

Appendix A

Tables

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2023
Otter Tail Power Company
Status Report

APPENDIX A, TABLE 1

	Costs			Participation			Energy Savings			Demand Savings		
	Proposed Budget*	Actual Expenses	% of Budget	Proposed Participants*	Actual Participants	% of Goal	Proposed Energy Savings (kWh)*	Actual Energy Savings (kWh)	% of Goal	Proposed Summer Coincident kW Savings*	Actual Summer Coincident kW Savings	% of Goal
Residential												
Air Conditioning Control	\$12,000	\$3,258	27%	750	667	89%	9,317	8,286	89%	155.1	138.2	89%
Residential Heat Pumps	\$91,000	\$96,864	106%	20	50	250%	384,572	856,660	223%	25.6	72.0	281%
Home Lighting	\$35,000	\$28,533	82%	7,055	5,651	80%	295,269	263,248	89%	30.8	26.0	84%
Smart Thermostats	\$17,000	\$1,947	11%	31	9	29%	48,020	10,711	22%	1.5	0.5	33%
Total - Residential	\$155,000	\$130,602	84%	7,856	6,377	81%	737,178	1,138,905	154%	213.1	236.8	111%
Commercial												
Drive Power	\$69,000	\$15,175	22%	72	8	11%	1,604,366	165,500	10%	197.7	24.8	13%
Custom Efficiency Grants	\$42,000	\$128,652	306%	12	2	17%	604,106	2,965,301	491%	123.1	359.6	292%
Commercial Direct Install	\$26,000	\$7,739	30%	1,005	419	42%	243,985	86,778	36%	17.4	12.7	73%
Commercial Heat Pumps	\$45,000	\$124,663	277%	13	37	285%	223,355	696,550	312%	17.7	67.6	382%
Commercial Lighting	\$110,000	\$94,189	86%	69	56	81%	1,159,616	1,593,921	137%	158.8	263.8	166%
Total - Commercial	\$292,000	\$370,418	127%	1,171	522	45%	3,835,429	5,508,050	144%	514.8	728.5	142%
Total - Direct Impact	\$447,000	\$501,020	112%	9,027	6,899	76%	4,572,607	6,646,954	145%	727.8	965.2	133%
Indirect Impact												
Advertising & Education	\$35,000	\$31,872	91%	525	218	42%						
Total - Indirect Impact	\$35,000	\$31,872	91%	525	218	42%						
Total - Without Development Costs	\$482,000	\$532,892	111%	9,552	7,117	75%	4,572,607	6,646,954	145%	727.8	965.2	133%
Development												
EEP Development	\$15,000	\$14,788	99%									
Total - Development	\$15,000	\$14,788	99%									
Total - All Programs (Including Development)**	\$525,000	\$547,680	104%	9,552	7,117	75%	4,572,607	6,646,954	145%	727.8	965.2	133%
Prior Year Tracker Ending Balance		\$234,062										
Carrying Costs		\$12,894										
Accounting Adjustment		(\$131)										
Prior Year Approved Incentive		\$157,500										
Total Recoverable with Carrying Costs & Incentive		\$952,006										
Recovered through rates - 12/31/23		(\$908,011)										
Balance - EEP Tracker - 12/31/23		\$43,995										

* Reflects correction made to the Air Conditioning Control Program in EL20-022 Data Request SD-PUC-01.1

** Reflects the total 2023 Budget approved in Docket No. 20-022 in the October 14, 2021, Order.

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2023
Otter Tail Power Company
Net Benefits

