30
2022	118.62	9.89	179.60	14.97	5.08	13.78	0.00	8.42	60.29	60.29	13.78	74.07	0.4530	33.55
2023	120.70	10.06	182.74	15.23	5.17	14.02	0.00	7.96	56.99	56.99	14.02	71.02	0.4185	29.72
2024	122.82	10.24	185.95	15.50	5.26	14.27	0.00	7.75	55.49	55.49	14.27	69.76	0.3866	26.97
2025	124.98	10.42	189.21	15.77	5.35	14.52	0.00	8.18	58.57	58.57	14.52	73.09	0.3572	26.11
2026	127.17	10.60	192.53	16.04	5.45	14.77	0.00	8.43	60.36	60.36	14.77	75.13	0.3300	24.79
2027	129.40	10.78	195.91	16.33	5.54	15.03	0.00	8.28	59.28	59.28	15.03	74.32	0.3049	22.66
2028	131.67	10.97	199.35	16.61	5.64	15.30	0.00	8.54	61.15	61.15	15.30	76.45	0.2817	21.54
2029	133.98	11.17	202.85	16.90	5.74	15.57	0.00	8.86	63.44	63.44	15.57	79.01	0.2602	20.56
2030	136.33	11.36	206.41	17.20	5.84	15.84	0.00	9.09	65.08	65.08	15.84	80.93	0.2404	19.46
2031	138.72	11.56	210.03	17.50	5.94	16.12	0.00	9.25	66.23	66.23	16.12	82.35	0.2221	18.29

2012	1 Year -	Sum of PV Costs	Mills / kWh
2012 - 2016	5 Year -	Short Run - Sum of PV Costs Annual Cost of Energy	51.13 237.27 53.55
2012 - 2021	10 Years -	Medium Run - Sum of PV Costs Annual Cost of Energy	429.95 56.02
2012 - 2031	20 Years -	Long Run - Sum of PV Costs Annual Cost of Energy	673.59 57.19

Footnote:  
 Column A: Total Cost of Simple Cycle: Table 8, Page 1, column (f)  
 Column C: Total Cost of Combined Cycle: Table 8, Page 2, column (f)  
 Column H: Gas Price: Table 9, column (b)  
 Column I: Heat Rate for Combined Cycle: Table 8, Page 3

PacifiCorp  
Utah Marginal Cost Study  
Marginal Transmission Investment and O&M Expenses  
June 2012 Dollars

Line	Item	(A) Total	(B) Demand Related	(C) Energy Related
		(B) + (C)		
1	2012 Forecasted	300,645	240,328	60,317
2	2013 Forecasted	250,230	175,130	75,100
3	2014 Forecasted	193,745	146,633	47,112
4	2015 Forecasted	141,750	141,750	0
5	2016 Forecasted	187,639	187,639	0
7	Growth Related Investments - (2012 to 2016 in \$000's)	\$1,074,009	\$891,480	\$182,529
9	System Growth MW's from 2012-2016	647		
11	Marginal Investment	\$1,659.30	\$1,377.30	\$282.00 /kW
13	Annualized Investment	\$144.53	\$119.96	\$24.56 /kW
14	Admin. & General Factor	\$23.73	\$19.70	\$4.03 /kW
15	Annual O&M Expenses	\$22.85	\$18.97	\$3.88 /kW
17	Annualized Marginal Cost	\$191.11	\$158.63	\$32.47 /kW
19	Marginal Cost of Energy-Related Transmission			\$0.00471 /kWh
20	\$32.47 / 8760 hours / 78.63% Load Factor))			

Footnote:

- Lines 1-7 Tab 5.2 (Transm2:) `2012-2016 Forecasted Transmission'
- Line 9 Peak Load Forecast Detail, Dec. 16, 2009 - Forecasting Dept.
- Line 13 Tab 15.1 (Charge 1:) `Calculation of Annual Charges' (for 8.71% factor)
- Line 14 Tab 15.1 (Charge 1:) `Calculation of Annual Charges' (for 1.43% factor)
- Line 15 Tab 5.3 (Trans\_OM:) `Transmission O & M Expenses' (for 1.377% factor)
- Line 20 See Tab "TransLF"

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PacifiCorp  
Transmission O & M Expenses  
(Dollars in 000's)

Line	Description	2000	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
		2001	2002	2003	2004	2005	2006	2007	2008	2009	
1	Transmission O&M Exp.	103,968	123,213	102,419	105,962	105,324	136,930	154,195	174,010	172,875	
2	Wheeling	78,405	94,737	76,949	77,497	76,944	94,111	106,592	121,167	117,161	
3	Net Transmission O&M Line (1) - (2)	25,563	28,476	25,469	28,465	28,379	42,820	47,603	52,843	55,713	
4	Transmission Plant	2,172,469	2,232,246	2,299,173	2,396,665	2,487,677	2,688,839	2,874,659	3,054,529	3,342,914	
5	Tran. O&M Loading Line (3) / (4)	1.177%	1.276%	1.108%	1.188%	1.141%	1.238%	1.656%	1.730%	1.667%	1.377%

Source:  
PacifiCorp FERC Form 1  
(1) page 321, line 112  
(3) page 321, line 96  
(10) page 206-07, line 58

PacifiCorp  
 System Load Factor

Line No.	Month (1)	Total Monthly Energy (2)	Associated Losses (3)	(4)	Megawatts (5)
		(2)-(3)			
1	January	6,408,275	1,152,395	5,255,880	8,524
2	February	5,613,917	1,034,060	4,579,857	8,187
3	March	5,974,490	1,267,096	4,707,394	7,828
4	April	5,151,385	894,687	4,256,698	7,213
5	May	5,300,712	878,138	4,422,574	7,912
6	June	5,138,144	785,696	4,352,448	8,340
7	July	6,213,028	901,436	5,311,592	9,420
8	August	6,129,956	1,109,686	5,020,270	9,042
9	September	5,575,955	972,815	4,603,140	8,499
10	October	5,543,767	1,034,091	4,509,676	7,414
11	November	5,832,041	1,076,664	4,755,377	8,015
12	December	6,505,213	1,036,689	5,468,524	9,336
13		69,386,883	12,143,453		
14	Total			57,243,430	99,730
15	Average Monthly MW's				8,311
16	Load Factor			78.63%	

Source: FERC Form 1, December 31, 2009  
 Page 401b



Dist Sub 1

PacifiCorp  
Utah Marginal Cost Study  
Distribution Substation Costs / kW  
June 2012 Dollars

Line		
1	Incremental Substation Cost - \$ / kW	\$177.29
2		
3	Annual Distribution Carrying Charge	10.95%
4		
5	Substation Marginal Cost - \$ / kW	\$19.41 / kW

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PacifiCorp  
Utah Marginal Cost Study  
Hypothetical Circuit Study Results  
Annual Demand and Commitment Costs  
June 2012 Dollars

Line	Class	Demand				Commitment			
		Investment \$ / kW **		Annual \$ / kW **		Investment \$ / Customer		Annual \$ / Customer	
		Poles	Conductor	Poles (A) x 10.95%	Conductor (B) x 10.95%	Poles	Conductor	Poles (E) x 10.95%	Conductor (F) x 10.95%
1	Res - Schedule 1	\$205.17	\$201.53	\$22.47	\$22.07	\$567.69	\$213.32	\$62.16	\$23.36
2									
3	GS - Schedule 23	\$204.11	\$200.73	\$22.35	\$21.98	\$576.55	\$216.64	\$63.13	\$23.72
4									
5	GS - Schedule 6	\$177.87	\$181.44	\$19.48	\$19.87	\$461.29	\$173.34	\$50.51	\$18.98
6									
7	LGS - Schedule 8	\$198.05	\$196.26	\$21.69	\$21.49	\$558.90	\$210.01	\$61.20	\$23.00
8									
9	Irrigation - Schedule 10	\$488.76	\$410.00	\$53.52	\$44.90	\$1,813.10	\$681.29	\$198.53	\$74.60

Footnotes:

\*\*\$ / kW are in terms of Distribution kW.

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PacifiCorp  
Utah Marginal Cost Study  
Circuit Distribution Model  
Inputs & Calculations

Line	(A) Annual MWH	(B) Number of Customers	(C) Average MWh per Customer (A) / (B)	(D) Distribution Peak MW	(E) Average kW per customer (D)/(B) * 1,000	(F) Percent Single Phase
1	6,841,616	719,832	9.50	1,313	1.82	100.00%
2	1,413,674	79,902	17.69	236	2.95	64.25%
3	6,177,171	15,286	404.12	945	61.84	10.80%
4	2,167,936	295	7,353.09	296	1,005.31	-
5	187,460	2,865	65.43	22	7.77	24.99%
6	16,787,858	818,180		2,813		

Customer Distribution on the Hypothetical Circuit Branch

Class	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
								Branch
								Total
7	1	2	3	4	5	6	7	
8	1.98%	1.98%	1.98%	5.67%	5.67%	5.67%	77.06%	100.00%
9	2.35%	2.35%	2.35%	4.38%	4.38%	4.38%	79.81%	100.00%
10	1.80%	1.80%	1.80%	3.81%	3.81%	3.81%	83.17%	100.00%
11	2.48%	2.48%	2.48%	3.41%	3.41%	3.41%	82.33%	100.00%
	7.85%	7.85%	7.85%	11.88%	11.88%	11.88%	40.82%	100.00%

System property records & engineering information

12	Number of pole feet in Utah	60,072,847	Poles per mile	31.87
13	Number of pole miles in Utah	11,377	Customers per mile	38.71
14	Number of trench feet in Utah	51,539,348	MWH per customer	20.52
15	Number of trench miles in Utah	9,761	MWH per circuit	16,220
16	Total miles in Utah	21,139	Branches per circuit	7
17	Number of circuits in Utah	1,035	Distance per circuit	20.42
18	Number of poles in Utah	362,625	Distance per branch	2.92

12 kV circuit 12 miles long has approx. 3 miles of single phase, which is approx. 25 percent of circuit distance.

