

Otter Tail Power Company
South Dakota Energy Efficiency Program 2023 Status Report

Table of Contents

INTRODUCTION.....	1
DIRECT IMPACT – RESIDENTIAL.....	3
AIR CONDITIONING CONTROL.....	3
HOME LIGHTING.....	4
RESIDENTIAL HEAT PUMPS.....	5
SMART THERMOSTATS.....	9
DIRECT IMPACT – COMMERCIAL.....	10
COMMERCIAL DIRECT INSTALL.....	10
COMMERCIAL HEAT PUMPS.....	10
COMMERCIAL LIGHTING.....	12
CUSTOM ENERGY EFFICIENCY PROJECT.....	13
DRIVE POWER.....	14
INDIRECT IMPACT.....	15
ADVERTISING and EDUCATION.....	15
MISCELLANEOUS / INACTIVE PROJECT COSTS.....	17
EEP DEVELOPMENT.....	17
FINANCIAL INCENTIVE.....	17
REGULATORY REQUIREMENTS.....	17
ENERGY ADJUSTMENT RIDER / CARRYING COSTS.....	17

INTRODUCTION

The purpose of this Status Report is to present the results of direct impact, indirect impact, and miscellaneous programs completed from January 1, 2023, through December 31, 2023, through Otter Tail Power Company's (Otter Tail, the Company) South Dakota Energy Efficiency Partnership (EEP) program. Cost recovery and the financial incentive calculations for the program are also detailed in this report. Otter Tail has filed this annual filing with the South Dakota Public Utilities Commission (Commission, SDPUC) since its first EEP Status Report annual filing in 2010 which summarized partial-year 2008 and full-year 2009 conservation activities.

Direct Impact Programs

Residential

- Air Conditioning Control
- Home Lighting
- Residential Heat Pumps
- Smart Thermostats

Commercial

- Commercial Direct Install
- Commercial Heat Pumps
- Commercial Lighting
- Custom Energy Efficiency Project
- Drive Power

Indirect Impact Programs

- Advertising and Education

Miscellaneous and Inactive Programs

- EEP Development

Financial Incentive

Regulatory Requirements

Background

- On July 1, 2020, Otter Tail requested approval of its 2021-2023 EEP, Docket No. EL20-022.
- At the November 24, 2020, SDPUC meeting, the Commission voted unanimously to approve Otter Tail’s proposed EEP for 2021-2023.
- At the October 12, 2021, SDPUC meeting, the Commission voted unanimously to approve Company requested changes to its Residential and Commercial Heat Pump programs as well as allow the Company to lower rebate levels without approval while maintaining cost-effectiveness and staying within the Commission approved 110 percent spending cap for the 2022 and 2023 program years.

Overview

Overall results for the 2023 South Dakota EEP Program show the Company achieved 74 percent of projected participation goals, 145 percent of projected energy savings goals, and 133 percent of projected demand savings while maintaining spending at 104 percent of the budget.

Summary of Budget to Actuals – 2023			
	Budget	Actual	% of Goal
Expenses All Programs	\$525,000	\$547,680	104%
Participation	9,552	7,108	74%
Energy Savings - kWh	4,572,607	6,646,954	145%
Demand Savings - kW	727.8	965.2	133%

The Company’s 2023 EEP program achieved significant energy and demand savings, stayed within allowed budget parameters, and resulted in an overall cost-effective effort for program participants and South Dakota ratepayers. Otter Tail appreciates the Commission’s support for our program, and we applaud customers’ response. Energy efficiency is a long-term commitment that continues to evolve in South Dakota. Otter Tail is confident that working together with customers we can continue to create a sustainable energy future for South Dakota, of which energy efficiency will play a critical role.

Approved 2023 South Dakota EEP program goals, budgets, net benefits, benefit-cost ratios, and lifetime kWh savings are listed in Appendix A, Tables 1 through 4, along with actual results for 2023.

DIRECT IMPACT – RESIDENTIAL

AIR CONDITIONING CONTROL

The Air Conditioning Control Program targets residential customers with central air conditioning systems. Customers are encouraged to enroll in the program and receive a \$8.25/month credit for each of the four summer months (June-September). In 2023, Otter Tail controlled air conditioning 27 days totaling of 59 hours and 44 minutes. This control time is within the 300-hour control limit approved for the air conditioning rider.