APPENDIX A, TABLE 2
Page 1 of 2

	Approved Savings, Costs, and Benefits*				Actual Savings, Costs, and Benefits			
	Energy Savings (kWh)	Proposed Budget	Total Benefits	Utility Net Benefits	Energy Savings (kWh)	Actual Expenses	Total Benefits	Utility Net Benefits
Residential								
Air Conditioning Control	9,317	\$12,000	\$17,880	\$5,880	8,286	\$3,258	\$15,901	\$12,643
Appliance Recycling	97,307	\$28,000	\$35,581	\$7,581	N/A	N/A	N/A	N/A
Residential Heat Pumps	384,572	\$91,000	\$238,245	\$147,245	856,660	\$96,864	\$544,831	\$447,967
Home Lighting	295,269	\$35,000	\$172,270	\$137,270	263,248	\$28,533	\$158,546	\$130,013
Smart Thermostats	48,020	\$17,000	\$20,588	\$3,588	10,711	\$1,947	\$3,844	\$1,897
Total - Residential	834,485	\$183,000	\$484,564	\$301,564	1,138,905	\$130,602	\$723,122	\$592,520
Commercial								
Drive Power	1,604,366	\$69,000	\$896,496	\$827,496	165,500	\$15,175	\$97,480	\$82,305
Custom Efficiency Grants	604,106	\$42,000	\$449,323	\$407,323	2,965,301	\$128,652	\$1,650,395	\$1,521,743
Commercial Direct Install	243,985	\$26,000	\$49,299	\$23,299	86,778	\$7,739	\$19,319	\$11,581
Commercial Heat Pumps	223,355	\$45,000	\$141,513	\$96,513	696,550	\$124,663	\$484,343	\$359,680
Commercial Lighting	1,159,616	\$110,000	\$499,783	\$389,783	1,593,921	\$94,189	\$902,574	\$808,385
Total - Commercial	3,835,429	\$292,000	\$2,036,413	\$1,744,413	5,508,050	\$370,418	\$3,154,112	\$2,783,693
Total - Direct Impact	4,669,913	\$475,000	\$2,520,976	\$2,045,976	6,646,954	\$501,020	\$3,877,234	\$3,376,213
Indirect Impact								
Advertising & Education		\$35,000	\$0	(\$35,000)		\$31,872	\$0	(\$31,872)
EEP Development - 2022		\$15,000	\$0	(\$15,000)		\$14,788	\$0	(\$14,788)
Total - Indirect Impact		\$50,000	\$0	(\$50,000)		\$46,660	\$0	(\$46,660)
Total - All Programs (Including Development)	4,669,913	\$525,000	\$2,520,976	\$1,995,976	6,646,954	\$547,680	\$3,877,234	\$3,329,554

* Reflects correction made to the Air Conditioning Control Program in EL20-022 Data Request SD-PUC-01.1

Benefit/Cost Results
2023 SD EEP

Data discounted to 2023	AS FILED Utility Test*	ACTUAL 2023 Utility Test
NPV Method: Midyear		
Discount Rates:	7.09%	7.09%
Benefit/Cost Ratio	4.80	7.08
Total Costs	\$525,000	\$547,680
Total Benefits	\$2,520,976	\$3,877,234
Net Benefits	\$1,995,976	\$3,329,554
Total Benefits:		
Utility Elec. Production Cost Credit	\$1,852,802	\$2,902,192
Utility Ancillary	\$0	\$0
Utility Generation Capacity Credit	\$530,216	\$761,343
Utility Transmission & Distribution Credit	\$138,817	\$213,698
Total Benefits	\$2,521,835	\$3,877,234
Total Costs:		
Utility Rebates Paid	\$282,150	\$430,901
Utility Fixed Admin Cost	\$242,850	\$116,780
Total Costs	\$525,000	\$547,680

* Reflects correction made to the Air Conditioning Control Program in EL20-022 Data Request SD-PUC-01.1

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2023
Otter Tail Power Company
Benefit/Cost Ratios

APPENDIX A, TABLE 3

	Approved Budget 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
						Ratio	Ratio	Ratio	Ratio	Ratio
Residential										
Air Conditioning Control	1.49	1.69	1.38	1.69	inf.	4.88	4.88	3.87	4.88	inf.
Appliance Recycling	1.27	1.55	0.41	1.76	inf.	N/A	N/A	N/A	N/A	N/A
Residential Heat Pumps	2.62	1.21	0.49	1.67	3.91	5.62	1.67	0.56	2.30	3.85
Home Lighting	4.92	1.48	0.56	1.95	3.75	5.56	1.62	0.56	2.17	4.02
Smart Thermostats	1.21	1.11	0.40	1.32	7.71	1.97	1.47	0.40	1.75	5.91
Total - Residential	2.65	1.28	0.46	1.69	4.75	5.54	1.68	0.57	2.29	3.89
Commercial										
Drive Power	12.99	2.75	0.86	3.57	3.29	6.42	2.66	0.82	3.45	3.65
Custom Efficiency Grants	10.70	1.96	1.30	2.69	1.53	12.95	1.80	1.09	2.34	1.65
Commercial Direct Install	1.90	2.90	0.49	3.28	inf.	2.50	4.41	0.59	5.01	inf.
Commercial Heat Pumps	3.14	1.11	0.68	1.51	1.68	3.89	0.78	0.74	1.08	1.06
Commercial Lighting	4.54	4.01	0.75	5.05	6.32	9.58	8.05	0.83	10.38	11.63
Total - Commercial	6.97	2.47	0.86	3.22	3.05	8.52	1.87	0.93	2.44	2.05
Indirect Impact										
Advertising & Education EEP Development - 2023										
Total - Indirect Impact										
Total - All Programs	4.80	2.03	0.75	2.66	3.34	7.08	1.79	0.82	2.36	2.42

