

Appendix A

Tables

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2022
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	\$4,285	36%	725	655	90%	9,006	8,137	90%	150.2	135.7	90%
Appliance Recycling	\$28,000	\$6,515	23%	100	3	3%	97,307	2,994	3%	15.1	0.5	3%
Residential Heat Pumps	\$91,000	\$108,252	119%	20	58	290%	384,572	907,511	236%	25.6	67.9	265%
Home Lighting	\$35,000	\$26,187	75%	7,055	4,611	65%	295,269	182,761	62%	30.8	21.3	69%
Smart Thermostats	\$17,000	\$1,933	11%	31	14	45%	48,020	11,154	23%	1.5	0.5	33%
Total - Residential	\$183,000	\$147,171	80%	7,931	5,341	67%	834,174	1,112,556	133%	223.2	225.9	101%
Commercial												
Drive Power	\$69,000	\$68,899	100%	72	163	226%	1,604,366	1,270,597	79%	197.7	147.6	75%
Custom Efficiency Grants	\$42,000	\$1,601	4%	12	0	0%	604,106	0	0%	123.1	0.0	0%
Commercial Direct Install	\$26,000	\$630	2%	1,005	0	0%	243,985	0	0%	17.4	0.0	0%
Commercial Heat Pumps	\$45,000	\$117,389	261%	13	33	254%	223,355	646,183	289%	17.7	59.3	335%
Commercial Lighting	\$110,000	\$172,962	157%	69	80	116%	1,159,616	3,038,239	262%	158.8	353.7	223%
Total - Commercial	\$292,000	\$361,481	124%	1,171	276	24%	3,835,429	4,955,018	129%	514.8	560.5	109%
Total - Direct Impact	\$475,000	\$508,652	107%	9,102	5,617	62%	4,669,603	6,067,575	130%	738.0	786.4	107%
Indirect Impact												
Advertising & Education	\$35,000	\$12,359	35%	525	214	41%						
Total - Indirect Impact	\$35,000	\$12,359	35%	525	214	41%						
Total - Without Development Costs	\$510,000	\$521,010	102%	9,627	5,831	61%	4,669,603	6,067,575	130%	738.0	786.4	107%
Development												
EEP Development	\$15,000	\$4,873	32%									
Total - Development	\$15,000	\$4,873	32%									
Total - All Programs (Including Development)	\$525,000	\$525,883	100%	9,627	5,831	61%	4,669,603	6,067,575	130%	738.0	786.4	107%
Prior Year Tracker Ending Balance		\$413,363										
Carrying Costs		\$23,642										
Accounting Adjustment		\$51										
Prior Year Approved Incentive		\$278,101										
Total Recoverable with Carrying Costs & Incentive		\$1,241,039										
Recovered through rates - 12/31/22		(\$1,006,977)										
Balance - EEP Tracker - 12/31/22		\$234,062										

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

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2022
Otter Tail Power Company
Net Benefits

APPENDIX A, TABLE 2
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	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	9,006	\$12,000	\$17,179	\$5,179	8,137	\$4,285	\$15,520	\$11,235
Appliance Recycling	97,307	\$28,000	\$34,322	\$6,322	2,994	\$6,515	\$1,070	(\$5,445)
Residential Heat Pumps	384,572	\$91,000	\$229,535	\$138,535	907,511	\$108,252	\$538,053	\$429,801
Home Lighting	295,269	\$35,000	\$166,128	\$131,128	182,761	\$26,187	\$106,568	\$80,381
Smart Thermostats	48,020	\$17,000	\$19,704	\$2,704	11,154	\$1,933	\$3,868	\$1,935
Total - Residential	834,174	\$183,000	\$466,866	\$283,866	1,112,556	\$147,171	\$665,078	\$517,907
Commercial								
Drive Power	1,604,366	\$69,000	\$865,868	\$796,868	1,270,597	\$68,899	\$675,631	\$606,732
Custom Efficiency Grants	604,106	\$42,000	\$436,208	\$394,208	0	\$1,601	\$0	(\$1,601)
Commercial Direct Install	243,985	\$26,000	\$47,131	\$21,131	0	\$630	\$0	(\$630)
Commercial Heat Pumps	223,355	\$45,000	\$136,437	\$91,437	646,183	\$117,389	\$346,465	\$229,077
Commercial Lighting	1,159,616	\$110,000	\$483,297	\$373,297	3,038,239	\$172,962	\$1,608,739	\$1,435,777
Total - Commercial	3,835,429	\$292,000	\$1,968,940	\$1,676,940	4,955,018	\$361,481	\$2,630,836	\$2,269,355
Total - Direct Impact	4,669,603	\$475,000	\$2,435,807	\$1,960,807	6,067,575	\$508,652	\$3,295,914	\$2,787,262
Indirect Impact								
Advertising & Education		\$35,000	\$0	(\$35,000)		\$12,359	\$0	(\$12,359)
EEP Development - 2022		\$15,000	\$0	(\$15,000)		\$4,873	\$0	(\$4,873)
Total - Indirect Impact		\$50,000	\$0	(\$50,000)		\$17,231	\$0	(\$17,231)
Total - All Programs (Including Development)	4,669,603	\$525,000	\$2,435,807	\$1,910,807	6,067,575	\$525,883	\$3,295,914	\$2,770,031