Otter Tail promotes air conditioning control using various resources listed below:

- *Programs and Services Guide* sent to contractors.
- Bill inserts promoting EEP program opportunities for South Dakota customers.
- Customer care booklet that is sent to all new customers.
- Home page hero spots on the Company website.
- Training material covered with service representatives.
- Bill messages included on customer monthly service statements.
- Brochures available upon request.
- Program, rate, and rebate pages described within the Company’s website.

Participation and Budget

PARTICIPATION AND BUDGET – 2023				
Air Conditioning Control	Actual Annual Added	Actual Cumulative	Proposed Cumulative	% of Cumulative Goal
Participation	15	667	750	89%

Air Conditioning Control	Actual Spend	Proposed Spend	% of Goal
Budget	\$3,258	\$12,000	27%

Evaluation Methodology

Otter Tail continues to use savings based on a previous study performed where the company extracted interval customer data from its load research database to analyze customer’s 15-minute loads. Otter Tail used this interval data to compare energy consumption on non-control days to control days when the weather was similar between the periods.

Energy Savings and Adjustments

Air Conditioning Control	Actual Savings at the Generator	Budgeted Savings at the Generator	% of Goal
Energy Savings – kWh	8,286	9,317	89%
Demand Savings – kW Summer Coincident Peak	138.2	155.1	89%

HOME LIGHTING

The Home Lighting program promotes qualified ENERGY STAR LED lighting sold by participating retailers to customers of Otter Tail Power Company. The project also provides cash rebate incentives to residential customers for hard-wired retrofits of inefficient lighting technologies to LED lighting systems. Finally, the project offers incentives for installation of hard-wired LED lighting in new construction applications.

Otter Tail actively promotes the Home Lighting program through a variety of promotional resources including:

- *Programs and Services Guide* sent to contractors.
- Program, technology, and rebate information available on the Company’s website.
- Bill inserts promoting EEP program opportunities for South Dakota customers.
- Messages on customer billing statements.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Home Lighting	Actual	Proposed	% of Goal
Participation*	5,651	7,055	80%
Budget	\$28,533	\$35,000	82%

* Participation is based on the number of units installed.

Evaluation Methodology

Engineering calculations and the State of Minnesota’s Division of Energy Resources’ Technical Reference Manual (MN TRM) are used for impact savings for energy and demand from the Home Lighting program.

Energy Savings and Adjustments

Home Lighting	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	263,248	295,269	89%
Demand Savings – kW Summer Coincident Peak	26.0	30.8	84%

RESIDENTIAL HEAT PUMPS

The Residential Heat Pump program targets customers currently using or considering the installation of less efficient resistance electric heating and cooling systems by offering rebates for high-efficiency air source and geothermal heat pumps. The Company relies on Energy Star qualifications as a guide for the minimum equipment efficiency requirement for its air source and geothermal heat pumps.

In 2023, air source heat pumps minimum rating requirements included the addition of updated Seasonal Energy Efficiency Ratio (SEER2) and Heating Season Performance Factor (HSPF2) ratings. The 2023 program year was a transition year for the industry as it prepared for 2024 standards. Impacted air conditioning and air source heat pump equipment, currently utilizing SEER and HSPF ratings, would need to be certified to the new 2024 testing performance requirements. The Company utilized conversions from SEER/HSPF to SEER2/HSPF2 provided in the Minnesota Technical Reference Manual (TRM) to set equivalent minimum ratings. Any equipment submitted for rebates with new ratings standards was converted back to the original rating before energy saving calculations were performed.

Air Source Heat Pumps			
	SEER / (SEER2)	HSPF / (HSPF2)	COP*
CCHP – Ducted	> or = 15.0 (14.3)	> or = 9.0 (7.6)	-
CCHP – Ductless	> or = 15.0 (15)	> or = 10.0 (9.5)	-
Air to Water (AWHP)	-	-	1.7

*COP rating at A5W110 (At an outdoor ambient temperature of 5°F, the unit must deliver 110°F supply water.)

