

Otter Tail Power Company
South Dakota Energy Efficiency Program 2019 Status Report

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INTRODUCTION

The purpose of this Status Report is to present the results of direct impact, indirect impact, and miscellaneous programs completed from January 1, 2019, through December 31, 2019, 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
- Air Source Heat Pumps
- Geothermal Heat Pumps
- Lighting

Commercial

- Air Source Heat Pumps
- Custom Efficiency
- Drive Power
- Geothermal Heat Pumps
- Lighting

Indirect Impact Programs

- Advertising & Education

Miscellaneous and Inactive Programs

- EEP Development

Financial Incentive

Regulatory Requirements

Background

- On April 29, 2016, Otter Tail requested approval of its 2017-2019 EEP, Docket No. EL16-020.
- At the November 17, 2016 SDPUC meeting, the Commission voted unanimously to approve Otter Tail's proposed EEP for 2017-2019.
- At the December 11, 2018 SDPUC meeting, the Commission voted unanimously to approve an increase of \$250,000 annually to the Company's EEP for years 2019 through 2021 and approve the rebate amount cap of \$250,000 per year in years 2019 through 2021 for the single large industrial customer.

Overview

Overall results for the 2019 South Dakota EEP Program show the Company achieved 114 percent of projected participation goals, 119 percent of projected energy savings goals, and 128 percent of projected demand savings while maintaining spending at 102 percent of the budget.

Summary of Budget to Actuals – 2019			
	Budget	Actual	% of Budget
Expenses All Programs	\$699,000	\$715,984	102%
Participation	2,308	1,806	114%
Energy Savings - kWh	11,135,570	13,217,098	119%
Demand Savings - kW	2,061.6	2,644.0	128%

The Company's 2019 EEP program achieved significant energy and demand savings, stayed within allowed budget parameters, and resulted in a 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 2019 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 2019.

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 2019, Otter Tail controlled air conditioning 13 days totaling of 32 hours and 26 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 sent in February and March.
- Customer care booklet that is sent to all new customers.
- Home page hero spots on the Company website during March and April.
- Service representative training.
- Bill messages in January, April, and May.
- Brochures available upon request.
- Program, rate, and rebate pages described within the Company’s web.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Air Conditioning Control	Actual	Proposed	% of Goal
Participation	643	661	97%
Budget \$	\$3,476	\$14,000	25%

Evaluation Methodology

Otter Tail 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 & Adjustments

Air Conditioning Control	Actual Savings at the Generator	Budgeted Savings at the Generator	% of Budget
Energy Savings – kWh	19,940	20,498	97%
Demand Savings – kW Summer Coincident Peak	475.5	488.8	97%

AIR SOURCE HEAT PUMPS

The Air Source Heat Pump program targets residential customers currently using or considering the installation of less efficient resistance electric heating and cooling systems by offering rebates for high-efficiency air source heat pumps.

For 2019, Otter Tail relied on Energy Star qualifications for the minimum equipment efficiency requirement for this program:

Energy Star – ASHP	HSPF	SEER	EER
Split System	> or = 8.5	> or = 15.0	12.5
Package Terminal			> or = 12

A special category of air source heat pump, the cold climate heat pump (CCHP), was included in our 2019 program. CCHPs are identified as rated with a heating seasonal performance factor (HSPF) of 10 or greater and labeled as Energy Star or have minimum ratings of 15 seasonal energy efficiency ratio (SEER) and 12.5 energy efficiency ratings (EER).

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

- Media advertising including television, radio, and digital media.
- *Programs and Services Guide* sent to contractors.
- Training material covered with service representatives.
- Bill messages included on customer monthly service statements during April, May, and August.
- Bill inserts featuring heat pump efficiency and rebates sent in April, June, and July.
- Program, technology, and rebate information available on the Company’s web.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Air Source Heat Pumps (R)	Actual	Proposed	% of Goal
Participation*	35	20	175%
Budget \$	\$31,804	\$20,000	159%

* Participation is based on the number of units installed.

