

Appendix A

Tables

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2021
Otter Tail Power Company
Status Report

	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	\$5,500	\$2,836	52%	700	628	90%	8,239	7,801	95%	145.1	130.1	90%
Appliance Recycling	\$7,000	\$6,874	98%	100	7	7%	19,461	7,702	40%	15.1	1.1	7%
Residential Heat Pumps	\$124,000	\$181,781	147%	20	67	335%	806,786	1,177,513	146%	25.6	68.2	266%
Home Lighting	\$32,000	\$37,187	116%	7,055	7,922	112%	332,958	350,351	105%	30.8	33.4	108%
Smart Thermostats	\$5,000	\$2,977	60%	31	17	55%	34,700	19,045	55%	1.5	0.4	27%
Total - Residential	\$173,500	\$231,655	134%	7,906	8,641	109%	1,202,144	1,562,413	130%	218.1	233.1	107%
Commercial												
Drive Power	\$292,000	\$292,724	100%	364	347	95%	7,497,598	7,488,898	100%	1,783.0	1,302.7	73%
Custom Efficiency Grants	\$61,500	\$59,284	96%	12	3	25%	535,822	518,670.53	97%	123.1	55.4	45%
Commercial Direct Install	\$17,000	\$8,544	50%	1,005	427	42%	243,984	108,059	44%	17.4	15.7	90%
Commercial Heat Pumps	\$170,000	\$95,983	56%	13	23	177%	982,177	434,753	44%	17.7	25.1	142%
Commercial Lighting	\$158,000	\$179,477	114%	69	88	128%	1,638,575	1,756,436	107%	158.8	278.3	175%
Total - Commercial	\$698,500	\$636,013	91%	1,463	888	61%	10,898,156	10,306,816	95%	2,100.0	1,677.2	80%
Total - Direct Impact	\$872,000	\$867,668	100%	9,369	9,529	102%	12,100,300	11,869,229	98%	2,318.1	1,910.3	82%
Indirect Impact												
Advertising & Education	\$38,000	\$40,233	106%	525	265	50%						
Total - Indirect Impact	\$38,000	\$40,233	106%	525	265	50%						
Total - Without Development Costs	\$910,000	\$907,900	100%	9,894	9,794	99%	12,100,300	11,869,229	98%	2,318.1	1,910.3	82%
Development												
EEP Development	\$20,000	\$19,104	96%									
Total - Development	\$20,000	\$19,104	96%									
Total - All Programs (Including Development)	\$930,000	\$927,005	100%	9,894	9,794	99%	12,100,300	11,869,229	98%	2,318.1	1,910.3	82%
Prior Year Tracker Ending Balance		\$204,311										
Carrying Costs		\$27,787										
Accounting Adjustment		\$0										
Prior Year Approved Incentive		\$209,700										
Total Recoverable with Carrying Costs & Incentive		\$1,368,802										
Recovered through rates - 12/31/21		(\$955,440)										
Balance - EEP Tracker - 12/31/21		\$413,363										

* Reflects modifications to the 2021-2023 Energy Efficiency Plan EL20-022 approved by the SD PUC on October 12, 2021

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

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2021
Otter Tail Power Company
Net Benefits

	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	8,239	\$5,500	\$15,605	\$10,105	7,801	\$2,836	\$14,775	\$11,939
Appliance Recycling	19,461	\$7,000	\$6,576	(\$424)	7,702	\$6,874	\$2,559	(\$4,315)
Residential Heat Pumps	806,786	\$124,000	\$461,262	\$337,262	1,177,513	\$181,781	\$650,461	\$468,679
Home Lighting	332,958	\$32,000	\$179,562	\$147,562	350,351	\$37,187	\$189,579	\$152,392
Smart Thermostats	34,700	\$5,000	\$13,535	\$8,535	19,045	\$2,977	\$5,789	\$2,813
Total - Residential	1,202,144	\$173,500	\$676,539	\$503,039	1,562,413	\$231,655	\$863,164	\$631,509
Commercial								
Drive Power	7,497,598	\$292,000	\$4,600,330	\$4,308,330	7,488,898	\$292,724	\$4,305,305	\$4,012,581
Custom Efficiency Grants	535,822	\$61,500	\$374,050	\$312,550	518,671	\$59,284	\$248,229	\$188,945
Commercial Direct Install	243,984	\$17,000	\$44,433	\$27,433	108,059	\$8,544	\$18,352	\$9,808
Commercial Heat Pumps	982,177	\$170,000	\$575,215	\$405,215	434,753	\$95,983	\$212,273	\$116,290
Commercial Lighting	1,638,575	\$158,000	\$655,846	\$497,846	1,756,436	\$179,477	\$953,865	\$774,388
Total - Commercial	10,898,156	\$698,500	\$6,249,874	\$5,551,374	10,306,816	\$636,013	\$5,738,025	\$5,102,012
Total - Direct Impact	12,100,300	\$872,000	\$6,926,413	\$6,054,413	11,869,229	\$867,668	\$6,601,188	\$5,733,521
Indirect Impact								
Advertising & Education		\$38,000	\$0	(\$38,000)		\$40,233	\$0	(\$40,233)
EEP Development - 2021		\$20,000	\$0	(\$20,000)		\$19,104	\$0	(\$19,104)
Total - Indirect Impact		\$58,000	\$0	(\$58,000)		\$59,337	\$0	(\$59,337)
Total - All Programs (Including Development)	12,100,300	\$930,000	\$6,926,413	\$5,996,413	11,869,229	\$927,005	\$6,601,188	\$5,674,184