In 2023 geothermal heat pumps met the following minimum rating requirements.

Geothermal Heat Pumps			
Type	Loop Type	COP	EER
Water to air	Open loop	4.1	21.1
Water to air	Closed loop	3.6	17.1
Water to water	Open loop	3.5	20.1
Water to water	Closed loop	3.1	16.1
Direct exchange	-	3.6	16.0
GHP single unit \geq 6 tons	-	3.1	13.0

For larger units, the Company continued a specific minimum efficiency requirement for single units equal to or larger than six tons. This was done following contractor feedback and the limitation of Energy Star testing that does not account for these larger units. When compared to other heating/cooling options at these larger sizes, a geothermal heat pump remains the highest efficiency technology available to customers.

Otter Tail promotes energy efficient air source heat pumps through the following resources:

- *Programs and Services Guide* sent to contractors.
- Training material covered with service representatives.
- Bill messages included on customer monthly service statements.
- Bill inserts featuring heat pump efficiency and rebates.
- Program, technology, and rebate information available on the Company’s website.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Residential Heat Pumps	Actual	Proposed	% of Goal
Participation*	50	20	250%
Budget	\$96,864	\$91,000	106%

* Participation is based on the number of units installed.

Evaluation Methodology

Energy savings estimates utilize the MN TRM energy savings algorithms. The Company has modified the MN TRM assumptions to reflect the climate conditions in its South Dakota service area.

Energy Savings and Adjustments

Residential Heat Pumps	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	856,660	384,572	223%
Demand Savings – kW Summer Coincident Peak	72.0	25.6	281%

Heat Pumps and Peak Load

On November 7, 2023, during the South Dakota Public Utilities Commission Meeting, while discussing Docket No. EL23-019, Otter Tail’s 2024-2026 Energy Efficiency Partnership Triennial Plan, Commissioner Nelson led a discussion on the impact heat pumps have on peak demand during extremely cold days, when heat pumps need to be supplemented with an additional heat source.

Otter Tail would like to take this opportunity to continue the more in-depth dialogue on heat pumps by providing some information to address Commissioner Nelson’s concerns and provide some research the Company has conducted on winter peak loads and heat pumps since the November meeting. The additional information provided in this filing will touch on three general areas: emerging heat pump technologies, load management potential, and a summary of the interplay between Midcontinent Independent System Operator (MISO) and the heat pump load on Otter Tail’s system.

The issues raised concerning the supplemental energy needs for heat pumps during extreme cold are a valid and common concern with heat pumps. As detailed more thoroughly in Appendix E, heat pumps have a temperature point in which they start to lose some efficiencies, however through both manufacturer innovation and the actions by the Department of Energy, heat pump technology is rapidly becoming more and more efficient at lower temperatures. In the heat pump market of today, 100 percent of heating capacity can be achieved at the temperature of negative four degrees Fahrenheit. By the end of 2024, it is expected that this benchmark temperature will decrease to at least negative fifteen degrees Fahrenheit. These types of heat pump technology strides will allow for Otter Tail customers in the South Dakota service area to operate their heat pump to fully cover their heat load for approximately ninety-eight percent of their needs.

Utility Heat Pump Programs, like the Otter Tail program in South Dakota, help ensure that customers in areas with extreme weather are informed on new technologies and incentivized to purchase the right type of heat pump for their climate, best meet their needs, and benefit the utility system.

Otter Tail currently maintains a robust load management program across its three service territories. The load management portfolio is designed to include a widespread number of technologies in order to be able to reduce load for both summer and winter system peaks. While Otter Tail load management offerings do include heat pumps, when a backup heat source is available, other winter peak options remain at the Company’s disposal. These options include water heating, thermal storage, and underfloor heating. These are all load management options that are all available for winter peak load control without the need for a secondary heat source, allowing a cushion for potential increased electric demand from customers that might need to switch from their heat pump to a secondary electric heat source.

However, it would be unreasonable to look at the impacts heat pumps have on the Otter Tail system in a “winter peak vacuum”. Heat pumps, as a standard, are a more efficient technology than the baseline electric options available to customers, reducing energy and demand in both summer and winter months. Similarly, because of the unique nature of heat pumps, Otter Tail is able to call upon the technology as a load management resource during all four seasons.