* Reflects correction made to the Air Conditioning Control Program in EL20-022 Data Request SD-PUC-01.1

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2023
Otter Tail Power Company
Lifetime Savings

APPENDIX A, TABLE 4

	Energy Savings			Demand Savings		
	Proposed Energy Lifetime Savings (kWh)*	Actual Energy Lifetime Savings (kWh)	% of Goal	Proposed Summer Coincident kW Savings*	Actual Summer Coincident kW Savings	% of Goal
Residential						
Air Conditioning Control	9,317	8,286	89%	155.1	138.2	89%
Residential Heat Pumps	7,024,036	15,602,517	222%	25.6	72.0	281%
Home Lighting	4,596,687	4,355,451	95%	30.8	26.0	84%
Smart Thermostats	480,198	107,112	22%	1.5	0.5	33%
Total - Residential	12,110,238	20,073,366	166%	213.1	236.8	111%
Commercial						
Drive Power	24,065,494	2,482,503	10%	197.7	24.8	13%
Custom Efficiency Grants	11,024,748	44,479,511	403%	123.1	359.6	292%
Commercial Direct Install	1,253,914	418,337	33%	17.4	12.7	73%
Commercial Heat Pumps	3,842,999	12,826,978	334%	17.7	67.6	382%
Commercial Lighting	12,487,113	22,251,302	178%	158.8	263.8	166%
Total - Commercial	52,674,267	82,458,630	157%	514.8	728.5	142%
Total - Direct Impact	64,784,505	102,531,996	158%	727.8	965.2	133%
Indirect Impact						
Advertising & Education						
Total - Indirect Impact						
Total - Without Development Costs	64,784,505	102,531,996	158%	727.8	965.2	133%
Development						
EEP Development						
Total - Development						
Total - All Programs (Including Development)	64,784,505	102,531,996	158%	727.8	965.23	133%

* Reflects correction made to the Air Conditioning Control Program in EL20-022 Data Request SD-PUC-01.1

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2023
Otter Tail Power Company
Incentive Calculation

APPENDIX A, TABLE 5

Calculated Incentive Based on Pre-Year Inputs

1 Original EEP Expense Budget	\$525,000
2 Original EEP Expense Budget multiplied by 30%	\$157,500

Calculated Incentive Based on Post-Year Inputs

3 Actual EEP Expenses	\$547,680
4 Actual EEP Expenses multiplied by 30%	\$164,304

5 Financial Incentive: lesser of lines 2 and 4.	\$157,500
--	------------------

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2023
Otter Tail Power Company
EEP Tracker Account / Cost Recovery

APPENDIX A, TABLE 6

EEP AUTOMATIC RECOVERY MECHANISM

		FILING DATE														
		May 1														
		2008/09														
		Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual
1	Estimated EEP Tracker Account Balance - end of prior year	\$27,487	(\$43,107)	(\$31,900)	\$45,767	\$134,194	\$110,115	\$111,762	\$77,456	(\$15,484)	\$24,284	(\$215)	\$70,604	\$204,311	\$413,363	\$234,062
2	Accounting Adjustments	\$0	(\$45)	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51	(\$131)
3	True up from Previous Year (sum of lines 1 and 2)	\$27,487	(\$43,152)	(\$31,855)	\$45,767	\$134,194	\$110,115	\$111,762	\$77,456	(\$15,484)	\$24,284	(\$215)	\$70,604	\$204,311	\$413,413	\$233,931
4																
5	EEP Program expenditures	\$252,677	\$243,816	\$272,093	\$309,911	\$281,549	\$351,483	\$371,902	\$362,330	\$463,357	\$493,353	\$715,984	\$760,590	\$927,005	\$525,883	\$547,680
6	Previous Year EEP Financial Incentives	\$0	\$47,130	\$73,145	\$78,900	\$84,000	\$84,000	\$105,445	\$105,900	\$105,900	\$134,700	\$134,700	\$209,700	\$209,700	\$278,101	\$157,500
7	EEP Carrying Charge	(\$726)	(\$6,503)	(\$4,286)	\$6,412	\$7,950	\$7,195	\$11,110	\$3,485	\$6,166	\$4,285	(\$2,275)	\$11,042	\$27,787	\$23,642	\$12,894
8	EEP Cost Recovery through EE Adjustment Factor	(\$322,545)	(\$273,190)	(\$263,330)	(\$306,796)	(\$397,578)	(\$441,030)	(\$522,763)	(\$564,655)	(\$535,655)	(\$656,837)	(\$777,590)	(\$847,625)	(\$955,440)	(\$1,006,977)	(\$908,011)
9	Recoverable Tracker Balance (Line 3 Plus Lines 5 thru 8)	(\$43,107)	(\$31,900)	\$45,767	\$134,194	\$110,115	\$111,762	\$77,456	(\$15,484)	\$24,284	(\$215)	\$70,604	\$204,311	\$413,363	\$234,062	\$43,994
10																
11	SD Sales (KWH budget)															
12	Conservation Surcharge (1)	\$0.00063	\$0.00063	\$0.00063	\$0.00088	\$0.00103	\$0.00103	\$0.00152	\$0.00114	\$0.00138	\$0.00155	\$0.00164	\$0.00195	\$0.00195	\$0.00195	\$0.00160
13	Estimated EEP Tracker Account Balances															