Evaluation Methodology

Energy savings estimates utilize the State of Minnesota’s Division of Energy Resources’ Technical Reference Manual (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 & Adjustments

Air Source Heat Pumps (R)	Actual Savings at the Generator	Proposed Savings at the Generator	% of Budget
Energy Savings – kWh	481,523	298,204	161%
Demand Savings – kW Summer Coincident Peak	39.4	28.3	139%

GEOTHERMAL HEAT PUMPS

Geothermal heat pumps are most often used in the coldest climates where the winter season ground temperature is significantly warmer and less variable than outside air temperatures. Because of the consistent, steady ground temperatures, geothermal heat pumps can achieve efficiencies over 400 percent. The Geothermal Heat Pump program capitalizes on a renewable technology and targets customers currently using or considering the installation of less efficient resistance electric heating and cooling systems.

In 2019 geothermal heat pumps met the following minimum rating requirements:

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

Starting in 2019 geothermal efficiency requirements also include proof of the minimum EER along with coefficient of performance (COP).

Otter Tail promotes energy efficient geothermal heat pumps using the following promotional resources:

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

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Geothermal Heat Pumps (R)	Actual	Proposed	% of Goal
Participation*	3	9	33%
Budget \$	\$9,028	\$30,000	30%

* Participation is based on the number of units installed.

Evaluation Methodology

Energy savings estimates utilize 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 & Adjustments

Geothermal Heat Pumps (R)	Actual Savings at the Generator	Proposed Savings at the Generator	% of Budget
Energy Savings – kWh	103,046	321,779	32%
Demand Savings – kW Summer Coincident Peak	9.4	23.9	39%

LIGHTING

The U.S. Energy Information Administration reports that in 2019 U.S. electricity consumption for residential lighting was about 75 billion kWh, or about 35 percent of the total electricity use for lighting in the residential and commercial sectors combined. The Lighting program provides rebates to residential customers for retrofit installations of energy-efficient lighting technologies. Measures available for implementation by customers include retrofits from inefficient

incandescent and linear fluorescent lighting systems to more efficient technologies such as LED lighting.

Otter Tail’s approved Lighting program includes an LED bulb giveaway to students participating in the *Energy Connections* educational outreach component of the Advertising and Education program conducted by the Minnesota Science Museum in 2019. Each student was given an LED bulb as a take home action item. A total of 680 bulbs were given out with the expectation the students would install the bulbs in higher usage areas in their homes with the help of their parents.

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

- Media campaign that included television, radio, and digital media.
- *Programs and Services Guide* sent to contractors.
- Program, technology, and rebate information available on the Company’s web.
- Bill inserts promoting EEP program opportunities for South Dakota customers.
- Messages on customer billing statements.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Lighting (R)	Actual	Proposed	% of Goal
Participation*	830	900	92%
Budget \$	\$4,180	\$11,000	38%

* 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 from the Residential Lighting program.

The Company compares existing lighting wattage removed at each site to the energy efficient lighting wattage being installed to calculate energy savings.

Energy Savings & Adjustments

Lighting (R)	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	83,472	33,209	251%
Demand Savings – kW Summer Coincident Peak	5.6	3.9	146%

DIRECT IMPACT – COMMERCIAL

AIR SOURCE HEAT PUMPS

The Air Source Heat Pump program targets commercial customers currently using resistant electric heat or considering the installation of less efficient heating and cooling systems by offering rebates for high-efficiency air source heat pumps.

For 2019, Otter Tail relied on Energy Star qualifications for the minimum equipment efficiency requirement for this program:

Energy Star – ASHP	HSPF	SEER	EER
Split System	> or = 8.5	> or = 15	12.5
Package Terminal			> or = 12

A special category of air source heat pump, the CCHP, was included in our 2019 program. CCHPs are identified as rated with a HSPF of 10 or greater and labeled as Energy Star or have minimum ratings of 15 SEER and 12.5 EER.

Otter Tail promotes energy efficient heat pumps using various resources:

- Media campaign that included television, radio, and digital media.
- *Programs and Services Guide* sent to contractors.
- Bill messages included on customer statements during April, May, and August.
- Bill inserts about heat pump efficiency and rebates sent in April, June, and July.
- Training material covered with service representatives.
- Program, technology, and rebate information available on the Company’s web site.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Air Source Heat Pumps (C)	Actual	Proposed	% of Goal
Participation*	65	25	260%
Budget \$	\$34,473	\$18,000	192%

* Participation is based on the number of units installed.