As a member of MISO, Otter Tail is bound to the prices of the market year-round. On April 25, 2024, as a part of the MISO Capacity Auction, new seasonal clearing prices for June 2024 - May 2025 were released.¹

Planning Resource Auction Clearing Price	<u>Summer</u>	<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
June 2023 - May 2024 (\$/MW/Day)	\$10.00	\$15.00	\$2.00	\$10.00
June 2024 - May 2025 (\$/MW/Day)	\$30.00	\$15.00	\$0.75	\$34.10

The price changes highlight two factors for Otter Tail. The Company being a winter peaking utility in a summer peaking MISO market has its benefits and there is a strong need for a year-round efficient system with a robust load management portfolio that is designed and available for deployment in all four seasons.

¹ [Planning Resource Auction results highlight the need for continued market reforms \(misoenergy.org\)](https://www.misoenergy.org/Planning-Resource-Auction-Results)

Otter Tail continues to support its high performing Residential and Commercial heat pump programs, as the Company believes, the decrease in the winter peak impacts, overall efficiency, and load management potential will continue to grow.

SMART THERMOSTATS

The Smart Thermostat program promotes qualified Tier II and III smart thermostats. The rebate level is dependent on thermostat communication capabilities (tier level) and use of electricity for heating and/or cooling. The rebate amounts for customers with electric cooling but without electric heating range from \$35-\$50 based on tier level. The rebate amounts for customers with electric heating range from \$100-\$150 based on tier level.

Otter Tail actively promotes the Smart Thermostat program through a variety of promotional resources including:

- *Programs and Services Guide* sent to contractors.
- Program, technology, and rebate information available on the Company’s website.
- Bill inserts featuring smart thermostat rebates.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Smart Thermostats	Actual	Proposed	% of Goal
Participation*	9	31	29%
Budget	\$1,947	\$17,000	11%

* Participation is based on the number of units installed.

Evaluation Methodology

Engineering calculations and the MN TRM are used for impact savings for energy and demand for the Smart Thermostat program.

Energy Savings and Adjustments

Smart Thermostats	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	10,711	48,020	22%
Demand Savings – kW Summer Coincident Peak	0.5	1.5	33%

DIRECT IMPACT – COMMERCIAL

COMMERCIAL DIRECT INSTALL

Otter Tail’s Commercial Direct Install (CDI) project provides free installation of low-cost energy efficiency measures for participating small to mid-sized commercial customers. The program further capitalizes on personal interactions to ensure customers in this market segment have opportunities to engage in:

- Benefits of energy efficiency and conservation.
- Energy efficiency opportunities available in the customer’s business operations.
- Quick, easy, and affordable measures that have a direct, immediate impact on reducing energy bills.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Commercial Direct Install	Actual	Proposed	% of Goal
Participation*	419	1,005	42%
Budget	\$7,739	\$26,000	30%

* Participation is based on the number of units installed.

Evaluation Methodology

Energy savings estimates utilize the MN TRM algorithms for energy savings.

Energy Savings and Adjustments

Commercial Direct Install	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	86,778	243,985	36%
Demand Savings – kW Summer Coincident Peak	12.7	17.4	73%

COMMERCIAL HEAT PUMPS

The Air Source and Geothermal Heat Pump program targets commercial customers currently using or considering the installation of less efficient resistance electric heating and cooling systems by offering rebates for high-efficiency air source and geothermal heat pumps. During 2023, Otter Tail relied on Energy Star qualifications as the reference for minimum equipment efficiency requirements.

Air source heat pumps met the following rating requirements:

Air Source Heat Pumps			
	SEER (SEER2)	HSPF (HSPF2)	COP*
CCHP – Ducted	> or = 15.0 (14.3)	> or = 9.0 (7.6)	-
CCHP – Ductless	> or = 15.0 (15)	> or = 10.0 (9.5)	-
Air to water (AWHP)	-	-	1.7

*COP rating at A5W110 (At an outdoor ambient temperature of 5°F, the unit must deliver 110°F supply water.)

