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	Budgeted	Total	Utility Net	Energy Savings	Actual	Total	Utility Net	
	(kWh)	Costs	Benefits	Benefits	(kWh)	Costs	Benefits	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 Utility Test		
Data discounted to 2015	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		

APPENDIX A, TABLE 2 (REVISED) Page 2 of 2

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

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
4.27	6.23	3.91	6.23	inf.	7.43	10.84	6.16	10.84	inf.
6.29	2.67	0.64	2.67	4.89	16.56	5.40	1.10	5.40	4.29
7.15	2.04	0.82	2.04	2.66	12.18	3.00	1.05	3.00	2.23
3.29	3.79	0.69	3.79	15.68	5.08	6.52	0.57	6.52	34.89
5.95	2.57	0.85	2.57	3.49	10.61	4.48	1.10	4.48	3.65
5.80	2.69	0.69	2.69	3.59	15.07	7.28	1.05	7.28	6.18
12.81	4.35	1.64	4.35	2.07	0.00	0.00	0.00	0.00	inf.
8.92	3.74	1.72	3.74	1.68	15.03	9.07	1.00	9.07	7.02
7.56	2.14	0.89	2.14	1.83	9.49	12.02	0.82	12.02	12.73
5.31	2.96	1.29	2.96	2.00	6.84	12.61	1.10	12.61	18.83
8.78	3.31	1.33	3.31	1.95	12.10	9.39	0.99	9.39	7.97
inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
7.43	3.09	1.22	3.09	2.19	10.81	8.09	0.99	8.09	7.22
	Test 4.27 6.29 7.15 3.29 5.95 5.80 12.81 8.92 7.56 5.31 8.78 inf. inf.	Utility Test Total Resource Test 4.27 6.23 6.29 2.67 7.15 2.04 3.29 3.79 5.95 2.57 5.80 2.69 12.81 4.35 8.92 3.74 7.56 2.14 5.31 2.96 8.78 3.31 inf. inf. inf. inf. inf. inf.	Utility Test Total Resource Test Ratepayer Impact Test 4.27 6.23 3.91 6.29 2.67 0.64 7.15 2.04 0.82 3.29 3.79 0.69 5.80 2.69 0.69 12.81 4.35 1.64 8.92 3.74 1.72 7.56 2.14 0.89 5.31 2.96 1.29 8.78 3.31 1.33 inf. inf. inf. inf. inf. inf. inf. inf. inf.	Utility Test Total Resource Test Ratepayer Impact Test Societal Test 4.27 6.23 3.91 6.23 6.29 2.67 0.64 2.67 7.15 2.04 0.82 2.04 3.29 3.79 0.69 3.79 5.95 2.57 0.85 2.57 5.80 2.69 0.69 2.69 12.81 4.35 1.64 4.35 8.92 3.74 1.72 3.74 7.56 2.14 0.89 2.14 5.31 2.96 1.29 2.96 8.78 3.31 1.33 3.31 inf. inf. inf. inf. inf. inf. inf. inf. inf. inf. inf. inf.	Utility Test Total Resource Test Ratepayer Impact Test Societal Test Participant Test 4.27 6.23 3.91 6.23 inf. 6.29 2.67 0.64 2.67 4.89 7.15 2.04 0.82 2.04 2.66 3.29 3.79 0.69 3.79 15.68 5.95 2.57 0.85 2.57 3.49 5.80 2.69 0.69 2.69 3.59 12.81 4.35 1.64 4.35 2.07 8.92 3.74 1.72 3.74 1.68 7.56 2.14 0.89 2.14 1.83 5.31 2.96 1.29 2.96 2.00 8.78 3.31 1.33 3.31 1.95 inf. inf. inf. inf. inf. inf. inf. inf. inf. inf.	Utility Test Total Resource Test Ratepayer Impact Test Societal Test Participant Test Utility Test 4.27 6.23 3.91 6.23 inf. 7.43 6.29 2.67 0.64 2.67 4.89 16.56 7.15 2.04 0.82 2.04 2.66 12.18 3.29 3.79 0.69 3.79 15.68 5.08 5.95 2.57 0.85 2.57 3.49 10.61 5.80 2.69 0.69 2.69 3.59 15.07 12.81 4.35 1.64 4.35 2.07 0.00 8.92 3.74 1.72 3.74 1.68 15.03 7.56 2.14 0.89 2.14 1.83 9.49 5.31 2.96 1.29 2.96 2.00 6.84 8.78 3.31 1.33 3.31 1.95 12.10 inf. inf. inf. inf. inf. inf.	Utility Test Total Resource Test Ratepayer Impact Test Societal Test Participant Test Utility Test Total Resource Test 4.27 6.23 3.91 6.23 inf. 7.43 10.84 6.29 2.67 0.64 2.67 4.89 16.56 5.40 7.15 2.04 0.82 2.04 2.66 12.18 3.00 3.29 3.79 0.69 3.79 15.68 5.08 6.52 5.95 2.57 0.85 2.57 3.49 10.61 4.48 5.80 2.69 0.69 2.69 3.59 15.07 7.28 12.81 4.35 1.64 4.35 2.07 0.00 0.00 8.92 3.74 1.72 3.74 1.68 15.03 9.07 7.56 2.14 0.89 2.14 1.83 9.49 12.02 5.31 2.96 1.29 2.96 2.00 6.84 12.61 8.78 3.31	Utility Test Total Resource Test Ratepayer Impact Test Societal Test Participant Test Utility Test Total Resource Test Ratepayer Impact Test 4.27 6.23 3.91 6.23 inf. 7.43 10.84 6.16 6.29 2.67 0.64 2.67 4.89 16.56 5.40 1.10 7.15 2.04 0.82 2.04 2.66 12.18 3.00 1.05 3.29 3.79 0.69 3.79 15.68 5.08 6.52 0.57 5.95 2.57 0.85 2.57 3.49 10.61 4.48 1.10 5.80 2.69 0.69 2.69 3.59 15.07 7.28 1.05 12.81 4.35 1.64 4.35 2.07 0.00 0.00 0.00 8.92 3.74 1.72 3.74 1.68 15.03 9.07 1.00 7.56 2.14 0.89 2.14 1.83 9.49 12.02 0.82	Utility Test Total Resource Test Ratepayer Impact Test Societal Test Participant Test Utility Test Total Resource Test Ratepayer Impact Test Societal Test 4.27 6.23 3.91 6.23 inf. 7.43 10.84 6.16 10.84 6.29 2.67 0.64 2.67 4.89 16.56 5.40 1.10 5.40 7.15 2.04 0.69 3.79 15.68 5.08 6.52 0.57 6.52 5.95 2.57 0.85 2.57 3.49 10.61 4.48 1.10 4.48 5.80 2.69 0.69 2.69 3.59 15.07 7.28 1.05 7.28 12.81 4.35 1.64 4.35 2.07 0.00 0.00 0.00 0.00 8.92 3.74 1.72 3.74 1.68 15.03 9.07 1.00 9.07 7.56 2.14 0.89 2.14 1.83 9.49 12.02 0.82