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

Benefit/Cost Results
2022 SD EEP

Data discounted to 2022	AS FILED Utility Test*	ACTUAL 2022 Utility Test
NPV Method: Midyear		
Discount Rates:	7.09%	7.09%
Benefit/Cost Ratio	4.64	6.27
Total Costs	\$525,000	\$525,883
Total Benefits	\$2,435,807	\$3,295,914
Net Benefits	\$1,910,807	\$2,770,031
Total Benefits:		
Utility Elec. Production Cost Decr	\$1,772,236	\$2,542,351
Utility Ancillary	\$0	\$0
Utility Generation Cap. Credit	\$529,023	\$613,925
Utility Transmission & Distrib. Credit	\$134,547	\$139,637
Total Benefits	\$2,435,807	\$3,295,914
Total Costs:		
Utility Rebates Paid	\$282,150	\$465,098
Utility Fixed Admin Cost	\$242,850	\$60,785
Total Costs	\$525,000	\$525,883

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

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2022
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	1.43	1.62	1.33	1.62	inf.	3.62	3.62	3.04	3.62	inf.
Appliance Recycling	1.23	1.49	0.39	1.70	inf.	0.16	0.17	0.13	0.19	inf.
Residential Heat Pumps	2.52	1.17	0.43	1.61	4.46	4.97	1.64	0.47	2.26	4.61
Home Lighting	4.75	1.43	0.49	1.88	4.20	4.07	1.56	0.50	2.06	4.69
Smart Thermostats	1.16	1.06	0.37	1.26	8.18	2.00	1.24	0.38	1.48	4.62
Total - Residential	2.55	1.28	0.46	1.69	4.75	4.52	1.62	0.48	2.20	4.63
Commercial										
Drive Power	12.55	2.66	0.76	3.45	3.60	9.81	3.01	0.76	3.90	4.00
Custom Efficiency Grants	10.39	1.90	1.14	2.61	1.71	0.00	0.00	0.00	0.00	inf.
Commercial Direct Install	1.81	2.77	0.46	3.14	inf.	0.00	0.00	0.00	0.00	inf.
Commercial Heat Pumps	3.03	1.07	0.60	1.46	1.85	2.95	2.92	0.58	3.80	5.20
Commercial Lighting	4.39	3.88	0.68	4.89	6.78	9.30	12.69	0.74	16.49	17.80
Total - Commercial	6.74	2.39	0.77	3.12	3.32	7.28	5.57	0.72	7.23	7.97
Indirect Impact										
Advertising & Education										
EEP Development - 2022										
Total - Indirect Impact										
Total - All Programs	4.64	1.97	0.67	2.57	3.68	6.27	3.67	0.65	4.80	6.45

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

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2022

APPENDIX A, TABLE 4

**Otter Tail Power Company
Lifetime Savings**

	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	9,006	8,137	90%	150.2	135.7	90%
Appliance Recycling	768,420	23,950	3%	15.1	0.5	3%
Residential Heat Pumps	7,024,036	16,335,198	233%	25.6	67.9	265%
Home Lighting	4,596,687	2,875,271	63%	30.8	21.3	69%
Smart Thermostats	480,198	111,540	23%	1.5	0.5	33%
Total - Residential	12,878,347	19,354,096	150%	223.2	225.9	101%
Commercial						
Drive Power	24,065,494	19,058,954	79%	197.7	147.6	75%
Custom Efficiency Grants	11,024,748	7,416,052	67%	123.1	0.0	0%
Commercial Direct Install	1,253,914	0	0%	17.4	0.0	0%
Commercial Heat Pumps	3,842,999	9,692,743	252%	17.7	59.3	335%
Commercial Lighting	12,487,113	45,314,813	363%	158.8	353.7	223%
Total - Commercial	52,674,267	81,482,562	155%	514.8	560.5	109%
Total - Direct Impact	65,552,615	100,836,658	154%	738.0	786.4	107%
Indirect Impact						
Advertising & Education						
Total - Indirect Impact						
Total - Without Development Costs	65,552,615	100,836,658	154%	738.0	786.4	107%
Development						
EEP Development						
Total - Development						
Total - All Programs (Including Development)	65,552,615	100,836,658	154%	738.0	786.44	107%