Geothermal heat pumps met the following rating requirements:

Geothermal Heat Pumps			
Type	Loop Type	COP	EER
Water to air	Open loop	4.1	21.1
Water to air	Closed loop	3.6	17.1
Water to water	Open loop	3.5	20.1
Water to water	Closed loop	3.1	16.1
Direct exchange		3.6	16.0
GHP single unit ≥ 6 tons		3.1	13.0

For larger units, the Company continued a specific minimum requirement for single units equal to or larger than six tons. This was done following contractor feedback and the limitation of Energy Star testing that does not account for these larger units. When compared to other heating/cooling options at these larger sizes, a geothermal heat pump remains the highest efficiency technology available to customers.

Otter Tail promotes energy efficient heat pumps using various resources including:

- *Programs and Services Guide* sent to contractors.
- Bill messages included on customer statements.
- Bill inserts about heat pump efficiency and rebates.
- Training material covered with service representatives.
- Program, technology, and rebate information available on the Company’s website.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Commercial Heat Pumps	Actual	Proposed	% of Goal
Participation*	37	13	285%
Budget	\$124,663	\$45,000	277%

* Participation is based on the number of units installed.

Evaluation Methodology

The Commercial Heat Pump Program utilizes the MN TRM algorithms for energy savings. The Company has modified the MN TRM assumptions to reflect the climate conditions for the Company's South Dakota service area.

Energy Savings and Adjustments

Commercial Heat Pumps	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	696,550	223,355	312%
Demand Savings – kW Summer Coincident Peak	67.6	17.7	382%

COMMERCIAL LIGHTING

The Commercial Lighting program provides incentives to commercial and industrial customers installing qualifying energy-efficient lighting technologies in new construction applications and for retrofitting to energy-efficient lighting technologies such as LED lamps and fixtures and lighting controls.

Otter Tail actively promotes the Lighting program through a variety of promotional resources including:

- *Programs and Services Guide* sent to contractors.
- Program, technology, and rebate information available on the Company's website.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Commercial Lighting	Actual	Proposed	% of Goal
Participation	56	69	81%
Budget	\$94,189	\$110,000	86%

Evaluation Methodology

Engineering calculations are used for impact savings for energy and demand from the Commercial Lighting Program. The Company documents all existing lighting wattage removed at each site and compares it to the actual energy efficient lighting wattage installed to calculate energy savings. Hours of operation are determined by the MN TRM according to customer building type. Company personnel conduct visual verification of retrofit projects as needed.

Energy Savings and Adjustments

Commercial Lighting	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	1,593,921	1,159,616	137%
Demand Savings – kW Summer Coincident Peak	263.8	158.8	166%

CUSTOM ENERGY EFFICIENCY PROJECT

The Custom Energy Efficiency Project pays incentives to commercial and industrial customers for energy saving installations such as process changes and new energy efficient equipment that the Company does not incentivize through prescriptive programs.

Otter Tail promotes the Custom Energy Efficiency Project through a variety of promotional resources including:

- *Programs and Services Guide* available to contractors.
- Program, technology, and rebate information available on the Company’s website.
- Direct contact between customers and Otter Tail program implementation and sales staff.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Custom Energy Efficiency Project	Actual	Proposed	% of Goal
Participation	2	12	17%
Budget	\$128,652	\$42,000	306%

The Custom Energy Efficiency Program only received applications from two customers in 2023. While this produced low participation numbers, it did allow Otter Tail to work with these two customers on projects that produced energy and demand savings that far exceeded original goals. In turn, these projects also resulted in rebates much higher than a typical program year. However, Otter Tail believes the 2023 projects and resulting savings were a good investment for the overall portfolio with net benefits over \$1.5 million.

Evaluation Methodology

Otter Tail assists our commercial and industrial customers, as needed, to help determine the energy and demand savings on a per measure basis needed to develop a grant proposal and often works with internal or third-party engineers to determine and verify savings. The Company will also consider and verify estimated energy savings when submitted by a qualified and independent third-party energy services provider.