(1) Effective for 12-month period July 1 through June 30

		2024 Budget Financial Incentive
1	Estimated EEP Tracker Account Balance - end of prior year	\$43,995
2	Accounting Adjustments	\$0
3	True up from Previous Year (sum of lines 1 and 2)	\$43,995
4		
5	EEP Program expenditures	\$650,000
6	Previous Year EEP Financial Incentives	\$157,500
7	Projected EEP Carrying Charge	\$725
8	EEP Cost Recovery through EE Adjustment Factor	(\$717,648)
9	Recoverable Tracker Balance (Line 3 Plus Lines 5 thru 8)	\$134,572
10		
11	SD Sales (KWH budget)	487,932,373
12	Conservation Surcharge (1)	\$0.00134
13	Estimated EEP Tracker Account Balances	

(1) Effective for 12-month period July 1 through June 30

Otter Tail Power Company
EEP TRACKER AND CALCULATION OF PROPOSED EEP

APPENDIX A, TABLE 7

	January 2024	February 2024	March* 2024	April 2024	May 2024	June 2024	Total
1 Beginning of Period Balance	\$43,995	(\$3,694)	(\$35,325)	(\$59,802)	(\$40,910)	(\$69,151)	
2 Monthly Carrying Charge rate	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	
3 Monthly Carrying Charge	\$260	(\$22)	(\$209)	(\$353)	(\$242)	(\$409)	(\$974)
4 EEP Program Charges	\$30,857	\$42,730	\$32,608	\$85,419	\$30,927	\$12,924	\$235,465
5 EEP Incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7 Less: Energy Efficiency Adjustment (EEP Revenue)	(\$78,806)	(\$74,339)	(\$56,876)	(\$66,174)	(\$58,926)	(\$60,617)	(\$395,738)
8 End of Period Balance	(\$3,694)	(\$35,325)	(\$59,802)	(\$40,910)	(\$69,151)	(\$117,253)	

9 **CURRENT EEP FACTOR (\$/kWh)** **\$0.00160**

10 Projected sales (kWh) 41,972,802 37,696,864 38,831,996

1. EEP TRACKER PROPOSED \$/kWh Method

	July 2024	August 2024	September 2024	October 2024	November 2024	December 2024	January 2025	February 2025	March 2025	April 2025	May 2025	June 2025	Total
1 Beginning of Period Balance	(\$117,253)	\$18,740	\$39,429	\$28,033	\$149,484	\$169,170	\$134,572	\$94,660	\$68,534	\$37,266	\$63,952	\$41,362	
2 Monthly Carrying Charge Rate	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	
3 Monthly Carrying Charge	(\$693)	\$111	\$233	\$166	\$883	\$1,000	\$795	\$559	\$405	\$220	\$378	\$244	\$4,301
4 EEP Program Charges	\$31,386	\$75,142	\$41,548	\$169,752	\$74,226	\$22,481	\$30,857	\$42,730	\$32,608	\$85,419	\$30,927	\$12,924	\$650,000
5 EEP Incentive	\$157,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$157,500
7 Less: Energy Efficiency Adjustment (EEP Revenue)	(\$52,201)	(\$54,564)	(\$53,177)	(\$48,467)	(\$55,423)	(\$58,079)	(\$71,564)	(\$69,415)	(\$64,281)	(\$58,953)	(\$53,895)	(\$54,530)	(\$694,548)
8 End of Period Balance	\$18,740	\$39,429	\$28,033	\$149,484	\$169,170	\$134,572	\$94,660	\$68,534	\$37,266	\$63,952	\$41,362	\$0	
9 PROPOSED EEP FACTOR (\$ / kWh)	\$0.00134												
12 Projected sales (kWh)	39,015,131	40,780,851	39,744,383	36,224,218	41,422,835	43,408,122	53,487,000	51,880,862	48,043,409	44,061,751	40,281,215	40,755,626	

*Actual data was used through March 2024