Evaluation Methodology

Energy savings estimates utilize 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 & Adjustments

Air Source Heat Pumps (C)	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	123,974	291,112	43%
Demand Savings – kW Summer Coincident Peak	9.1	25.6	36%

CUSTOM EFFICIENCY

The Custom Efficiency program 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 efficiency program through a variety of promotional resources:

- *Programs and Services Guide* available to contractors.
- Program, technology, and rebate information available on the Company's web site.
- EEP bill inserts for South Dakota customers.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Custom Efficiency	Actual	Proposed	% of Goal
Participation	9	88	10%
Budget \$	\$21,716	\$168,000	13%

Otter Tail provided incentives for 9 Custom Efficiency projects in 2019:

Building Envelope Improvements	2
Lighting	6
Production Equipment	1
Total	9

The six lighting projects provided incentives in commercial new construction applications for which Otter Tail does not have a prescriptive program.

Evaluation Methodology

Otter Tail assists as needed our commercial and industrial customers 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 & Adjustments

Custom Efficiency Program	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	318,012	4,274,737	7%
Demand Savings – kW Summer Coincident Peak	233.1	598.5	39%

DRIVE POWER

The U.S. Department of Energy (DOE) reports that electric motors, taken together, make up the single largest end use of electricity in the United States. In the U.S manufacturing sector alone, electric motors used for pumps, conveyors, compressors, fans, mixers, grinders, and other processing equipment account for about 54 percent of electricity consumption. The U.S. Department of Energy estimates that on average, the manufacturing sector could reduce industrial electric motor usage 11 to 18 percent by using proven efficiency technologies and practices.

The goal of the Drive Power program is to educate dealers 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:

- *Programs and Services Guide* available to contractors.
- Program, technology, and rebate information available on the Company's web site.
- EEP bill inserts for South Dakota customers.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Drive Power	Actual	Proposed	% of Goal
Participation*	264	151	175%
Budget \$	\$263,263	\$201,000	180%

* 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 relies on methodologies developed by the Electric Power Research Institute (EPRI) for fan-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 & Adjustments

Drive Power	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	7,779,015	4,207,940	185%
Demand Savings – kW Summer Coincident Peak	1,308.9	589.6	222%

Additional Drive Power Project Discussion

At the end of 2019, an industrial customer had completed three projects qualifying for \$126,430.74 in rebates: \$25,631 in Lighting Retrofit program rebates and \$100,800 in Drive Power program rebates. Previously, Otter Tail has informed the SDPUC and Staff of an internal Otter Tail rule where a single customer cannot receive more than 20 percent of the total EEP budget in customer rebate payments. This rule is in place to ensure EEP rebate dollars are spread to as many qualifying customers as possible and not all funding is distributed to only several customers.

Otter Tail has a \$699,000 EEP budget for 2019, and 20 percent of the budget is \$139,800. However, \$250,000 of the \$699,000 budget is reserved for a very large project that was approved by the SDPUC on December 12, 2018, in EL16-020. After removing the \$250,000 Otter Tail's 2019 EEP budget is \$449,000 for all other customer rebates. Based on a \$449,000 budget the maximum rebates paid to a customer cannot exceed 20 percent or \$89,900 in accordance to Otter Tail's internal rule.

Near the end of 2019 Otter Tail did reach out to Staff but was unable to connect with Staff due to holiday schedules to receive guidance on how to proceed. On December 31, 2019 Otter Tail processed the final two rebates for the industrial customer bringing the total rebates for the customer to their qualifying amount of \$126,431. This payment to the customer did exceed Otter Tail's internal rule but did not limit any other customers from receiving EEP rebates. Otter Tail believes the following criteria were met:

1. avoid carrying rebates into the following year,
2. maintain the overall EEP budget, and
3. ensure all customers received rebates that applied.

Because these three criteria were met, the Company processed the full rebate for the customer in 2019. Otter Tail ensured all qualifying projects were paid in 2019 before processing rebates for the industrial customer.