Energy Savings and Adjustments

Custom Energy Efficiency Program	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	2,965,301	604,106	491%
Demand Savings – kW Summer Coincident Peak	359.6	123.1	292%

DRIVE POWER

The goal of the Drive Power program is to educate distributors and customers on the benefits of installing adjustable speed drives and new and replacement electric motors that meet or exceed the National Electrical Manufacturers Association (NEMA) Premium® efficiency requirements. The program provides incentives for customers to reduce peak demand and energy use by purchasing motors that meet or exceed NEMA Premium® efficiency.

Otter Tail promotes the Drive Power program through a variety of promotional resources including:

- *Programs and Services Guide* available to contractors.
- Program, technology, and rebate information available on the Company's website.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Drive Power	Actual	Proposed	% of Goal
Participation*	8	72	11%
Budget	\$15,175	\$69,000	22%

* Participation is based on the number of units installed.

Evaluation Methodology

The Company uses estimates from the MN TRM, the Company’s engineering estimates, and motor usage information from customers to determine the energy savings for each installed motor. The Company also used data from Bonneville Power's MotorMaster software project to develop standard motor efficiency numbers.

For adjustable speed drive projects, Otter Tail relied on methodologies developed by the Electric Power Research Institute (EPRI) for fan-based and pump-based adjustable speed drive systems. Hours of operation for associated loading factors are provided by the customer as inputs for the energy and demand savings calculations.

Energy Savings and Adjustments

Drive Power	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	165,500	1,604,366	10%
Demand Savings – kW Summer Coincident Peak	24.8	197.7	13%

INDIRECT IMPACT

ADVERTISING and EDUCATION

The Advertising and Education program for 2023 was planned to include:

- Educational outreach to South Dakota school children in third through sixth grades.
- Educational and energy savings information provided through the Home Energy Analyzer (HEA), an online home energy audit tool for customer access.
- Free energy assessments for small- to mid-sized businesses participating in Otter Tail’s direct impact Commercial Direct Install program.
- General advertisement of energy efficiency program opportunities through bill inserts, newsletters, and through resources posted on the company website www.otpco.com.

A planned component of the Advertising and Education program was *Energy Connections*, an educational outreach program to school age children that is focused on the science of energy, energy resources, conservation, and efficiency. The Minnesota Science Museum, which operates the program on behalf of Otter Tail, suspended their program offering due to pandemic restrictions and began offering services limited to its

Minnesota service area during 2023. Otter Tail is continuing to explore alternative cost-effective resources that may be offered in place of the Energy Connections outreach.

The Home Energy Analyzer is an online educational and energy savings resource available to South Dakota residential customers. The tool helps residential customers analyze their energy use and identify ways to reduce energy use and costs. Customers may complete a home profile, develop a personalized plan to reduce energy consumption, and compare their electric bills. The HEA was accessed by 155 South Dakota residential customers during 2023.

The Commercial Direct Install program provides installation of low-cost energy efficiency measures free for participating customers. At the time of the installation of these low-cost efficiency measures, customers also receive a free two-page report identifying the top three to five energy efficiency opportunities for their business. Each proposed energy efficiency measure includes estimated energy savings, expense savings, and project costs. While Otter Tail accounts for the direct install measures through the Direct Install program, the Advertising and Education program includes the participation of the energy efficiency assessments and reports.

The general advertisement component of the Advertising and Education program includes support for developing and producing bill inserts, contractor educational information, online materials that promote energy saving opportunities for customers, and market programs available through the EEP portfolio, including the HEA tool.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
Advertising and Education	Actual	Proposed	% of Goal
Participation	219	525	42%
Budget	\$31,872	\$35,000	91%

Advertising and Education Detailed Participation	
Science Museum School Tour	0
Home Energy Analyzer	155
CDI Assessments	63
Total	219

MISCELLANEOUS / INACTIVE PROJECT COSTS

EEP DEVELOPMENT

The EEP Development program includes EEP strategic market planning analysis, EEP-related planning work, and EEP-related regulatory coordination. It also includes program development time for research and studying new energy-efficient technologies.

