

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2013
Otter Tail Power Company
Status Report

	COSTS			PARTICIPATION		
	PROPOSED BUDGET	ACTUAL EXPENSES	% OF BUDGET	PROPOSED PART.	ACTUAL	% of GOAL
DIRECT IMPACT PROJECTS						
RESIDENTIAL						
Air Conditioning Control *	\$10,000	\$9,760	98%	30	9	30%
Air Source Heat Pumps -Residential	\$14,000	\$14,673	105%	20	16	80%
Geothermal Heat Pumps -Residential	\$21,000	\$15,687	75%	10	6	60%
Total -Residential	\$45,000	\$40,120	89%	60	31	52%
COMMERCIAL						
Air Source Heat Pumps -Commercial	\$25,000	\$6,784	27%	22	7	32%
Custom Efficiency Projects	\$73,000	\$75,709	104%	5	6	120%
Geothermal Heat Pumps -Commercial	\$50,000	\$17,906	36%	22	7	32%
Lighting	\$37,000	\$76,983	208%	15	33	220%
Motors	\$17,000	\$5,435	32%	16	0	0%
Total -Commercial	\$202,000	\$182,818	91%	80	53	66%
Total -Direct Impact	\$247,000	\$222,938	90%	140	84	60%
INDIRECT IMPACT PROJECTS						
Advertising & Education	\$8,000	\$7,838	98%	900	2,739	304%
Total - Indirect Impact	\$8,000	\$7,838	98%	900	2,739	304%
Total - Without Development Costs	\$255,000	\$230,776	91%	1040	2,823	271%
DEVELOPMENT						
EEP DEVELOPMENT - 2013	\$25,000	\$50,773	203%	0		
Total Development	\$25,000	\$50,773	203%	0		
TOTAL - ALL PROGRAMS (INC. DEVL)	\$280,000	\$281,549	101%	1,040	2,823	271%
Prior Year Tracker Ending Balance		\$134,194				
Carrying Costs		\$7,950				
Accounting Adjustments		\$0				
Prior Year Approved Incentive		\$84,000				
Total Recoverable with Carrying Costs & Incentive		\$507,693				
Recoverd through rates -- 12/31/13		(\$397,578)				
Balance - EEP Tracker -- 12/31/13		\$110,115				

* Air conditioning programs include summer load reductions, which are not coincident to the system winter-peak

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	ENERGY SAVINGS			DEMAND SAVINGS		
	PROPOSED ENERGY SAVINGS (KWH)	ACTUAL ENERGY SAVINGS (KWH)	% OF GOAL	PROPOSED COINC. PEAK DEMAND SAVINGS (KW)	ACTUAL COINC. PEAK DEMAND SAVINGS (KW)	% OF GOAL
DIRECT IMPACT PROJECTS						
RESIDENTIAL						
Air Conditioning Control *	1,464	439	30%	31.22	9.37	30%
Air Source Heat Pumps -Residential	168,130	156,361	93%	17.11	11.50	67%
Geothermal Heat Pumps -Residential	120,398	104,549	87%	86.00	80.29	93%
Total -Residential	289,992	261,349	90%	134.33	101.16	75%
COMMERCIAL						
Air Source Heat Pumps -Commercial	314,403	72,296	23%	37.30	5.32	14%
Custom Efficiency Projects	806,250	183,117	23%	161.25	125.10	78%
Geothermal Heat Pumps -Commercial	308,633	126,040	41%	206.56	90.68	44%
Lighting	522,671	968,723	185%	126.47	130.11	103%
Motors	32,311	0	0%	5.36	0.00	0%
Total -Commercial	1,984,268	1,350,175	68%	536.94	351.21	65%
Total -Direct Impact	2,274,260	1,611,524	71%	671.27	452.37	67%
INDIRECT IMPACT PROJECTS						
Advertising & Education						
Total - Indirect Impact						
Total - Without Development Costs	2,274,260	1,611,524	71%	671.27	452.37	67%
DEVELOPMENT						
EEP DEVELOPMENT - 2013						
Total Development						
TOTAL - ALL PROGRAMS (INC. DEVL)	2,274,260	1,611,524	71%	671.27	452.37	67%
Prior Year Tracker Ending Balance						
Carrying Costs						
Accounting Adjustments						
Prior Year Approved Incentive						
Total Recoverable with Carrying Costs & Incentive						
Recoverd through rates -- 12/31/13						
Balance - EEP Tracker -- 12/31/13						