* Reflects modifications to the 2021-2023 Energy Efficiency Plan EL20-022 approved by the SD PUC on October 12, 2021

** Reflects an estimate based on the modifications to the 2021-2023 Energy Efficiency Plan EL20-022 approved by the SD PUC on October 12, 2021

Benefit/Cost Results
2021 SD EEP

Data discounted to 2021	AS FILED Utility Test	ACTUAL 2021 Utility Test
NPV Method: Midyear		
Discount Rates:	7.09%	7.09%
Benefit/Cost Ratio	7.45	7.12
Total Costs	\$930,000	\$927,005
Total Benefits	\$6,926,413	\$6,601,188
Net Benefits	\$5,996,413	\$5,674,184
Total Benefits:*		
Utility Elec. Production Cost Decr	\$4,434,195	\$4,382,072
Utility Ancillary	\$0	\$0
Utility Generation Cap. Credit	\$2,029,945	\$2,330,485
Utility Transmission & Distrib. Credit	\$462,273	\$1,339,096
Total Benefits	\$6,926,413	\$8,051,652
Total Costs:		
Utility Rebates Paid	\$507,744	\$749,964
Utility Fixed Admin Cost	\$422,256	\$177,041
Total Costs	\$930,000	\$927,005

* The "AS FILED" numbers reflect an estimate based on the modifications to the 2021-2023 Energy Efficiency Plan EL20-022 approved by the SD PUC on October 12, 2021

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2021
Otter Tail Power Company
Benefit/Cost Ratios

	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
Residential										
Air Conditioning Control	1.37	1.55	1.28	1.55	inf.	5.21	5.21	4.09	5.21	inf.
Appliance Recycling	1.17	1.43	0.38	1.63	inf.	0.37	0.39	0.22	0.45	inf.
Residential Heat Pumps	2.42	1.12	0.42	1.55	4.38	3.58	1.52	0.43	2.11	4.79
Home Lighting	4.55	1.37	0.48	1.80	4.12	5.10	2.44	0.47	3.25	8.11
Smart Thermostats	1.10	1.01	0.36	1.20	8.04	1.94	1.45	0.34	1.73	6.55
Total - Residential	2.44	1.23	0.44	1.62	4.66	3.73	1.67	0.45	2.27	5.25
Commercial										
Drive Power	16.44	3.02	0.78	3.91	3.88	14.71	2.82	0.77	3.67	3.66
Custom Efficiency Grants	10.04	1.84	1.12	2.53	1.68	4.19	1.57	0.80	2.02	2.00
Commercial Direct Install	1.71	2.61	0.44	2.97	inf.	2.15	3.58	0.51	3.90	inf.
Commercial Heat Pumps	2.91	1.03	0.58	1.40	1.82	2.21	1.81	0.51	2.39	4.03
Commercial Lighting	4.22	3.72	0.66	4.70	6.66	5.31	5.82	0.68	7.54	10.27
Total - Commercial	11.63	2.82	0.78	3.66	3.72	9.02	2.91	0.74	3.78	4.03
Indirect Impact										
Advertising & Education										
EEP Development - 2021										
Total - Indirect Impact										
Total - All Programs	8.71	2.55	0.74	3.31	3.81	7.12	2.59	0.68	3.39	4.27

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

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2021

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	8,239	7,801	95%	145.1	130.1	90%
Appliance Recycling	155,691	61,617	40%	15.1	1.1	7%
Residential Heat Pumps	14,619,548	21,337,398	146%	25.6	68.2	266%
Home Lighting	5,370,409	5,650,956	105%	30.8	33.4	108%
Smart Thermostats	346,999	190,448	55%	1.5	0.4	27%
Total - Residential	20,500,886	27,248,219	133%	218.1	233.1	107%
Commercial						
Drive Power	112,463,964	112,333,475	100%	1,783.0	1,302.7	73%
Custom Efficiency Grants	7,661,284	7,416,052	97%	123.1	55.4	45%
Commercial Direct Install	959,139	424,794	44%	17.4	15.7	90%
Commercial Heat Pumps	15,066,616	6,669,115	44%	17.7	25.1	142%
Commercial Lighting	23,841,610	25,556,512	107%	158.8	278.3	175%
Total - Commercial	159,992,612	152,399,947	95%	2,100.0	1,677.2	80%
Total - Direct Impact	180,493,499	179,648,167	100%	2,318.1	1,910.3	82%
Indirect Impact						
Advertising & Education						
Total - Indirect Impact						
Total - Without Development Costs	180,493,499	179,648,167	100%	2,318.1	1,910.3	82%
Development						
EEP Development						
Total - Development						
Total - All Programs (Including Development)	180,493,499	179,648,167	100%	2,318.1	1,910.26	82%