5.11 = 25 percent of typical Utah circuit

5 divide by outer branches

1.021 distance of single phase on outer branch

35.00% equals percentage of single phase outer branch Segments

PacifiCorp  
Utah Circuit Model Study  
Customer Distribution on the Hypothetical Circuit Branch

Class	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Hypothetical Circuit Branch							Branch
	1	2	3	4	5	6	7	Total

1	Res - Schedule 1	1.98%	1.98%	1.98%	5.67%	5.67%	5.67%	77.06%	100.00%
2	GS - Schedule 23	2.35%	2.35%	2.35%	4.38%	4.38%	4.38%	79.81%	100.00%
3	GS - Schedule 6	1.80%	1.80%	1.80%	3.81%	3.81%	3.81%	83.17%	100.00%
4	LGS - Schedule 8	2.48%	2.48%	2.48%	3.41%	3.41%	3.41%	82.33%	100.00%
5	Irrigation - Schedule 10	7.85%	7.85%	7.85%	11.88%	11.88%	11.88%	40.82%	100.00%

Except where customers own their own transformers.

**PacifiCorp**  
**Utah Circuit Model Study**  
**Average Customers by Hypothetical Circuit Branch**

Class	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Hypothetical Circuit Branch							
1	2	3	4	5	6	7	Total	

**Average Customers**

1 Res - Schedule 1	13.77	13.77	13.77	39.41	39.41	39.41	535.95	695.49
2 GS - Schedule 23	1.81	1.81	1.81	3.38	3.38	3.38	61.61	77.20
3 GS - Schedule 6	0.27	0.27	0.27	0.56	0.56	0.56	12.28	14.77
4 LGS - Schedule 8	0.01	0.01	0.01	0.01	0.01	0.01	0.23	0.28
5 Irrigation - Schedule 10	0.22	0.22	0.22	0.33	0.33	0.33	1.13	2.77
6 Total	16.07	16.07	16.07	43.69	43.69	43.69	611.21	790.51

Source - 'Circuit Distribution Model Inputs & Calculations' (PC 3) Tab 7.3

Source - 'Customer Distribution on the Hypothetical Circuit Branch' (PC 4) Tab 7.4

Customers multiplied by Customer Distribution on the Hypothetical Circuit Branch divided by circuits in the state.

For Example 13.77 is 719,832 Residential Customers X 1.980% customers on Branch 1 divided by 1035 circuits.

**Percent of Customers**

1 Res - Schedule 1	85.67%	85.67%	85.67%	90.20%	90.20%	90.20%	87.69%	87.98%
2 GS - Schedule 23	11.27%	11.27%	11.27%	7.74%	7.74%	7.74%	10.08%	9.77%
3 GS - Schedule 6	1.66%	1.66%	1.66%	1.29%	1.29%	1.29%	2.01%	1.87%
4 LGS - Schedule 8	0.04%	0.04%	0.04%	0.02%	0.02%	0.02%	0.04%	0.04%
5 Irrigation - Schedule 10	1.35%	1.35%	1.35%	0.75%	0.75%	0.75%	0.18%	0.35%
6 Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

**Sum of Branch Loads**

7 1,2,3,6	16.1	16.1	16.1	43.7	43.7	43.7	611.2	790.5
8 1,2,3,4,5,6,7	16.1	16.1	16.1	43.7	43.7	43.7	611.2	790.5
9								
10 1,2,3,6	17.5%	17.5%	17.5%	5.5%	5.5%	47.5%	77.3%	100.0%
11 1,2,3,4,5,6,7	2.0%	2.0%	2.0%	5.5%	5.5%	5.5%	77.3%	100.0%

**PacifiCorp  
Utah Circuit Model Study  
Circuit kW Load by Branch**

Class	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Hypothetical Circuit Branch							
1		2	3	4	5	6	7	Total

**Circuit kW Loads**

1	Res - Schedule 1	25.1	25.1	25.1	71.9	71.9	71.9	977.8	1,268.9
2	GS - Schedule 23	5.4	5.4	5.4	10.0	10.0	10.0	182.0	228.1
3	GS - Schedule 6	16.5	16.5	16.5	34.8	34.8	34.8	759.6	913.3
4	LGS - Schedule 8	7.1	7.1	7.1	9.8	9.8	9.8	235.8	286.4
5	Irrigation - Schedule 10	1.7	1.7	1.7	2.6	2.6	2.6	8.8	21.5
6	Total	55.7	55.7	55.7	129.0	129.0	129.0	2,164.0	2,718.2

Source - 'Circuit Distribution Model Inputs & Calculations' (PC 3) Tab 7.3

Source - 'Average Customers by Hypothetical Circuit Branch' (PC 5) Tab 7.5

Customers multiplied by circuit kW per customer.

For Example 25.1 is 13.77 Residential Customers multiplied by 1.82 average Dist. kW per Customer.

**Percent of Branch Load**

1	Res - Schedule 1	45.06%	45.06%	45.06%	55.74%	55.74%	55.74%	45.19%	46.68%
2	GS - Schedule 23	9.60%	9.60%	9.60%	7.75%	7.75%	7.75%	8.41%	8.39%
3	GS - Schedule 6	29.56%	29.56%	29.56%	26.96%	26.96%	26.96%	35.10%	33.60%
4	LGS - Schedule 8	12.74%	12.74%	12.74%	7.57%	7.57%	7.57%	10.89%	10.54%
5	Irrigation - Schedule 10	3.03%	3.03%	3.03%	1.98%	1.98%	1.98%	0.41%	0.79%
6	Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

**Sum of Branch Loads**

1,2,3,6		55.7	55.7	55.7	129.0	129.0	129.0	296.2	
1,2,3,4,5,6,7		55.7	55.7	55.7	129.0	129.0	129.0	2,164.0	2,718.2
1,2,3,6		18.8%	18.8%	18.8%				43.5%	100.0%
1,2,3,4,5,6,7		2.1%	2.1%	2.1%	4.7%	4.7%	4.7%	79.6%	100.0%



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PacifiCorp  
Utah Marginal Cost Study  
Transformer Commitment Costs

Line	Customer Type	(A) Percent of Customers	(B) Dollars / Tran.	(C) Weighted \$/ Tran.	(D) # Cust. / Tran.	(E) Transformer \$/ Cust. (C) / (D)	(F) Average Customers	(G) Tot. Trans. Commitment \$ (E) x (F)
1	Res - Schedule 1	100.00%	\$346.38	\$346.38	6.06	\$57.12	719,832	\$41,116,804
2								
3	GS - Schedule 23							
4	1 Phase	64.25%	\$346.38	\$222.55	2.91	\$76.40		
5	3 Phase	35.75%	\$995.27	\$355.82	2.07	\$171.58		
6	Total GS - Schedule 23	100.00%		\$578.37		\$247.98	79,902	\$19,814,201.29
7								
8	GS - Schedule 6							
9	1 Phase	10.80%	\$346.38	\$37.40	1.75	\$21.42		
10	3 Phase	89.20%	\$995.27	\$887.79	1.18	\$750.39		
11	Total GS - Schedule 6	100.00%		\$925.20		\$771.81	15,286	\$11,797,630.39
12								
13	LGS - Schedule 8	100.00%	\$995.27	\$995.27	1.00	\$995.27	295	\$293,438.77
14								
15	Irrigation - Schedule 10							
16	1 Phase	24.99%	\$346.38	\$86.56	1.59	\$54.54		
17	3 Phase	75.01%	\$995.27	\$746.54	1.00	\$746.54		
18	Total Irrigation - Schedule 10	100.00%		\$833.10		\$801.08	2,865	\$2,295,094.20

REDACTED  
Rocky Mountain Power  
Exhibit RMP (CCP-5) Page 39 of 63  
Docket No. 10-035-124  
Witness: C. Craig Paice



PacifiCorp  
Utah Marginal Cost Study  
Transformer Demand Costs

Line	Customer Type	(A) Weighted \$/ kW	(B) Transformer Peak kW's	(C) Tot. Trans. Demand \$ (A) x (B)
1	Res - Schedule 1	\$2.33	3,963,417	\$9,234,761
2				
3	GS - Schedule 23	\$2.33	523,706	\$1,220,236
4				
5	GS - Schedule 6	\$2.33	1,562,414	\$3,640,426
6				
7	LGS - Schedule 8	\$2.33	250,954	\$584,724
8				
9	Street & Area Lighting			
10	Schedules 11,12	\$2.33	18,979	\$44,221
11	Traffic Signals	\$2.33	773	\$1,801
12	Outdoor Lighting	\$2.33	5,768	\$13,439
13				
14	Irrigation - Schedule 10	\$2.33	172,552	\$402,046
15				
16	Totals		6,498,564	\$15,141,654