* Air conditioning programs include summer load reductions, which are

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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 *	1,464	\$10,000	\$66,140	\$56,140	439	\$9,760	\$19,842	\$10,082
Air Source Heat Pumps - Residential	168,130	\$14,000	\$124,847	\$110,847	156,361	\$14,673	\$109,210	\$94,536
Geothermal Heat Pumps - Residential	120,398	\$21,000	\$247,205	\$226,205	104,549	\$15,687	\$225,598	\$209,911
Total - Residential	289,992	\$45,000	\$438,192	\$393,192	261,349	\$40,120	\$354,649	\$314,529
COMMERCIAL								
Air Source Heat Pumps - Commercial	314,403	\$25,000	\$243,056	\$218,056	72,296	\$6,784	\$53,553	\$46,769
Custom Efficiency Project	806,250	\$73,000	\$988,246	\$915,246	183,117	\$75,709	\$435,369	\$359,660
Geothermal Heat Pumps - Commercial	308,633	\$50,000	\$619,904	\$569,904	126,040	\$17,906	\$230,556	\$212,651
Lighting	522,671	\$37,000	\$516,836	\$479,836	968,723	\$76,983	\$1,090,478	\$1,013,495
Motors	32,311	\$17,000	\$36,975	\$19,975	0	\$5,435	\$0	(\$5,435)
Total - Commercial	1,984,268	\$202,000	\$2,405,017	\$2,203,017	1,350,175	\$182,818	\$1,809,957	\$1,627,139
Total - Direct Impact	2,274,260	\$247,000	\$2,843,209	\$2,596,209	1,611,524	\$222,938	\$2,164,606	\$1,941,668
INDIRECT IMPACT PROJECTS								
Advertising & Education	0	\$8,000	\$0	(\$8,000)	0	\$7,838	\$0	(\$7,838)
Development (all years)	0	\$25,000	\$0	(\$25,000)	0	\$50,773	\$0	(\$50,773)
Total - Indirect Impact	0	\$33,000	\$0	(\$33,000)	0	\$58,611	\$0	(\$58,611)
TOTAL - ALL PROGRAMS	2,274,260	\$280,000	\$2,843,209	\$2,563,209	1,611,524	\$281,549	\$2,164,606	\$1,883,058

* Air conditioning programs include summer load reductions, which are not coincident to the system winter-peak

Benefit/Cost Results
2013 SD EEP

	AS FILED	ACTUAL 2013
Data discounted to 2013	Utility Test	Utility Test
NPV Method: Midyear		
Discount Rates:	8%	8%
Benefit/Cost Ratio	10.15	7.69
Total Costs	\$280,000	\$281,549
Total Benefits	\$2,843,209	\$2,164,606
Net Benefits	\$2,563,209	\$1,883,058
Total Benefits:		
Utility Elec. Production Cost Decr	\$1,514,367	\$1,237,192
Utility Generation Cap. Credit	\$627,613	\$398,308
Utility Transmission & Distrib. Credit	\$701,229	\$529,106
Total Benefits	\$2,843,209	\$2,164,606
Total Costs:		
Utility Rebates Paid	\$142,470	\$141,200
Utility Fixed Admin Cost	\$137,530	\$140,349
Total Costs	\$280,000	\$281,549

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2013
OTTER TAIL POWER COMPANY
Benefit Cost Ratios

APPENDIX A, TABLE 3

	APPROVED BENEFIT / COST TEST RESULTS					ACTUAL BENEFIT / COST TEST RESULTS				
	UTILITY TEST	TOTAL RESOURCE TEST	RATEPAYER IMPACT TEST	SOCIETAL TEST	PART. TEST	UTILITY TEST	TOTAL RESOURCE TEST	RATEPAYER IMPACT TEST	SOCIETAL TEST	PART. TEST
DIRECT IMPACT PROJECTS										
RESIDENTIAL										
Air Conditioning Control *	6.61	8.29	5.91	8.29	inf.	2.03	2.55	1.96	2.55	inf.
Air Source Heat Pumps - Residential	8.92	4.15	0.96	4.30	4.30	7.44	4.18	0.89	4.35	5.00
Geothermal Heat Pumps - Residential	11.77	2.84	2.08	2.89	1.14	14.38	3.77	2.24	3.83	1.42
Total - Residential	8.27	3.33	1.63	3.39	1.88	8.84	3.78	1.52	3.86	2.34
COMMERCIAL										
Air Source Heat Pumps - Commercial	9.72	5.17	1.08	5.34	4.83	7.89	3.55	0.99	3.68	3.60
Custom Efficiency Projects	13.54	4.18	1.74	4.26	2.08	5.75	2.30	2.89	2.32	0.56
Geothermal Heat Pumps - Commercial	12.40	2.90	2.19	2.95	1.10	12.88	3.42	2.04	2.69	1.42
Lighting	13.97	4.12	1.57	4.21	2.47	14.17	5.41	1.52	5.54	3.29
Motors	2.18	1.69	1.03	1.72	1.53	NA	NA	NA	NA	NA
Total - Commercial	11.91	3.72	1.67	3.80	1.98	9.90	3.73	1.74	3.79	1.84
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										
TOTAL - ALL PROGRAMS	10.15	3.56	1.64	3.63	1.96	7.69	3.45	1.62	3.52	1.92

* Air conditioning programs include summer load reductions, which are not coincident to the system winter-peak