GEOTHERMAL HEAT PUMPS

Geothermal heat pumps are most often used in the coldest climates where the ground temperature is significantly warmer and less variable than outside air temperatures. Because of the consistent, steady ground temperatures, geothermal heat pumps can achieve efficiencies of up to 400 percent. The Geothermal Heat Pump program capitalizes on a renewable technology and targets customers currently using or considering the installation of less efficient resistance electric heating and cooling systems.

In 2019 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

Starting in 2019 geothermal heat pump efficiency requirements also include proof of the minimum EER along with coefficient of performance (COP).

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

- *Programs and Services Guide* available 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 web site.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Geothermal Heat Pumps (C)	Actual	Proposed	% of Goal
Participation*	0	16	0%
Budget \$	\$0	\$73,000	0%

* Participation is based on the number of units installed.

Evaluation Methodology

Energy savings estimates utilize 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 & Adjustments

Geothermal Heat Pumps (C)	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	0	730,265	0%
Demand Savings – kW Summer Coincident Peak	0	93.0	0%

LIGHTING

The U.S. Energy Information Administration estimates that in 2019, about 216 billion kWh of electricity were used for lighting by the commercial and residential sectors in the U.S, representing about five percent of total U.S. electricity consumption. The commercial sector alone, including commercial and institutional buildings, and public street and highway lighting, consumed about 141 billion kWh for lighting, equal to about 10 percent of total commercial sector electricity consumption in 2019.

The Lighting program creates opportunities for customers in commercial and industrial sectors to significantly reduce electricity consumption by retrofitting to energy-efficient lighting technologies. Possible measures implemented by customers include retrofits from inefficient incandescent, high intensity discharge, and linear fluorescent lighting systems to the LED and high-efficiency fluorescent fixtures. The 2019 program continued offering customers a tremendous opportunity to accelerate change-out of their old, inefficient lighting systems.

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

- *Programs and Services Guide* sent to contractors.
- Program, technology, and rebate information available on the Company’s web site.
- EEP bill inserts for South Dakota customers.

Participation & Budget

PARTICIPATION AND BUDGET – 2019			
Lighting (C)	Actual	Proposed	% of Goal
Participation	98	38	258%
Budget \$	\$222,895	\$127,000	176%

Advancements in LED product technology continued to play a key role in participation that

exceeded expectations in Otter Tail’s 2019 Lighting program. Product efficiency, improved light quality, reduced maintenance costs, and utility incentives have all contributed in increasing program participation. Otter Tail reduced incentive levels for customers by 50 percent in 2018 in interest of controlling program expenses. The Company continues to monitor participation levels for possible impacts of reduced incentives.

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 being 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 & Adjustments

Lighting (C)	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	4,308,116	957,826	450%
Demand Savings – kW Summer Coincident Peak	563.0	210.0	268%

INDIRECT IMPACT

ADVERTISING & EDUCATION

The residential Advertising & Education program for 2019 includes:

- 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.
- General advertisement of energy efficiency program opportunities through bill inserts, newsletters, and through resources posted on the company website www.otpc.com.

The educational outreach program was operated by the Minnesota Science Museum on behalf of Otter Tail and provided an energy-focused lyceum, *Energy Connections*, during April 2019. The 50-minute assembly focused on the science of energy, energy resources, and energy conservation and efficiency.

Energy Connections helps schools meet their academic standards for science. It delivers and reinforces messages to make conserving energy a lifestyle and includes a component to educate students about energy production.

The program rotates yearly to one of three sections of the Otter Tail South Dakota service area. This ensures that each South Dakota school in the service area is offered the program every fourth year.

The Science Museum visited the following schools during 2019: Waubay Elementary, Waubay; St. Lawrence, Milbank; Westside, Sisseton; Rosholt Elementary, Rosholt; Laura Ingalls Wilder, De Smet; and Waverly/South Shore, Waverly. Because most assemblies target third through sixth grades, Otter Tail expects no student to participate more than once.

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, receive a personalized plan to reduce energy consumption, and compare their electric bills. The HEA provides insights into the possible reasons for variations among bills. The HEA was accessed by 61 South Dakota residential customers during 2019.

During 2019 an updated version of the Home Energy Analyzer was launched in conjunction with Otter Tail Power Company's customer information system database update. The new HEA platform is built with responsive design, making it compatible with smart phones and tablets. The new platform was launched in March 2019.