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Dist OM

PacifiCorp  
 Utah Marginal Cost Study  
 Distribution O&M Expense  
 Loading Factor as a Percent of Dist. Plant  
 (Excluding Meters and St Ltg)

Line	Description	2000	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
	Distribution O & M Expenses											
1	Total Distribution O & M Expense	54,640,742	50,242,065	35,388,813	77,519,975	85,849,966	105,291,705	90,973,196	94,571,965	95,431,455	91,767,653	
2	Less:											
3	585 St Ltg & Signal Systems	-	53,380	134,739	65,811	70,885	115,089	102,777	97,460			
4	586 Meter Expense	-	1,983,275	1,445,363	1,931,095	1,828,574	1,830,560	2,145,019	1,963,147			
5	587 Customer Installation Expense	41,473	7,709	14,670	128,581	27,712	-	3,140,378	4,634,365	5,110,766		
6	596 Main. of St Ltg & Signal Systems	1,291,124	2,169,562	3,412,767	3,283,001	2,643,628	2,907,223	2,543,384	2,556,387	2,426,694	2,314,003	
7	597 Main. of Meters	994,653	901,325	1,010,759	1,728,167	1,670,792	1,693,057	1,993,464	2,281,515	2,089,800	2,500,839	
8												
9	Total Adjusted Distribution O & M Expense	52,313,491	45,180,195	29,505,253	70,395,750	79,575,328	98,807,554	84,536,889	84,648,037	84,032,800	79,781,437	
10	Line 1 - (Lines 3 through 7)											
11												
12												
13	Distribution Plant											
14	Total Distribution Plant	1,331,856,196	1,419,748,249	1,575,329,910	1,628,516,177	1,707,670,624	1,822,542,031	1,907,965,619	2,020,496,170	2,146,132,812	2,246,469,275	
15	Less:											
16	370 Meters	76,162,663	76,139,716	77,381,366	78,448,746	79,701,337	81,862,984	83,680,783	81,177,426	79,055,431	80,079,521	
17	373 Street Lighting	20,139,025	21,398,219	22,015,156	22,815,628	23,629,977	24,189,661	24,391,975	24,784,541	25,649,840	26,505,737	
18												
19	Adjusted Distribution Plant	1,235,554,508	1,322,210,314	1,475,933,389	1,527,251,804	1,604,339,310	1,716,489,386	1,799,892,862	1,914,534,203	2,041,427,541	2,139,884,017	
20	Line 14 - Line 16 - Line 17											
21												
22												
23	O & M Expense Loading Factor											
24	Distribution O & M Loading	4.23%	3.42%	2.00%	4.61%	4.96%	5.76%	4.70%	4.42%	4.12%	3.73%	
25	Line 9 / Line 19											
26												
27	Average Distribution O & M Loading											
28	Average of Line 24	4.19%										
29												
30	Distribution Annual Change											
31	Annualized Distribution O & M Loading Factor	10.95%										
32	Line 27 / Line 30	38.26%										
33												

Footnotes:  
 Source: FERC Form 1 (State of Utah) & Results of Operations

Meters 1

PacifiCorp  
 Utah Marginal Cost Study  
 Weighted Average Installed Meter Costs  
 Res - Schedule 1 / GS - Schedule 23 / GS - Schedule 6

Line	Class	Customers	(A)	(B)	(E)	(F)
		Customers	(A) / (A,Ttl)	% of Customers	Metering Cost	Weighted Metering Cost (B) x (E)
1	Res - Schedule 1	719,832		100.00%	\$100	\$99.86
3	Annualized - (Line 1) x 10.95%					\$10.93
4						
5	GS - Schedule 23					
6	0 KW					
7	1 Phase	46,964		71.65%	\$95	\$68.19
8	3 Phase	18,580		28.35%	\$290	\$82.23
9	Total 0 KW	65,544		100.00%		\$150.42
10						
11	1-30 KW					
12	1 Phase	4,372		30.45%	\$211	\$64.21
13	3 Phase	9,986		69.55%	\$290	\$201.76
14	Total 1-30 KW	14,358		100.00%		\$265.97
15						
16	Total GS - Schedule 23					\$171.18
17	Annualized - (Line 16) x 10.95%					\$18.74
18						
19	GS - Schedule 6					
20	0 KW					
21	KW = 0, 1 Phase	6		33.33%	\$95	\$31.72
22	KW = 0, 3 Phase	12		66.67%	\$290	\$193.40
23	Total 0 KW	18		100.00%		\$225.12
24						
25	1-30 KW					
26	KW > 1, 1 Phase	510		62.20%	\$211	\$131.15
27	KW > 1, 3 Phase	310		37.80%	\$290	\$109.67
28	Total 1-30 KW	820		100.00%		\$240.82
29						
30	31-100 KW					
31	1 Phase	1,077		11.92%	\$212	\$25.26
32	3 Phase	7,962		88.08%	\$290	\$255.53
33	Total 31-100 KW	9,039		100.00%		\$280.79
34						
35	101-1,000 KW					
36	1 Phase	58		1.11%	\$943	\$10.47
37	3 Phase	5,164		98.89%	\$1,389	\$1,373.26
38	Total 101-1,000 KW	5,222		100.00%		\$1,383.73
39						
40	> 1,000KW					
41	3 Phase	14		100.00%	\$2,164	\$2,164.27
42	Total > 1,000KW	14		100.00%		\$2,164.27
43						
44	Primary					
45	0-1,000 KW	171		98.84%	\$8,324	\$8,227.88
46	> 1,000 KW	2		1.16%	\$11,122	\$128.58
47	Total Primary	173		100.00%		\$8,356.46
48						
49	Total GS - Schedule 6					749.11
50	Annualized - (Line 49) x 10.95%					\$82.03

**Meters 2**

PacifiCorp  
Utah Marginal Cost Study  
Weighted Average Installed Meter Costs  
LGS - Schedule 8 / LGS - Schedule 9 / Special Contracts / Irrigation - Schedule 10

Line	Class	Customers	% of Customers (A) / (A,Ttl)	Metering Cost (B)	Weighted Metering Cost (B) x (C)
1	LGS - Schedule 8				
2	Secondary	203	68.81%	\$2,164	\$1,489.31
3	Primary	92	31.19%	\$11,122	\$3,468.68
4	Total LGS - Schedule 8	295	100.00%		\$4,957.99
5	Annualized - (Line 2) x 10.95%				\$542.90
6					
7	LGS - Schedule 9	160	100.00%	\$25,551	\$25,550.55
8	Total LGS - Schedule 9	160	100.00%		\$25,550.55
9	Annualized - (Line 7) x 10.95%				\$2,797.79
10					
11	Special Contracts				
12	Customer A	1	33.33%	\$318,813	\$106,271.04
13	Customer B	1	33.33%	\$318,813	\$106,271.04
14	Customer C	1	33.33%	\$318,813	\$106,271.04
15	Total Special Contracts	3	100.00%		\$318,813.12
16	Annualized - (Line 14) x 10.95%				\$34,910.04
17					
18	Irrigation - Schedule 10				
19	Secondary	2,862	99.90%	\$95	\$95.07
20	Primary	3	0.10%	\$6,723	\$7.04
21	Total Irrigation - Schedule 10	2,865	100.00%		\$102.11
22	Annualized - (Line 19) x 10.95%				\$11.18

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Meters 4

PacifiCorp  
Utah Marginal Cost Study  
Distribution Meters Expense  
Loading Factor

Line	Description	2000	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
<u>Distribution Meters Expenses</u>												
1	586 Meter Expense	-	1,983,275	1,445,363	1,931,095	1,797,766	1,818,060	1,828,574	1,830,560	2,145,019	1,963,147	
2	597 Main. of Meters	994,653	901,325	1,010,759	1,728,167	1,670,792	1,693,057	1,993,464	2,281,515	2,089,800	2,500,939	
3												
4	Total Adjusted Distribution Meters Expense	994,653	2,884,601	2,456,122	3,659,262	3,468,558	3,511,116	3,822,038	4,112,075	4,234,818	4,463,986	
5	Line 1 + Line 2											
6												
7												
8												
9												
<u>Distribution Meters</u>												
10	370 Meters	76,162,663	76,139,716	77,381,366	78,448,746	79,701,337	81,862,984	83,680,783	81,177,426	79,055,431	80,079,521	
11												
12												
13												
<u>Meters Expense Loading Factor</u>												
14	Meter O&M Loading	1.31%	3.79%	3.17%	4.66%	4.35%	4.29%	4.57%	5.07%	5.36%	5.57%	
15	Line 3 / Line 4											
16												
17												
18	Average Meter O&M Loading	4.21%										
19	Average of Line 5											
20												
21	Distribution Annual Charge	10.95%										
22												
23	Annualized Meter O&M Loading Factor	38.48%										
24	Line 6 / Line 7											

Services 1

PacifiCorp  
Utah Marginal Cost Study  
Weighted Average Installed Service Drop Costs  
Res - Schedule 1 / GS - Schedule 23 / GS - Schedule 6 / LGS - Schedule 8