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

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2022
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	\$525,883
4 Actual EEP Expenses multiplied by 30%	\$157,765
5 Financial Incentive: lesser of lines 2 and 4.	\$157,500

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2022
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	
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
2	Accounting Adjustments	\$0	(\$45)	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51
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
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
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
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
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)
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
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
13	Estimated EEP Tracker Account Balances														

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

	2023 Budget Financial Incentive	
1	Estimated EEP Tracker Account Balance - end of prior year	\$234,062
2	Accounting Adjustments	\$0
3	True up from Previous Year (sum of lines 1 and 2)	\$234,062
4		
5	EEP Program expenditures	\$525,000
6	Previous Year EEP Financial Incentives	\$157,500
7	Projected EEP Carrying Charge	\$10,071
8	EEP Cost Recovery through EE Adjustment Factor	(\$909,245)
9	Recoverable Tracker Balance (Line 3 Plus Lines 5 thru 8)	\$17,388
10		
11	SD Sales (KWH budget)	508,903,758
12	Conservation Surcharge (1)	\$0.00160
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 2023	February 2023	March* 2023	April 2023	May 2023	June 2023	Total
1 Beginning of Period Balance	\$234,062	\$240,939	\$293,329	\$226,657	\$169,878	\$109,084	
2 Monthly Carrying Charge rate	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	
3 Monthly Carrying Charge	\$1,383	\$1,424	\$1,733	\$1,339	\$1,004	\$645	\$7,527
4 EEP Program Charges	\$104,607	\$145,344	\$21,823	\$23,730	\$11,710	\$18,950	\$326,164
5 EEP Incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7 Less: Energy Efficiency Adjustment (EEP Revenue)	(\$99,113)	(\$94,377)	(\$90,229)	(\$81,847)	(\$73,509)	(\$75,722)	(\$514,797)
8 End of Period Balance	\$240,939	\$293,329	\$226,657	\$169,878	\$109,084	\$52,955	
9 CURRENT EEP FACTOR (\$/kWh)	\$0.00195						
10 Projected sales (kWh)				41,972,802	37,696,864	38,831,996	

1. EEP TRACKER PROPOSED \$/kWh Method

	July 2023	August 2023	September 2023	October 2023	November 2023	December 2023	January 2024	February 2024	March 2024	April 2024	May 2024	June 2024	Total
1 Beginning of Period Balance	\$52,955	\$151,229	\$111,189	\$77,005	\$42,799	(\$4,653)	\$17,388	\$65,717	\$166,792	\$121,305	\$83,602	\$37,688	
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	\$313	\$894	\$657	\$455	\$253	(\$27)	\$103	\$388	\$985	\$717	\$494	\$223	\$5,453
4 EEP Program Charges	\$5,070	\$24,322	\$31,175	\$24,647	\$21,000	\$92,623	\$129,514	\$179,949	\$27,019	\$29,380	\$14,499	\$23,461	\$602,658
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)	(\$64,609)	(\$65,254)	(\$66,017)	(\$59,308)	(\$68,704)	(\$70,555)	(\$81,287)	(\$79,263)	(\$73,492)	(\$67,799)	(\$60,907)	(\$62,681)	(\$819,876)
8 End of Period Balance	\$151,229	\$111,189	\$77,005	\$42,799	(\$4,653)	\$17,388	\$65,717	\$166,792	\$121,305	\$83,602	\$37,688	(\$1,309)	
9 PROPOSED EEP FACTOR (\$ / kWh)	\$0.00160												
12 Projected sales (kWh)	40,380,815	40,783,986	41,260,635	37,067,334	42,940,185	44,096,856	50,804,657	49,539,063	45,932,250	42,374,554	38,066,712	39,175,563	

*Actual data was used through March 2022