Participation and Budget

PARTICIPATION AND BUDGET – 2023			
EEP Development	Actual	Proposed	% of Goal
Participation	N/A	N/A	N/A
Budget	\$14,788	\$15,000	99%

FINANCIAL INCENTIVE

On June 26, 2012, the Commission’s Order approved financial incentive investments in energy efficiency based on a “30% fixed percentage recovery on the lesser of actual expenses incurred or the company’s approved budget expenses for the planned program year.” The Commission’s approval was consistent with South Dakota Staff’s June 8, 2012, memorandum which recommended, “...this method is the appropriate and most reasonable methodology based on prior mechanisms and recovery options.”

As shown in Appendix A, Table 2, the Company spent \$547,680 in 2023. The approved budget for 2023 was \$525,000.² The maximum incentive that can be awarded is 30 percent of \$525,000, or \$157,500. Total net benefits provided to South Dakota customers by 2023 EEP projects was \$3,329,554. **The proposed incentive is 4.73 percent of net benefits provided by the program.** Otter Tail requests approval of a financial incentive of \$157,500 as calculated and shown in Appendix A, Table 5.

REGULATORY REQUIREMENTS

ENERGY ADJUSTMENT RIDER / CARRYING COSTS

The South Dakota EEP account was established on February 1, 2007, when the Company started active development of an energy efficiency plan for South Dakota. This filing includes information regarding the tracker balance as of December 31, 2023. In addition,

² Reflects the total 2023 Budget approved in Docket No. 20-022 in the October 14, 2021, Order.

carrying charges and any applicable incentives (discussed in the financial incentive section), as well as any offsets or adjustments have been included. The Company has calculated the monthly carrying charge equivalent to the Company’s approved rate of return (ROR).

The tracker also accounts for amounts collected from customers through the “ENERGY EFFICIENCY ADJUSTMENT FACTOR.” The energy efficiency adjustment factor is collected monthly based on a kWh charge on customers’ bills. For billing purposes, the charge is a separate line item on customers’ electric service bills. Otter Tail is not currently recovering any of these costs in base rates; therefore, the Company proposes the energy efficiency adjustment charge recovery mechanism continue as an appropriate means to recover costs associated with developing and implementing the South Dakota Energy Efficiency Partnership.

The current Energy Efficiency Adjustment Factor is \$0.00160/kWh. Otter Tail proposes to lower the EEP factor by approximately sixteen percent to \$0.00134/kWh. Appendix A, Table 7 presents the EEP tracker account balances for year-end 2024 and projections for 2025 through June 2025. When including the financial incentive amount of \$157,500, carrying charges, and the start of the \$0.00134/kWh EEP surcharge in July 2024, Otter Tail forecasts the tracker balance to be approximately zero at the end of June 2025.

The following table summarizes the expenses and revenues discussed above.

	January 2024 - June 2024	July 2024 - June 2025
Beginning Balance	\$43,995	(\$117,253)
Carrying Charges	(\$974)	\$4,301
EEP Program Expenses	\$235,465	\$650,000
EEP Incentive Proposed	\$0	\$157,500
EEP Rider Revenue	(\$395,738)	(\$694,548)
Ending Balance	(\$117,253)	\$0
EEP Factor	\$0.00160/kWh	\$0.00134/kWh

Otter Tail has included a redline and final version of our Section 13.04, EEP cost recovery rider rate schedule in this filing with a July 1, 2024, effective date (Appendix B: Energy Efficiency Adjustment Rider). The EEP cost recovery rider included in this filing reflects the proposed EEP factor of \$0.00134/kWh.

Pursuant to SDCL Chapter 49-34A-12 and ARSD 20:10:13:19, Otter Tail will provide notice of these proposed rates to all South Dakota customers in the form of a bill message. Appendix C, Attachment 1 to this filing includes the bill message as it will appear on customers' bills in the month of May 2024.

Upon Commission approval, Otter Tail will provide each customer, affected by this change, a customer notice to comparing the prior rates and the new rate impacts for residential customers, as required by ARSD 20:10:16:01 (2), shown in Appendix C, Attachment 4.

Otter Tail has also included a report on tariff schedule changes (Appendix C, Attachment 2). This report complies with ARSD 20:10:13:26, which requires the Utility to report all rate schedule changes and customer impacts. Appendix C, Attachment 3 is also provided to show the monthly billing impacts of the proposed EEP adjustment factor for each revenue class.