Line	Class	(A) Customers	(B) % of Customers (A) / (A, Tt)	(C) Overhead Service Drop Cost	(D) Underground Service Drop Cost	(E) Overhead %	(F) Underground %	(G) Overhead & Underground (C) x (E) + (D) x (F)	(H) Weighted Service Drop Cost 1 & 3 Phase (B) x (G)
1	Res - Schedule 1	719,832	100.00%						
2	Annualized - (Line 1) x 10.95%							\$475	\$474.89
3									\$52.00
4	GS - Schedule 23								
5	0 KW								
6	1 Phase	46,956	71.67%	\$627.47	\$605.40	36.00%	64.00%	\$613	\$439.57
7	3 Phase	18,563	28.33%	\$818.03	\$863.67	36.00%	64.00%	\$847	\$240.04
8	Total 0 KW	65,519	100.00%						\$679.61
9									
10	1-30 kW								
11	1 Phase	4,366	30.45%	\$870.67	\$634.68	36.00%	64.00%	\$720	\$219.15
12	3 Phase	9,971	69.55%	\$1,035.96	\$910.72	36.00%	64.00%	\$956	\$664.73
13	Total 1-30 kW	14,337	100.00%						\$883.88
14									
15	Total Weighted GS - Schedule 23								\$716.28
16	Annualized - (Line 15) x 10.95%								\$78.43
17									
18	GS - Schedule 6								
19	0 KW								
20	KW = 0, 1 Phase	6	33.33%	\$627.47	\$605.40	20.42%	79.58%	\$610	\$203.30
21	KW = 0, 3 Phase	12	66.67%	\$818.03	\$863.67	20.42%	79.58%	\$854	\$589.56
22	Total 0 KW	18	100.00%						\$772.86
23									
24	1-30 kW								
25	KW > 1, 1 Phase	510	62.20%	\$870.67	\$634.68	20.42%	79.58%	\$683	\$424.71
26	KW > 1, 3 Phase	310	37.80%	\$1,035.96	\$910.72	20.42%	79.58%	\$936	\$353.96
27	Total 1-30 kW	820	100.00%						\$778.67
28									
29	31-100 kW								
30	1 Phase	1,077	11.92%	\$1,609.73	\$1,134.48	20.42%	79.58%	\$1,232	\$146.74
31	3 Phase	7,962	88.08%	\$1,909.78	\$1,684.46	20.42%	79.58%	\$1,730	\$1,524.29
32	Total 31-100 kW	9,039	100.00%						\$1,671.03
33									
34	101-1,000 kW								
35	1 Phase	58	1.11%	\$3,980.64	\$3,870.81	20.42%	79.58%	\$3,893	\$43.24
36	3 Phase	5,164	98.89%	\$3,670.06	\$3,588.50	20.42%	79.58%	\$3,605	\$3,565.11
37	Total 101-1,000 kW	5,222	100.00%						\$3,608.35
38									
39	> 1,000kW								
40	3 Phase	14	100.00%	\$6,045.18	\$7,080.80	20.42%	79.58%	\$6,869	\$6,869.33
41	Total > 1,000kW	14	100.00%						\$6,869.33
42									
43	Total Weighted GS - Schedule 6								\$2,295.76
44	Annualized - (Line 43) x 10.95%								\$251.39
45									
46	LGS - Schedule 8	203	100.00%	\$6,045.18	\$7,080.80	21.03%	78.97%	\$6,863	\$6,862.98
47	Secondary	203	100.00%						\$6,862.98
48	Total LGS - Schedule 8	203	100.00%						\$751.50
49	Annualized - (Line 47) x 10.95%								



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Cust Exp Sum

PacificCorp  
Utah Marginal Cost Study  
Summary of Customer Accounting Expense  
By Schedule  
June 2012 Dollars

Line	FERC Account	Description	(A) Sch. 1 Residential	(B) Sch. 23 General Service	(C) Sch. 6 General Service	(D) Sch. 8 General Service	(E) Sch. 9 High Voltage	(F) Customer A	(G) Customer B	(H) Customer C	(I) Sch. 10 Irrigation	(J) Streetlighting (Excluding Metered)	(K) Streetlighting (Metered)	(L) Total
1		Average Number of Customers	719,832	79,902	15,286	295	160	1	1	1	2,865	1,529	2,717	822,589
2		Write-offs By Schedule		146,972	512,385	106,150	56,200	2,069	5,940	4,497	31,728	2,110	2,110	4,584,231
3		Account 902 + 903 + 904	\$33,880,912	\$3,576,334	\$1,325,835	\$260,609	\$149,981	\$2,809	\$7,806	\$6,174	\$227,379	\$50,834	\$109,015	\$39,597,688
4		% of Total 902 + 903 + 904	85.56%	9.03%	3.35%	0.66%	0.38%	0.01%	0.02%	0.02%	0.57%	0.13%	0.28%	100.00%
5	901	Total 901 \$	\$1,634,462	\$172,527	\$63,960	\$12,572	\$7,235	\$136	\$377	\$298	\$10,969	\$2,452	\$5,259	\$1,910,247
6		Dollars Per Customer	\$2.27	\$2.16	\$4.18	\$42.64	\$45.22	\$135.50	\$376.57	\$297.82	\$3.83	\$1.60	\$1.94	\$2.32
7	902	902 Weighting Factor	1.00	1.52	2.07	32.78	42.11	31.59	122.83	122.83	4.67	0.00	1.11	
8		Weighted Customers	719,832	121,222	31,612	9,664	6,738	32	123	123	13,377	0	3,026	905,749
9		% of Total \$	79.47%	13.38%	3.49%	1.07%	0.74%	0.00%	0.01%	0.01%	1.48%	0.00%	0.33%	100.00%
10		Total 902 \$	\$4,888,727	\$823,277	\$214,694	\$65,632	\$45,760	\$215	\$834	\$834	\$90,852	\$0	\$20,551	\$6,151,377
11		Dollars Per Customer	\$6.79	\$10.30	\$14.05	\$222.61	\$286.00	\$214.56	\$834.22	\$834.22	\$31.71	\$0.00	\$7.56	\$7.48
12	903	903 Weighting Factor	1.00	0.94	1.01	7.38	7.38	7.38	7.38	7.38	1.02	0.92	0.92	
13		Weighted Customers	719,832	75,108	15,439	2,176	1,181	7	7	7	2,922	1,407	2,499	820,566
14		% of Total \$	87.72%	9.15%	1.88%	0.27%	0.14%	0.00%	0.00%	0.00%	0.36%	0.17%	0.30%	100.00%
15		Total 903 \$	\$24,792,270	\$2,686,860	\$531,730	\$74,941	\$40,669	\$254	\$254	\$254	\$100,649	\$48,449	\$66,079	\$28,262,408
16		Dollars Per Customer	\$34.44	\$32.38	\$34.79	\$254.18	\$254.18	\$254.18	\$254.18	\$254.18	\$35.13	\$31.69	\$31.69	\$34.36
17	904	Total 904 \$	\$4,199,915	\$166,197	\$579,411	\$120,036	\$63,552	\$2,340	\$6,717	\$5,085	\$35,878	\$2,385	\$2,385	\$5,163,903
18		% of Write-offs	81.02%	3.21%	11.18%	2.32%	1.23%	0.05%	0.13%	0.10%	0.69%	0.05%	0.05%	
19		Dollars Per Customer	\$5.83	\$2.06	\$37.91	\$407.13	\$397.20	\$2,340.08	\$6,717.47	\$5,085.12	\$12.52	\$1.56	\$0.88	\$6.30
20		Account 902 + 903 + 904	\$33,880,912	\$3,576,334	\$1,325,835	\$260,609	\$149,981	\$2,809	\$7,806	\$6,174	\$227,379	\$50,834	\$109,015	\$39,597,688
21		% of Total 902 + 903 + 904	85.56%	9.03%	3.35%	0.66%	0.38%	0.01%	0.02%	0.02%	0.57%	0.13%	0.28%	100.00%
22		Total 905 \$	\$288,049	\$30,405	\$11,272	\$2,216	\$1,275	\$24	\$66	\$52	\$1,933	\$432	\$927	\$336,652
23		Dollars Per Customer	\$0.40	\$0.38	\$0.74	\$7.51	\$7.97	\$23.88	\$66.36	\$52.49	\$0.67	\$0.28	\$0.34	\$0.41
24	907-910	Average Number of customers	719,832	79,902	15,286	295	160	1	1	1	2,865	1,529	2,717	822,589
25		% of Total	87.51%	9.71%	1.86%	0.04%	0.02%	0.00%	0.00%	0.00%	0.35%	0.19%	0.33%	100.00%
26		Total 907-910 \$	\$6,585,905	\$731,045	\$139,852	\$2,697	\$1,464	\$9	\$9	\$9	\$26,213	\$13,889	\$24,855	\$7,526,047
27		Dollars Per Customer	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15	\$9.15
28	Total 901 - 910	Total 901 - 910 \$	\$42,389,328	\$4,510,312	\$1,540,919	\$278,094	\$159,955	\$2,977	\$8,258	\$6,533	\$266,494	\$67,708	\$140,056	\$49,370,634
29		Dollars Per Customer	\$58.89	\$56.45	\$100.81	\$943.22	\$899.72	\$2,977.34	\$8,257.95	\$6,532.98	\$93.02	\$44.28	\$51.56	\$60.02