* Reflects an estimate based on the modifications to the 2021-2023 Energy Efficiency Plan EL20-022 approved by the SD PUC on October 12, 2021

SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2021

Otter Tail Power Company

Incentive Calculation

Calculated Incentive Based on Pre-Year Inputs

1	Original EEP Expense Budget	\$930,000
2	Original EEP Expense Budget multiplied by 30%	\$279,000

Calculated Incentive Based on Post-Year Inputs

3	Actual EEP Expenses	\$927,005
4	Actual EEP Expenses multiplied by 30%	\$278,101

5	Financial Incentive: lesser of lines 2 and 4.	\$278,101
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SOUTH DAKOTA ENERGY EFFICIENCY PLAN - 2021
Otter Tail Power Company
EEP Tracker Account / Cost Recovery

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
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
2	Accounting Adjustments	\$0	(\$45)	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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
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
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
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
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)
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
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
13	Estimated EEP Tracker Account Balances													

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

	2022 Budget Financial Incentive	
1	Estimated EEP Tracker Account Balance - end of prior year	\$413,363
2	Accounting Adjustments	\$0
3	True up from Previous Year (sum of lines 1 and 2)	\$413,363
4		
5	EEP Program expenditures	\$525,000
6	Previous Year EEP Financial Incentives	\$278,101
7	Projected EEP Carrying Charge	\$26,864
8	EEP Cost Recovery through EE Adjustment Factor	(\$980,022)
9	Recoverable Tracker Balance (Line 3 Plus Lines 5 thru 8)	\$263,306
10		
11	SD Sales (KWH budget)	497,169,032
12	Conservation Surcharge (1)	\$0.00195
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 2022	February 2022	March* 2022	April 2022	May 2022	June 2022	Total
1 Beginning of Period Balance	\$413,363	\$410,662	\$392,859	\$385,511	\$331,361	\$315,285	
2 Monthly Carrying Charge rate	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	
3 Monthly Carrying Charge	\$2,442	\$2,426	\$2,321	\$2,278	\$1,958	\$1,863	\$13,288
4 EEP Program Charges	\$94,456	\$74,624	\$84,959	\$24,925	\$54,295	\$46,007	\$379,266
5 EEP Incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7 Less: Energy Efficiency Adjustment (EEP Revenue)	(\$99,599)	(\$94,853)	(\$94,628)	(\$81,353)	(\$72,328)	(\$71,630)	(\$514,391)
8 End of Period Balance	\$410,662	\$392,859	\$385,511	\$331,361	\$315,285	\$291,525	
9 CURRENT EEP FACTOR (\$/kWh)	\$0.00195						
10 Projected sales (kWh)				41,719,608	37,091,516	36,733,173	

1. EEP TRACKER PROPOSED \$/kWh Method

	July 2022	August 2022	September 2022	October 2022	November 2022	December 2022	January 2023	February 2023	March 2023	April 2023	May 2023	June 2023	Total
1 Beginning of Period Balance	\$291,525	\$513,117	\$456,607	\$400,574	\$348,466	\$287,520	\$263,306	\$260,856	\$241,419	\$240,558	\$185,094	\$167,811	
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	\$1,722	\$3,032	\$2,698	\$2,367	\$2,059	\$1,699	\$1,556	\$1,541	\$1,426	\$1,421	\$1,094	\$991	\$21,606
4 EEP Program Charges	\$17,201	\$18,339	\$17,205	\$16,571	\$16,661	\$59,758	\$94,456	\$74,624	\$84,959	\$24,925	\$54,295	\$46,007	\$525,000
5 EEP Incentive	\$278,101	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$278,101
7 Less: Energy Efficiency Adjustment (EEP Revenue)	(\$75,432)	(\$77,881)	(\$75,936)	(\$71,045)	(\$79,666)	(\$85,670)	(\$98,462)	(\$95,601)	(\$87,247)	(\$81,810)	(\$72,672)	(\$71,914)	(\$973,337)
8 End of Period Balance	\$513,117	\$456,607	\$400,574	\$348,466	\$287,520	\$263,306	\$260,856	\$241,419	\$240,558	\$185,094	\$167,811	\$142,895	
9 PROPOSED EEP FACTOR (\$ / kWh)	\$0.00195												
12 Projected sales (kWh)	38,683,319	39,938,989	38,941,595	36,433,516	40,854,115	43,933,482	50,493,343	49,026,323	44,741,965	41,953,872	37,267,671	36,879,230	

*Actual data was used through March 2022