The general advertisement component of the Advertising and Education program includes support for developing and producing bill inserts and online materials that promote programs available through the EEP portfolio, including the Air Conditioning Control program and the HEA tool.

Participation & Budget

SD 2019 A&E Detailed Participation	
Science Museum School Tour	617
Home Energy Analyzer	61
Total	678

PARTICIPATION AND BUDGET – 2019			
Advertising and Education	Actual	Proposed	% of Goal
Participation	678	400	170%
Budget \$	\$13,667	\$12,000	114%

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 & Budget

PARTICIPATION AND BUDGET – 2019			
EEP Development	Actual	Proposed	% of Goal
Participation	N/A	N/A	N/A
Budget \$	\$12,482	\$25,000	50%

FINANCIAL INCENTIVE

On June 26, 2012, the Commission’s Order approved financial incentive investments in energy efficiency based on a percent of budgeted spending. The Commission’s approval was consistent with South Dakota Staff’s June 8, 2012, letter 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 \$715,984 in 2019. The approved budget for 2019 was \$699,000. The maximum incentive that can be awarded is 30 percent of \$699,000, or \$209,700. Total net benefits provided to South Dakota customers by 2019 EEP projects was \$8,105,042. **The proposed incentive is 2.59 percent of net benefits provided by the program.**

Otter Tail requests approval of a financial incentive of \$209,700 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, 2018. In addition, 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.

The tracker will also account for amounts collected from customers through the “ENERGY EFFICIENCY ADJUSTMENT FACTOR.” The energy efficiency adjustment factor was collected monthly based on a kWh charge on customers’ bills. For billing purposes, the charge was 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 continues 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 \$0.00164/kWh. Otter Tail proposes changing the EEP factor to \$0.00195. Appendix A, Table 7 presents the EEP tracker account balances for year-end 2019 and projections for 2020 through June 2021. When including the financial incentive amount of \$209,700 in the tracker, carrying charges, and approval to increase the EEP factor, Otter Tail forecasts the tracker balance to be approximately (\$1,196) on July 1, 2020. The proposed EEP surcharge will keep the tracker balance near zero, which keeps carrying charges for South Dakota customers as low as possible.

The following table summarizes the expenses and revenues discussed above.

	January 2020 - June 2020	July 2020 - June 2021
Beginning Balance	\$70,674	\$25,076
Carrying Charges	\$3,667	\$8,119
EEP Program Expenses	\$358,480	\$699,000
EEP Incentive Proposed	\$0	\$207,900
EEP Rider Revenue	(\$407,745)	(\$941,290)
Ending Balance	\$25,076	(\$1,196)
EEP Factor	\$0.00164/kWh	\$0.00195/kWh

Otter Tail has included a redline and final version of the EEP cost recovery rider rate schedule in this filing with a July 1, 2019 effective date (Appendix B: Energy Efficiency Adjustment Rider). The EEP cost recovery rider included in this filing reflects the proposed EEP factor of \$0.00195/kWh.

Pursuant to ARSD 20:10:13:18, Otter Tail will post a Notice of Proposed Changes (Appendix C, Attachment 1). This Notice will be placed in a conspicuous place outside Otter Tail’s Milbank customer service center for at least 30 days before the change becomes effective.

Pursuant to Codified Law 49-34A-12, Otter Tail will include, upon approval, the following bill message at least 30 days before the change in EEP factor becomes effective.

On [Date of Approval], the South Dakota Public Utilities Commission approved an updated adjustment factor for the Energy Efficiency Partnership (EEP) Cost Recovery Rider. The factor increased approximately 9% from \$0.00155/kWh to \$0.00169/kWh and is effective with bills rendered on and after July 1, 2019. The panel below shows the residential customer impact at different kWh levels.

Monthly residential customer impacts

250 kWh, \$0.41 to \$0.49, increase \$0.08
500 kWh, \$0.82 to \$0.98, increase \$0.16
750 kWh, \$1.23 to \$1.46, increase \$0.23
1,000 kWh, \$1.64 to \$1.95, increase \$0.31
1,500 kWh, \$2.46 to \$2.93, increase \$0.47
2,000 kWh, \$3.28 to \$3.90, increase \$0.62

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.