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Witness: C. Craig Paice

Cust Exp Year

PacifiCorp  
Utah Marginal Cost Study  
Summary of Customer and Metering Expenses  
June 2012 Dollars

Line	Description	(A) Actual 2005 Dollars	(B) Actual 2006 Dollars	(C) Actual 2007 Dollars	(D) Actual 2008 Dollars	(E) Actual 2009 Dollars	(F) Adjusted 2012 Dollars
							[(A) x 1.1247 + (B) x 1.1060 + (C) x 1.0876 + (D) x 1.0695 + (E) x 1.0517 ] / 5
Customer Accounting							
1	901 Supervision	2,066,880	3,155,472	1,216,993	1,103,506	1,172,258	\$1,910,247
2	902 Meter Reading Expense*	11,498,954	11,696,621	9,798,288	5,953,926	5,848,984	\$6,151,377
3	903 Cust Records & Collection	24,296,263	24,704,043	24,995,665	27,888,749	28,193,457	\$28,262,408
4	904 Uncollectible Accounts	4,881,823	5,617,893	3,418,268	5,169,530	4,724,748	\$5,183,903
5	905 Misc Cust Acct Expense	548,361	585,489	170,346	104,678	115,762	\$336,652
6	Total	43,292,281	45,759,518	39,599,559	40,220,389	40,055,209	41,844,587
Customer Service & Info Expense							
9	907 Supervision	1,215,827	599,000	195,483	117,676	136,906	\$502,476
10	908 Cust Assistance Expense	5,440,024	5,819,874	5,162,316	4,870,212	4,119,313	\$5,542,137
11	909 Info & Instructional Expense	276,426	1,165,688	1,448,859	1,657,167	2,085,927	\$1,428,407
12	910 Misc Cust Svc & Info Expense	81,050	57,737	2,097	30,302	71,726	\$53,027
13	Total	7,013,327	7,642,299	6,808,755	6,675,357	6,413,873	\$7,526,047
14							\$49,370,634
Distribution Expenses							
16	586 Meter Expenses	\$1,818,060	\$1,828,574	\$1,830,560	\$2,145,019	\$1,963,147	\$2,083,366
17	597 Meter Maintenance	\$1,693,057	\$1,993,464	\$2,281,515	\$2,089,800	\$2,500,839	\$2,291,100
18		\$3,511,116	\$3,822,038	\$4,112,075	\$4,234,818	\$4,463,986	\$4,374,466
19							
20							
21	(1) Inflation Adjustment -	1.1247	1.1060	1.0876	1.0695	1.0517	

Source:  
Source: FERC Form 1 (State of Utah) & Results of Operations

Footnote:

\* -Only 2009 was used for Account 902 to fully reflect the current level of automated meter reading deployment.  
A five year average is employed for all other customer expense accounts.

**AG Expenses**

PacifiCorp  
Utah Marginal Cost Study  
Administrative & General Expense  
Loading Factor

Year	(A) Administrative and General Expenses (000)	(B) Electric Plant in Service (000)	(C) Admin. & General to Electric Plant In Service Loading Factor <u>(A) / (B)</u>
2000	\$100,360	\$11,910,796	0.84%
2001	\$180,629	\$12,289,187	1.47%
2002	\$277,395	\$12,690,449	2.19%
2003	\$251,357	\$13,208,159	1.90%
2004	\$244,893	\$13,688,398	1.79%
2005	\$236,709	\$14,335,797	1.65%
2006	\$238,645	\$15,317,103	1.56%
2007	\$180,356	\$16,417,338	1.10%
2008	\$170,044	\$18,224,943	0.93%
2009	\$162,620	\$19,645,569	<u>0.83%</u>

10 Year Average A&G to Electric Plant In Service Loading Factor 1.43%

Footnotes:

(A) FERC Form 1 Page 322-323

(B) FERC Form 1 Page 206-207

Charge 1

PacifiCorp  
Utah Marginal Cost Study  
Calculation of Annual Charges

Line	Description	(A) 20 years - Generation	(B) 10 years - Generation	(C) 5 years - Generation	(D) System Transmission	(E) Distribution
1	Levelized Income Taxes *	NA	NA	NA	2.00%	2.04%
2	Levelized Property Tax *	NA	NA	NA	1.10%	1.19%
3	Total	NA	NA	NA	3.10%	3.23%
4						
5	Levelized Income & Property Taxes (per \$1,000 of Investment)	NA	NA	NA	\$31.00	\$32.30
6						
7	Expected Life	20	10	5	58	46
8						
9	Nominal Interest Rate *	8.24%	8.24%	8.24%	8.24%	8.24%
10						
11	Present Value: Income ** Taxes & Property Taxes per \$1,000 of Investment	NA	NA	NA	\$372.28 (PV of \$31.00 per year for 58 years at 8.24%)	\$381.60 (PV of \$32.30 per year for 46 years at 8.24%)
12						
13	Removal Cost Per \$1,000 Investment				\$204.38	\$212.37
14						
15	Present Value: Removal Cost at End of Useful Life				\$2.07 (PV of \$204.38 in 58 years at 8.24%)	\$5.56 (PV of \$212.37 in 46 years at 8.24%)
16						
17	Investment and Taxes w/o PVCD (Line 12 + Line 18 + \$1000)	\$1,000.00	\$1,000.00	\$1,000.00	\$1,374.35	\$1,387.16
18						
19	PVCD Factor	NA	NA	NA	0.019253	0.069878
20						
21	PVCD \$ (Line 22 x Line 25)	NA	NA	NA	\$26.46	\$96.93
22						
23	Total (Line 22 + Line 27)	\$1,000.00	\$1,000.00	\$1,000.00	\$1,400.81	\$1,484.09
24						
25	EOY Annual Charge ***	\$84.86	\$130.33	\$225.71	\$87.10	\$95.19
26						
27	Annual Economic Carrying Adm & Gen Expense Loading Factor	8.49%	13.03%	22.57%	8.71%	9.52%
28						
29	Annual Econ Carrying + A&G Loading	0.00%	0.00%	0.00%	1.43%	1.43%
30						
31		8.49%	13.03%	22.57%	10.14%	10.95%
32						
33						
34						
35						
36						

Footnotes:

From Financial Analysis -  
\*\*  $PV = \text{Ln}(5) \times [1/r - (1/r)/(1+r)^a]$

$31.00 \times (1/0.0824 - (1/0.0824)/(1+0.0824)^{58})$   
 $32.30 \times (1/0.0824 - (1/0.0824)/(1+0.0824)^{46})$

Where:

r = Nominal Interest Rate  
a = Expected Investment Life

\*\*\* The Annual Charge Formula:

$AC\% = \text{Ln}(1) \times k \times \{1/[1 - 1/(1+k)^a]\}/(1+k)$

Where:

k = real interest rate =  $(1+r)/(1+i) - 1$   
i = inflation rate = 1.7%  
a = expected investment life  
r = nominal interest rate

**Charge 2**

PacifiCorp  
Utah Marginal Cost Study  
Financial Inputs to the Economic Carrying Charge Calculation

(A) (B) (C) (D)

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	<u>Financial Inputs</u>	<u>Levelized</u>
1	Weighted Cost of Capital	Income Taxes
2	Borrowing Rate	Transmission
3	Inflation	Distribution
4		Property Taxes
5	Real Cost of Capital	Transmission
6	$(1+0.0824)/(1+0.0169)-1 =$ <span style="border: 1px solid black; padding: 2px;">6.44%</span>	Distribution
		2.00%
		2.04%
		1.10%
		1.19%

**Source:**

Cost of Capital/Borrowing Rate: Revenue Requirement (UT Jurisdictional Allocation Model)  
 Income & Property Taxes: Financial Analysis, Use of Facilities Charges 12/31/08 Basis (prepared 8/13/09)  
 Inflation Rate 2009-2028, 2009 Avoided Cost, Table 8

REDACTED  
 Rocky Mountain Power  
 Exhibit RMP\_\_\_\_(CCP-5) Page 54 of 63  
 Docket No. 10-035-124  
 Witness: C. Craig Paice

Charge 3

PacifiCorp  
 Utah Marginal Cost Study  
 Present Value of Cost of Dispersion Factor  
 Iowa Curve R 3.0 & 58 Year Average Life  
 Page 1 of 2

