

Docket No. UE 263  
Exhibit PAC/1104  
Witness: C. Craig Paice

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**PACIFICORP**

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**Exhibit Accompanying Direct Testimony of C. Craig Paice  
Oregon Marginal Cost of Service Summary**

**March 2013**

**PACIFICORP**  
**STATE OF OREGON**  
**Combined GRC and TAM**  
**Oregon Marginal Cost Study**  
**20 Year Marginal Cost By Load Class**  
**12 Months Ended December 31, 2014 Forecast**  
**(Dollars in 000's)**

Line	(A) Description	(B) Residential (sec)	(C) 0-15 kW (sec)	(D) General Service - Schedule 23 15+ kW (sec)	(E) Primary (pri)	(F) 0-50 kW (sec)	(G) 51-100 kW (sec)	(H) > 101kW (sec)	(I) Primary (pri)	(J) 0-300 kW (sec)	(K) 301+ kW (sec)	(L) Primary (pri)	(M) 1 - 4 MW (sec)	(N) 1 - 4 MW (pri)	(O) > 4 MW (sec)	(P) > 4 MW (pri)	(Q) Trans (trn)	(R) Irrg (sec)	(S) Sch 51, 53, 54 Streetlighting (sec)	
	<b>Demand Related Marginal Cost</b>																			
1	Generation	\$94,605	\$10,187	\$8,758	\$17	\$8,171	\$11,251	\$14,790	\$285	\$3,092	\$16,990	\$1,508	\$6,647	\$7,079	\$806	\$16,371	\$9,779	\$2,916	\$1,033	
2	Transmission	\$155,669	\$16,763	\$14,411	\$28	\$13,445	\$18,514	\$24,337	\$469	\$5,088	\$27,956	\$2,481	\$14,229	\$11,649	\$1,326	\$26,937	\$16,091	\$4,798	\$1,106	
3	Distribution																			
4	Poles	\$52,618	\$3,377	\$2,742	\$7	\$1,897	\$2,667	\$3,417	\$78	\$548	\$3,030	\$268	\$1,006	\$798	\$11	\$191	\$0	\$2,196		
5	Conductor	\$79,429	\$4,324	\$3,738	\$9	\$3,017	\$4,239	\$5,433	\$125	\$986	\$5,452	\$481	\$2,294	\$1,819	\$23	\$364	\$0	\$2,523		
6	Substations	\$70,546	\$3,128	\$2,540	\$6	\$2,728	\$3,854	\$4,913	\$113	\$1,048	\$5,796	\$571	\$2,960	\$2,347	\$218	\$5,126	\$0	\$937		
7	Subtotal: Pole, Cond, Subs	\$202,593	\$11,109	\$9,021	\$22	\$7,642	\$10,740	\$13,762	\$317	\$2,582	\$14,277	\$1,260	\$6,260	\$4,964	\$252	\$5,656	\$0	\$5,656		
8	Transformers	\$14,967	\$573	\$394	\$0	\$441	\$569	\$727	\$0	\$152	\$808	\$0	\$411	\$0	\$43	\$0	\$0	\$488		
9	Distribution subtotal	\$217,560	\$11,682	\$9,415	\$22	\$8,083	\$11,329	\$14,489	\$317	\$2,734	\$15,085	\$1,260	\$6,671	\$4,964	\$295	\$5,681	\$0	\$6,124		
10	Total Demand Related (Lines 1+2+9)	\$787,003	\$38,632	\$32,584	\$67	\$29,699	\$41,084	\$53,616	\$1,071	\$10,914	\$60,031	\$5,249	\$29,547	\$23,682	\$2,427	\$48,969	\$25,870	\$13,838		
11																				
12																				
13																				
14	<b>Energy Related Marginal Cost</b>																			
15	Generation Energy Related	\$616,337	\$28,122	\$24,350	\$53	\$20,863	\$31,617	\$41,712	\$861	\$9,747	\$49,707	\$4,247	\$25,008	\$21,685	\$2,460	\$49,228	\$37,622	\$11,365	\$1,033	
16	Transmission Energy Related	\$43,168	\$1,970	\$1,705	\$4	\$1,461	\$2,214	\$2,921	\$60	\$663	\$3,481	\$297	\$1,752	\$1,519	\$172	\$3,448	\$2,635	\$726	\$72	
