

Appendix A: Tables

**SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2015
 OTTER TAIL POWER COMPANY
 Net Benefits**

	Approved Savings, Costs and Benefits				Actual Savings, Costs and Benefits			
	Energy Savings (kWh)	Budgeted Costs	Total Benefits	Utility Net Benefits	Energy Savings (kWh)	Actual Costs	Total Benefits	Utility Net Benefits
Direct Impact Projects								
Residential								
Air Conditioning Control	1,448	\$14,000	\$59,712	\$45,712	1,399	\$7,772	\$57,721	\$49,949
Air Source Heat Pumps	222,277	\$19,000	\$119,503	\$100,503	154,705	\$9,102	\$150,767	\$141,665
Geothermal Heat Pumps	206,583	\$23,000	\$164,402	\$141,402	128,540	\$11,580	\$141,003	\$129,424
Lighting	24,098	\$4,000	\$13,171	\$9,171	96,292	\$8,603	\$43,692	\$35,089
Total - Residential	454,404	\$60,000	\$356,788	\$296,788	380,936	\$37,057	\$393,184	\$356,126
Commercial								
Air Source Heat Pumps	134,044	\$13,000	\$75,392	\$62,392	194,811	\$11,417	\$172,085	\$160,668
Custom Efficiency Projects	968,760	\$71,000	\$909,173	\$838,173	0	\$8,794	\$0	(\$8,794)
Drive Power	482,713	\$63,000	\$561,767	\$498,767	2,779,026	\$173,902	\$2,613,538	\$2,439,635
Geothermal Heat Pumps	523,938	\$57,000	\$431,030	\$374,030	512,295	\$44,482	\$421,940	\$377,458
Lighting	244,790	\$54,000	\$286,967	\$232,967	372,303	\$61,099	\$417,722	\$356,623
Total - Commercial	2,354,244	\$258,000	\$2,264,329	\$2,006,329	3,858,435	\$299,695	\$3,625,285	\$3,325,590
Total - Direct Impact	2,808,649	\$318,000	\$2,621,116	\$2,303,116	4,239,371	\$336,752	\$4,018,469	\$3,681,716
Indirect Impact Projects								
Advertising & Education	0	\$10,000	\$0	(\$10,000)	0	\$12,843	\$0	(\$12,843)
EEP Development - 2015	0	\$25,000	\$0	(\$25,000)	0	\$22,307	\$0	(\$22,307)
Total - Indirect Impact	0	\$35,000	\$0	(\$35,000)	0	\$35,150	\$0	(\$35,150)
Total - All Programs	2,808,649	\$353,000	\$2,621,116	\$2,268,116	4,239,371	\$371,902	\$4,018,469	\$3,646,567

**Benefit/Cost Results
2015 SD EEP**

	AS FILED	ACTUAL 2015
Data discounted to 2015	Utility Test	Utility Test
NPV Method: Midyear		
Discount Rates:	8.5%	8.5%
Benefit/Cost Ratio	7.43	10.81
Total Costs	\$353,000	\$371,902
Total Benefits	\$2,621,116	\$4,018,469
Net Benefits	\$2,268,116	\$3,646,567
Total Benefits:		
Utility Elec. Production Cost Decr	\$1,523,986	\$2,287,957
Utility Ancillary	\$5,404	\$8,193
Utility Generation Cap. Credit	\$619,948	\$876,457
Utility Transmission & Distrib. Credit	\$471,778	\$845,863
Total Benefits	\$2,621,116	\$4,018,469
Total Costs:		
Utility Rebates Paid	\$185,699	\$255,268
Utility Fixed Admin Cost	\$167,301	\$116,635
Total Costs	\$353,000	\$371,902

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2015
OTTER TAIL POWER COMPANY
Benefit Cost Ratios

APPENDIX A, TABLE 3 (REVISED)

	Approved Benefit / Cost Test Results					Actual Benefit / Cost Test Results				
	Utility Test	Total Resource Test	Ratepayer Impact Test	Societal Test	Participant Test	Utility Test	Total Resource Test	Ratepayer Impact Test	Societal Test	Participant Test
Direct Impact Projects										
Residential										
Air Conditioning Control	4.27	6.23	3.91	6.23	inf.	7.43	10.84	6.16	10.84	inf.
Air Source Heat Pumps	6.29	2.67	0.64	2.67	4.89	16.56	5.40	1.10	5.40	4.29
Geothermal Heat Pumps	7.15	2.04	0.82	2.04	2.66	12.18	3.00	1.05	3.00	2.23
Lighting	3.29	3.79	0.69	3.79	15.68	5.08	6.52	0.57	6.52	34.89
Total - Residential	5.95	2.57	0.85	2.57	3.49	10.61	4.48	1.10	4.48	3.65
Commercial										
Air Source Heat Pumps	5.80	2.69	0.69	2.69	3.59	15.07	7.28	1.05	7.28	6.18
Custom Efficiency Projects	12.81	4.35	1.64	4.35	2.07	0.00	0.00	0.00	0.00	inf.
Drive Power	8.92	3.74	1.72	3.74	1.68	15.03	9.07	1.00	9.07	7.02
Geothermal Heat Pumps	7.56	2.14	0.89	2.14	1.83	9.49	12.02	0.82	12.02	12.73
Lighting	5.31	2.96	1.29	2.96	2.00	6.84	12.61	1.10	12.61	18.83
Total - Commercial	8.78	3.31	1.33	3.31	1.95	12.10	9.39	0.99	9.39	7.97
Indirect Impact Projects										
Advertising & Education	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Development	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Total - Indirect Impact	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Total - All Programs	7.43	3.09	1.22	3.09	2.19	10.81	8.09	0.99	8.09	7.22