Real Cost of Capital = 6.44%

YEAR	(A) PVCD	(B) % RENEWED	(C) NUM1	(D) DEM1	(E) NUM1/DEM1	(F) NUM2	(G) DEM2	(H) NUM2/DEM2	(I) INSTANCE	(J) Iowa R 2.5
	((A) {yr-1} + (I)) / 100	((J){yr-1})-(J) * 100	(B)	1.0670 ^Year	(C) / (D)	(B)	1.0644 ^58	(F) / (G)	(E) - (H)	(Given)
1	0.000145	1.59%	0.0159	1.064407	0.014902	0.0159	37.347034	0.000425	0.014478	99.9841
2	0.000416	3.17%	0.0317	1.132963	0.028001	0.0317	37.347034	0.000849	0.027152	99.9524
3	0.000671	3.17%	0.0317	1.205934	0.026307	0.0317	37.347034	0.000849	0.025457	99.9207
4	0.000978	4.08%	0.0408	1.283605	0.031807	0.0408	37.347034	0.001093	0.030714	99.8799
5	0.001309	4.69%	0.0469	1.366279	0.034324	0.0469	37.347034	0.001256	0.033069	99.8330
6	0.001619	4.69%	0.0469	1.454277	0.032247	0.0469	37.347034	0.001256	0.030992	99.7861
7	0.002000	6.16%	0.0616	1.547943	0.039808	0.0616	37.347034	0.001650	0.038158	99.7244
8	0.002394	6.79%	0.0679	1.647642	0.041229	0.0679	37.347034	0.001819	0.039410	99.6565
9	0.002763	6.79%	0.0679	1.753762	0.038734	0.0679	37.347034	0.001819	0.036916	99.5886
10	0.003220	8.97%	0.0897	1.866718	0.048065	0.0897	37.347034	0.002402	0.045663	99.4989
11	0.003674	9.52%	0.0952	1.986948	0.047899	0.0952	37.347034	0.002548	0.045350	99.4037
12	0.004098	9.52%	0.0952	2.114922	0.045000	0.0952	37.347034	0.002548	0.042452	99.3085
13	0.004628	12.68%	0.1268	2.251139	0.056339	0.1268	37.347034	0.003396	0.052943	99.1817
14	0.005137	13.03%	0.1303	2.396128	0.054398	0.1303	37.347034	0.003490	0.050908	99.0513
15	0.005613	13.03%	0.1303	2.550457	0.051106	0.1303	37.347034	0.003490	0.047616	98.9210
16	0.006209	17.45%	0.1745	2.714725	0.064273	0.1745	37.347034	0.004672	0.059601	98.7465
17	0.006766	17.45%	0.1745	2.889573	0.060384	0.1745	37.347034	0.004672	0.055712	98.5720
18	0.007303	17.99%	0.1799	3.075683	0.058501	0.1799	37.347034	0.004818	0.053683	98.3921
19	0.007941	22.90%	0.2290	3.273779	0.069939	0.2290	37.347034	0.006131	0.063808	98.1631
20	0.008537	22.90%	0.2290	3.484635	0.065707	0.2290	37.347034	0.006131	0.059576	97.9342
21	0.009125	24.21%	0.2421	3.709071	0.065283	0.2421	37.347034	0.006483	0.058799	97.6920
22	0.009792	29.48%	0.2948	3.947962	0.074678	0.2948	37.347034	0.007894	0.066784	97.3972
23	0.010415	29.48%	0.2948	4.202240	0.070160	0.2948	37.347034	0.007894	0.062265	97.1024
24	0.011041	31.83%	0.3183	4.472895	0.071164	0.3183	37.347034	0.008523	0.062641	96.7841
25	0.011725	37.31%	0.3731	4.760983	0.078367	0.3731	37.347034	0.009990	0.068377	96.4110
26	0.012362	37.31%	0.3731	5.067625	0.073625	0.3731	37.347034	0.009990	0.063635	96.0379
27	0.013012	40.98%	0.4098	5.394017	0.075972	0.4098	37.347034	0.010973	0.064999	95.6281
28	0.013697	46.48%	0.4648	5.741432	0.080960	0.4648	37.347034	0.012446	0.068514	95.1632
29	0.014333	46.48%	0.4648	6.111222	0.076061	0.4648	37.347034	0.012446	0.063615	94.6984
30	0.014990	51.79%	0.5179	6.504830	0.079623	0.5179	37.347034	0.013868	0.065754	94.1805
31	0.015662	57.10%	0.5710	6.923788	0.082474	0.5710	37.347034	0.015290	0.067184	93.6094
32	0.016284	57.10%	0.5710	7.369731	0.077484	0.5710	37.347034	0.015290	0.062194	93.0384
33	0.016933	64.45%	0.6445	7.844396	0.082158	0.6445	37.347034	0.017257	0.064902	92.3939
34	0.017578	69.34%	0.6934	8.349633	0.083051	0.6934	37.347034	0.018568	0.064484	91.7005
35	0.018173	69.34%	0.6934	8.887411	0.078026	0.6934	37.347034	0.018568	0.059458	91.0070
36	0.018798	79.17%	0.7917	9.459825	0.083690	0.7917	37.347034	0.021198	0.062491	90.2153
37	0.019402	83.38%	0.8338	10.069107	0.082807	0.8338	37.347034	0.022326	0.060482	89.3816
38	0.019957	83.38%	0.8338	10.717632	0.077796	0.8338	37.347034	0.022326	0.055471	88.5478
39	0.020544	96.34%	0.9634	11.407926	0.084454	0.9634	37.347034	0.025797	0.058657	87.5843
40	0.021097	99.59%	0.9959	12.142680	0.082013	0.9959	37.347034	0.026665	0.055348	86.5884
41	0.021601	99.59%	0.9959	12.924758	0.077051	0.9959	37.347034	0.026665	0.050386	85.5926
42	0.022135	116.28%	1.1628	13.757208	0.084525	1.1628	37.347034	0.031136	0.053389	84.4298
43	0.022625	118.14%	1.1814	14.643273	0.080677	1.1814	37.347034	0.031632	0.049045	83.2484
44	0.023067	118.14%	1.1814	15.586407	0.075795	1.1814	37.347034	0.031632	0.044163	82.0670
45	0.023534	139.28%	1.3928	16.590286	0.083950	1.3928	37.347034	0.037292	0.046658	80.6742
46	0.023949	139.28%	1.3928	17.658823	0.078870	1.3928	37.347034	0.037292	0.041578	79.2815
47	0.024324	141.63%	1.4163	18.796181	0.075353	1.4163	37.347034	0.037924	0.037429	77.8651
48	0.024702	162.86%	1.6286	20.006793	0.081403	1.6286	37.347034	0.043608	0.037796	76.2365
49	0.025030	162.86%	1.6286	21.295377	0.076478	1.6286	37.347034	0.043608	0.032870	74.6079
50	0.025322	167.95%	1.6795	22.666956	0.074095	1.6795	37.347034	0.044971	0.029125	72.9284
51	0.025598	188.31%	1.8831	24.126875	0.078050	1.8831	37.347034	0.050422	0.027628	71.0453
52	0.025827	188.31%	1.8831	25.680823	0.073327	1.8831	37.347034	0.050422	0.022905	69.1622
53	0.026019	196.04%	1.9604	27.334856	0.071717	1.9604	37.347034	0.052491	0.019226	67.2018
54	0.026182	214.07%	2.1407	29.095422	0.073575	2.1407	37.347034	0.057319	0.016256	65.0611
55	0.026300	214.07%	2.1407	30.969381	0.069123	2.1407	37.347034	0.057319	0.011804	62.9204
56	0.026379	223.53%	2.2353	32.964037	0.067811	2.2353	37.347034	0.059852	0.007958	60.6851
57	0.026420	237.72%	2.3772	35.087163	0.067752	2.3772	37.347034	0.063653	0.004100	58.3079
58	0.026420	237.72%	2.3772	37.347034	0.063653	2.3772	37.347034	0.063653	0.000000	55.9306
59	0.026380	246.88%	2.4688	39.752458	0.062104	2.4688	37.347034	0.066104	-0.004000	53.4618
60	0.026300	256.03%	2.5603	42.312808	0.060510	2.5603	37.347034	0.068556	-0.008046	50.9015



Charge 4

PacifiCorp  
 Utah Marginal Cost Study  
 Present Value of Cost of Dispersion Factor  
 Iowa Curve R 3.0 & 58 Year Average Life  
 Page 1 of 2