17	Total Energy	\$659,505	\$30,091	\$26,055	\$57	\$22,324	\$33,831	\$44,633	\$921	\$10,429	\$53,189	\$4,544	\$26,760	\$23,204	\$2,633	\$52,676	\$40,257	\$12,161	\$1,106	
18																				
19	<b>Customer Related Marginal Cost</b>																			
20	Poles	\$80,224	\$9,847	\$1,578	\$7	\$435	\$334	\$186	\$6	\$14	\$37	\$3	\$4	\$3	\$0	\$0	\$0	\$2,819	\$3,362	
21	Conductor	\$37,186	\$4,756	\$763	\$3	\$211	\$162	\$90	\$3	\$7	\$17	\$3	\$3	\$1	\$0	\$0	\$0	\$1,362	\$61	
22	Transformers	\$85,223	\$10,485	\$2,482	\$0	\$3,247	\$2,849	\$1,706	\$0	\$222	\$573	\$0	\$115	\$0	\$3	\$0	\$0	\$7,111	\$69	
23	Service Drops	\$62,761	\$8,093	\$2,708	\$0	\$1,201	\$963	\$1,032	\$0	\$107	\$532	\$0	\$357	\$0	\$0	\$0	\$0	\$0	\$0	
24	Meters	\$12,746	\$1,256	\$349	\$90	\$151	\$126	\$446	\$117	\$47	\$120	\$98	\$31	\$127	\$1	\$67	\$474	\$0	\$0	
25	Meter Reading	\$10,598	\$1,513	\$243	\$1	\$186	\$143	\$80	\$2	\$14	\$37	\$3	\$19	\$11	\$0	\$6	\$2	\$205	\$2	
26	Billing & Collections	\$19,550	\$8,131	\$331	\$1	\$158	\$122	\$331	\$68	\$7	\$18	\$2	\$13	\$8	\$0	\$4	\$1	\$127	\$25	
27	Uncollectables	\$5,608	\$119	\$19	\$0	\$91	\$70	\$39	\$1	\$28	\$73	\$7	\$63	\$37	\$1	\$20	\$6	\$7	\$0	
28	Customer Service / Other	\$5,163	\$564	\$90	\$0	\$45	\$34	\$19	\$1	\$3	\$7	\$1	\$3	\$2	\$0	\$1	\$0	\$38	\$7	
29	Total Commitment & Billing Rel	\$319,060	\$38,709	\$8,363	\$103	\$5,724	\$4,803	\$3,665	\$132	\$449	\$1,414	\$115	\$608	\$190	\$12	\$98	\$482	\$11,942	\$3,529	
30																				
31	<b>Total Revenue @ Full MC</b>																			
32	Generation	\$351,262	\$38,309	\$33,108	\$70	\$29,034	\$42,868	\$56,502	\$1,146	\$12,839	\$66,697	\$5,755	\$33,655	\$28,764	\$3,266	\$65,599	\$47,401	\$14,281	\$1,033	
33	Transmission	\$97,359	\$18,733	\$16,116	\$32	\$14,906	\$20,728	\$27,258	\$529	\$5,771	\$31,437	\$2,778	\$15,981	\$13,168	\$1,498	\$30,385	\$18,726	\$5,594	\$72	
34	Distribution	\$482,954	\$44,872	\$16,945	\$32	\$13,177	\$15,638	\$17,503	\$325	\$3,084	\$16,245	\$1,264	\$7,150	\$4,969	\$305	\$5,661	\$0	\$17,415	\$3,493	
35	Customer - Billing	\$19,550	\$2,066	\$331	\$1	\$156	\$122	\$68	\$2	\$7	\$18	\$2	\$13	\$8	\$0	\$4	\$0	\$127	\$25	
36	Customer - Metering	\$23,344	\$2,769	\$592	\$91	\$336	\$269	\$526	\$119	\$61	\$196	\$102	\$50	\$139	\$1	\$73	\$475	\$478	\$5	
37	Customer - Other	\$5,163	\$4,347	\$90	\$0	\$45	\$34	\$19	\$1	\$3	\$7	\$1	\$3	\$2	\$0	\$1	\$0	\$38	\$7	
38	Revenue (less Uncollectables)	\$1,759,960	\$107,313	\$67,183	\$226	\$57,657	\$79,659	\$101,876	\$2,123	\$21,764	\$114,562	\$9,901	\$56,853	\$47,049	\$5,071	\$101,742	\$66,604	\$37,934	\$4,635	
39																				
40	Customer - Uncollectables	\$5,608	\$119	\$19	\$0	\$91	\$70	\$39	\$1	\$28	\$73	\$7	\$63	\$37	\$1	\$20	\$6	\$7	\$0	
41	Total Revenue	\$1,765,568	\$107,432	\$67,202	\$226	\$57,748	\$79,729	\$101,915	\$2,124	\$21,792	\$114,635	\$9,906	\$56,915	\$47,086	\$5,072	\$101,762	\$66,609	\$37,940	\$4,635	