YEAR	(A) PVCD	(B) % RENEWED	(C) NUM1	(D) DEM1	(E) NUM1/DEM1	(F) NUM2	(G) DEM2	(H) NUM2/DEM2	(I) INSTANCE	(J) Iowa R 2.5
	((A) {yr-1} + (I)) / 100	((J, {yr-1})-(J)) * 100	(B)	1.0644 ^Year	(C) / (D)	(B)	1.0644 ^58	(F) / (G)	(E) - (H)	(Given)
61	0.026300	5090.15%	50.9015	45.038064	1.130188	50.9015	37.347034	1.362932	-0.232744	48.3411
62	0.026145	261.70%	2.6170	47.938846	0.054591	2.6170	37.347034	0.070073	-0.015482	45.7241
63	0.025954	265.48%	2.6548	51.026460	0.052028	2.6548	37.347034	0.071085	-0.019057	43.0693
64	0.025732	265.48%	2.6548	54.312939	0.048880	2.6548	37.347034	0.071085	-0.022205	40.4144
65	0.025482	263.96%	2.6396	57.811091	0.045659	2.6396	37.347034	0.070678	-0.025019	37.7748
66	0.025205	263.31%	2.6331	61.534550	0.042791	2.6331	37.347034	0.070504	-0.027713	35.1417
67	0.024902	263.31%	2.6331	65.497828	0.040201	2.6331	37.347034	0.070504	-0.030302	32.5086
68	0.024590	251.34%	2.5134	69.716369	0.036051	2.5134	37.347034	0.067298	-0.031246	29.9952
69	0.024259	248.34%	2.4834	74.206615	0.033467	2.4834	37.347034	0.066497	-0.033030	27.5118
70	0.023909	248.34%	2.4834	78.986067	0.031442	2.4834	37.347034	0.066497	-0.035055	25.0283
71	0.023575	224.39%	2.2439	84.073350	0.026689	2.2439	37.347034	0.060081	-0.033392	22.7845
72	0.023229	221.72%	2.2172	89.488291	0.024777	2.2172	37.347034	0.059369	-0.034592	20.5672
73	0.022868	221.72%	2.2172	95.251995	0.023278	2.2172	37.347034	0.059369	-0.036091	18.3500
74	0.022552	187.10%	1.8710	101.386923	0.018454	1.8710	37.347034	0.050099	-0.021644	16.4790
75	0.022224	187.10%	1.8710	107.916986	0.017338	1.8710	37.347034	0.050099	-0.032761	14.6079
76	0.021893	183.31%	1.8331	114.867633	0.015958	1.8331	37.347034	0.049083	-0.033125	12.7748
77	0.021615	149.17%	1.4917	122.265953	0.012201	1.4917	37.347034	0.039942	-0.027742	11.2831
78	0.021330	149.17%	1.4917	130.140779	0.011462	1.4917	37.347034	0.039942	-0.028480	9.7914
79	0.021053	141.86%	1.4186	138.522801	0.010241	1.4186	37.347034	0.037983	-0.027742	8.3728
80	0.020828	112.59%	1.1259	147.444687	0.007636	1.1259	37.347034	0.030146	-0.022510	7.2470
81	0.020598	112.59%	1.1259	156.941209	0.007174	1.1259	37.347034	0.030146	-0.022972	6.1211
82	0.020384	102.87%	1.0287	167.049376	0.006158	1.0287	37.347034	0.027545	-0.021387	5.0924
83	0.020215	80.21%	0.8021	177.808583	0.004511	0.8021	37.347034	0.021476	-0.016965	4.2903
84	0.020042	80.21%	0.8021	189.260762	0.004238	0.8021	37.347034	0.021476	-0.017238	3.4882
85	0.019891	69.35%	0.6935	201.450546	0.003443	0.6935	37.347034	0.018570	-0.015127	2.7947
86	0.019774	53.07%	0.5307	214.425442	0.002475	0.5307	37.347034	0.014210	-0.011735	2.2640
87	0.019655	53.07%	0.5307	228.236016	0.002325	0.5307	37.347034	0.014210	-0.011885	1.7333
88	0.019559	42.14%	0.4214	242.936092	0.001735	0.4214	37.347034	0.011283	-0.009548	1.3120
89	0.019488	31.21%	0.3121	258.582962	0.001207	0.3121	37.347034	0.008356	-0.007149	0.9999
90	0.019416	31.21%	0.3121	275.237605	0.001134	0.3121	37.347034	0.008356	-0.007222	0.6878
91	0.019366	21.32%	0.2132	292.964929	0.000728	0.2132	37.347034	0.005708	-0.004980	0.4747
92	0.019331	14.72%	0.1472	311.834023	0.000472	0.1472	37.347034	0.003943	-0.003470	0.3274
93	0.019296	14.72%	0.1472	331.918426	0.000444	0.1472	37.347034	0.003943	-0.003499	0.1802
94	0.019278	7.46%	0.0746	353.296412	0.000211	0.0746	37.347034	0.001997	-0.001786	0.1056
95	0.019268	4.34%	0.0434	376.051297	0.000116	0.0434	37.347034	0.001163	-0.001048	0.0621
96	0.019257	4.34%	0.0434	400.271764	0.000109	0.0434	37.347034	0.001163	-0.001055	0.0187
97	0.019254	1.14%	0.0114	426.052206	0.000027	0.0114	37.347034	0.000307	-0.000280	0.0072
98	0.019254	0.34%	0.0034	453.493099	0.000008	0.0034	37.347034	0.000092	-0.000085	0.0038
99	0.019253	0.34%	0.0034	482.701387	0.000007	0.0034	37.347034	0.000092	-0.000085	0.0003
100	0.019253	0.03%	0.0003	513.790904	0.000001	0.0003	37.347034	0.000009	-0.000009	0.0000
101	0.019253	0.00%	0.0000	546.882813	0.000000	0.0000	37.347034	0.000000	0.000000	0.0000
102	0.019253	0.00%	0.0000	582.106085	0.000000	0.0000	37.347034	0.000000	0.000000	0.0000
103	0.019253	0.00%	0.0000	619.597995	0.000000	0.0000	37.347034	0.000000	0.000000	0.0000
104	0.019253	0.00%	0.0000	659.504658	0.000000	0.0000	37.347034	0.000000	0.000000	0.0000



CHARGE 6

PACIFICORP  
 Remaining Life Depreciation Rates

[1] Account Number	[2] Description	[3] 12/31/2006 Balance	[4] IOWA CURVE	[5] Average Life Yrs	[6] NET SALVAGE Percent	[7] NET SALVAGE Amount
		\$			%	\$
<b>TRANSMISSION PLANT</b>						
350.20	Land Rights	61,181,203	R5	70.00	0.00%	-
352.00	Structures & Improvements	55,260,234	S1	75.00	-1.00%	(552,602)
353.00	Station Equipment	907,682,638	R1.5	58.00	-4.00%	(36,307,306)
353.70	Supervisory Equipment	55,509,184	R2	25.00	0.00%	-
354.00	Towers & Fixtures	380,678,705	R5	65.00	-7.00%	(26,647,509)
355.00	Poles & Fixtures	508,938,637	R2.5	52.00	-42.00%	(213,754,228)
356.00	OH Conductors & Devices	630,352,557	R4	60.00	-42.00%	(264,748,074)
356.20	Clearing	30,355,853	S6	65.00	0.00%	-
357.00	UG Conduit	3,277,188	R2	60.00	0.00%	-
358.00	UG Conductors & Devices	7,274,658	R2	60.00	0.00%	-
359.00	Roads & Trails	11,494,522	R5	70.00	0.00%	-
	Total Transmission Plant	2,652,005,379		58.41	-20.44%	(542,009,719)
				<b>Use 58 Years</b>		

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[1] Account Number	[2] Description	[3] 12/31/2006 Balance	[4]	[5] Average Life	[6] NET SALVAGE Percent	[7] NET SALVAGE Amount
				Yrs	%	\$
<b>TRANSMISSION PLANT excludes land accounts</b>						
352.00	Structures & Improvements	55,260,234	-	2.13%	-	-
353.00	Station Equipment	907,682,638	1.50	35.03%	0.5255	-
353.70	Supervisory Equipment	55,509,184	2.00	2.14%	0.0429	-
354.00	Towers & Fixtures	380,678,705	5.00	14.69%	0.7347	-
355.00	Poles & Fixtures	508,938,637	2.50	19.64%	0.4911	-
356.00	OH Conductors & Devices	630,352,557	4.00	24.33%	0.9732	-
356.20	Clearing	30,355,853	-	1.17%	-	-
357.00	UG Conduit	3,277,188	2.00	0.13%	0.0025	-
358.00	UG Conductors & Devices	7,274,658	2.00	0.28%	0.0056	-
359.00	Roads & Trails	11,494,522	5.00	0.44%	0.0222	-
	Total Transmission Plant	2,590,824,176		100.00%	2.7977	<b>Use R3</b>

[1] Account Number	[2] Description	[3] 12/31/2006 Balance	[4] IOWA CURVE	[5] Average Life Yrs	[6] NET SALVAGE Percent	[7] NET SALVAGE Amount
		\$			%	\$
<b>DISTRIBUTION PLANT (UTAH)</b>						
360.20	Land Rights	6,311,184	R4	50.00	0.00%	-
361.00	Structures & Improvements	25,067,428	R2	60.00	0.00%	-
362.00	Station Equipment	304,454,487	S-.5	45.00	-5.00%	(15,222,724)
362.70	Supervisory & Alarm Equipment	11,365,762	R3	25.00	0.00%	-
363.00	Storage Battery Equipment	1,393,066	SQ	15.00	0.00%	-
363.70	Storage Battery - Supervisory Eqpt.	64,739	SQ	15.00	0.00%	-
364.00	Poles, Towers & Fixtures	257,266,586	S2	40.00	-55.00%	(141,496,622)
365.00	OH Conductors & Devices	180,757,899	R0.5	42.00	-40.00%	(72,303,160)
366.00	UG Conduit	133,152,468	R2	60.00	-45.00%	(59,918,611)
367.00	UG Conductors & Devices	382,825,808	R2	50.00	-25.00%	(95,706,452)
368.00	Line Transformers	323,264,851	R0.5	45.00	0.00%	-
369.00	Services	164,752,028	S5	55.00	-5.00%	(8,237,601)
370.00	Meters	84,295,977	R2.5	26.00	-4.00%	(3,371,839)
371.00	I.O.C.P.	4,590,137	L0	25.00	-70.00%	(3,213,096)
372.00	Leased Property on Customers' Premises	44,785	L0	30.00	0.00%	-
373.00	Street Lighting & Signal Systems	24,495,522	R0.5	25.00	-20.00%	(4,899,104)
	Total UTAH Distribution Plant	1,904,102,727		45.88	-21.24%	(404,369,210)
				<b>Use 46 years</b>		

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[1] Account Number	[2] Description	[3] 12/31/2006 Balance	[4]	[5] Average Life	[6] NET SALVAGE Percent	[7] NET SALVAGE Amount
				Yrs	%	\$
<b>DISTRIBUTION PLANT excludes land accounts (UTAH)</b>						
361.00	Structures & Improvements	25,067,428	2	1.32%	0.03	Curves:
362.00	Station Equipment	304,454,487	0	16.04%	0.00	R=positive
362.70	Supervisory & Alarm Equipment	11,365,762	3	0.60%	0.02	L=negative
363.00	Storage Battery Equipment	1,393,066	0	0.07%	0.00	S=0
363.70	Storage Battery - Supervisory Eqpt.	64,739	0	0.00%	0.00	
364.00	Poles, Towers & Fixtures	257,266,586	0	13.56%	0.00	R means right of the standard
365.00	OH Conductors & Devices	180,757,899	0.5	9.52%	0.05	L means left of the standard
366.00	UG Conduit	133,152,468	2	7.02%	0.14	S is at the standard
367.00	UG Conductors & Devices	382,825,808	2	20.17%	0.40	
368.00	Line Transformers	323,264,851	0.5	17.03%	0.09	
369.00	Services	164,752,028	0	8.68%	0.00	
370.00	Meters	84,295,977	2.5	4.44%	0.11	
371.00	I.O.C.P.	4,590,137	0	0.24%	0.00	
372.00	Leased Property on Customers' Premises	44,785	0	0.00%	0.00	
373.00	Street Lighting & Signal Systems	24,495,522	0.5	1.29%	0.01	
	Total UTAH Distribution Plant	1,897,791,543		100.00%	0.84	<b>Use R1</b>

**Losses**

PacifiCorp  
Utah Marginal Cost Study  
Loss Factors

Line	(A) Voltage Level	(B) Energy Factor	(C) Energy Loss Percent	(D) Demand Factor	(E) Demand Loss Percent
1	Transmission Line				
2	( >= 69 kV )	1.03605	3.60%	1.04975	4.98%
3					
4					
5					
6	Primary Line				
7	( 2.4 kV thru 34.5 kV )	1.05763	5.76%	1.07706	7.71%
8					
9					
10					
11	Secondary Distribution				
12	( <= 600 Volts )	1.08757	8.76%	1.10349	10.35%

\*\*Source: 2007 Losses (Updated 2009)

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**Cust Data 1**

PacifiCorp  
Utah Marginal Cost Study  
Customers and MWh's  
12 Months Ended June 2012

Line	Description	(A) Average Customers	(B) Annual MWh's	(C) Revenue
1	Res - Schedule 1	719,832	6,841,616 \$	623,014,366
2				
3	GS - Schedule 23	79,902	1,413,674 \$	121,790,448
4				
5	GS - Schedule 6	15,286	6,177,171 \$	459,953,818
6				
7	LGS - Schedule 8	295	2,167,936 \$	138,876,686
8				
9	LGS - Schedule 9	160	4,647,035 \$	215,589,840
10				
11	Special Contracts			
12	Customer A	1	246,723 \$	10,557,777
13	Customer B	1	906,891 \$	30,307,371
14	Customer C	1	566,032 \$	22,942,659
15				
16	Street & Area Lighting			
17	Schedules 11,12	1,529	67,384 \$	8,913,850
18	Traffic Signals	2,244	5,514 \$	521,280
19	Outdoor Lighting	472	16,986 \$	1,218,133
20				
21	Irrigation - Schedule 10 Average Customers	2,865 1,501	187,460 \$	12,157,883

Source:  
Columns A & C - PacifiCorp, Pricing Department

Cust Data 2

PacifiCorp  
Utah Marginal Cost Study  
Customer Class Split between  
Three Phase / Single Phase

Line	Customer Class	(A) Three Phase	(B) Total Customers	(C) Three Phase % of Customers	(D) Single Phase % of Customers
1	Res - Schedule 1	-	719,832	0.00%	100.00%
2					
3	GS - Schedule 23	28,566	79,902	35.75%	64.25%
4					
5	GS - Schedule 6	13,635	15,286	89.20%	10.80%
6					
7	LGS - Schedule 8	295	295	100.00%	0.00%
8					
9	LGS - Schedule 9	160	160	100.00%	0.00%
10					
11	SPCL				
12	Customer A	1	1	100.00%	0.00%
13	Customer B	1	1	100.00%	0.00%
14	Customer C	1	1	100.00%	0.00%
15					
16	Street & Area Lighting				
17	Schedules 11,12	-	1,529	0.00%	100.00%
18	Traffic Signals	-	2,244	0.00%	100.00%
19	Outdoor Lighting	-	472	0.00%	100.00%
20					
21	Irrigation - Schedule 10	2,149	2,865	75.01%	24.99%
TOTAL		44,808	822,589	5.45%	94.55%

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Cust Data 3

PacifiCorp  
Utah Marginal Cost Study  
Customer Loads  
12 Months Ended June 2012

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line	Description	System	Distribution	Transformer	Non-Coincident Peak	Cust per Transformer	Coincidence Factor
1	Res - Schedule 1	1,196	1,313	3,963	5,215	6	0.76
2							
3	GS - Schedule 23	225	236	524	582	2	0.90
4							
5	GS - Schedule 6	944	945	1,562	1,610	1	1.00
6							
7	LGS - Schedule 8	296	296	251	430	1	1.00
8							
9	LGS - Schedule 9	569	0	0	727	1	1.00
10							
11	SPCL						
12	Customer A	28	0	0	45	1	1.00
13	Customer B	55	0	0	149	1	1.00
14	Customer C	52	0	0	159	1	1.00
15							
16	Street & Area Lighting						
17	Schedules 11,12	3	7	19	19	1	1.00
18	Traffic Signals	1	1	1	1	1	1.00
19	Outdoor Lighting	1	2	6	6	1	1.00
20							
21	Irrigation - Sch 10	22	22	173	173	1	1.00

Source:  
Columns C, D & F - PacifiCorp, Load Research Dept.  
Column E - Column F x Column H  
Column H - PacifiCorp Distribution Construction Standard, DA 411

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Cust Data 4

PacifiCorp  
Utah Marginal Cost Study  
Allocation of Uncollectible Expense between Classes  
12 Months Ended June 2012

Line	Description	(A) Revenues June 2012			(B) Revenues June 2012			(C) Other			(D) Commercial			(E) Percent of Total Revenues			(F) Other			(G) Commercial			(H) Industrial			(I) Other			Total
		(A)			(B)			(C)			(D)			(E)			(F)			(G)			(H)			(I)			
		Commercial	Industrial	Other	Commercial	Industrial	Other	Commercial	Industrial	Other	Commercial	Industrial	Other	Commercial	Industrial	Other	Commercial	Industrial	Other	Commercial	Industrial	Other	Commercial	Industrial	Other				
1	Res - Schedule 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,714,070		
2	GS - Schedule 23	116,231,954	5,555,673	0	19.12%	1.49%	0	0	0	0	0	0	0	0	0	145,883	1,089	0	0	0	0	0	0	0	0	0	146,972		
3	GS - Schedule 6	398,703,431	61,080,451	0	65.60%	16.41%	0	0	0	0	0	0	0	0	0	500,413	11,972	0	0	0	0	0	0	0	0	0	512,385		
4	LGS - Schedule 8	74,525,388	64,351,298	0	12.26%	17.29%	0	0	0	0	0	0	0	0	0	93,537	12,613	0	0	0	0	0	0	0	0	0	106,150		
5	LGS - Schedule 9	17,068,713	177,431,608	0	2.81%	47.67%	0	0	0	0	0	0	0	0	0	21,423	34,777	0	0	0	0	0	0	0	0	0	56,200		
6	SPCL																												
7	Customer A	0	10,557,777	0	2.84%	2.84%	0	0	0	0	0	0	0	0	0	-	2,069	0	0	0	0	0	0	0	0	0	2,069		
8	Customer B	0	30,307,371	0	8.14%	8.14%	0	0	0	0	0	0	0	0	0	-	5,940	0	0	0	0	0	0	0	0	0	5,940		
9	Customer C	0	22,942,659	0	6.16%	6.16%	0	0	0	0	0	0	0	0	0	-	4,497	0	0	0	0	0	0	0	0	0	4,497		
10	Street & Area Lighting																												
11	Schedules 11,12	0	0	8,913,850	0.00%	0.00%	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	506		
12	Traffic Signals	134,423	2,273	384,585	0.02%	0.00%	0	0	0	0	0	0	0	0	0	169	0	0	0	0	0	0	0	0	0	0	191		
13	Outdoor Lighting	1,120,748	3,367	94,018	0.18%	0.00%	0	0	0	0	0	0	0	0	0	1,407	1	0	0	0	0	0	0	0	0	0	1,413		
14	Irrigation - Schedule 10	0	0	0	0.00%	0.00%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
15																											31,728		

Columns B & C - PacifiCorp, Pricing Department

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