Otter Tail Power Company
South Dakota Energy Efficiency Program 2017 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, 2017, through December 31, 2017, 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. This filing is the ninth Status Report provided to the South Dakota Public Utilities Commission (Commission, SDPUC) and summarizes the results of the ninth full year of EEP activity since the Program's inception.

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.

Overview

Overall results for the 2017 South Dakota EEP Program show the Company achieved 131 percent of projected participation goals, 130 percent of projected energy savings goals, and 124 percent of projected demand savings while maintaining spending at 103 percent of the budget.

Summary of Budget to Actuals – 2017			
	Budget	**Actual**	**% of Budget**
Expenses All Programs	$449,000	$463,357	103%
Participation	2,050	2,678	131%
Energy Savings - kWh	3,794,791	4,941,830	130%
Demand Savings - kW	1,000.5	1,239.9	124%

The Company's 2017 EEP 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 we can continue to create a sustainable energy future for South Dakota, of which energy efficiency will play a critical role.

Approved 2017 South Dakota EEP goals and budgets are listed in Appendix A, Tables 1 through 3, along with actual results for 2017.

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 $7/month credit for each of the four summer months (June-September).

In 2017, Otter Tail controlled air conditioning 13 days totaling of 18 hours and 51 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, April, and December of 2017.
- Customer care booklet that is sent to all new customers.
- Home page hero spots in April and May on www.otpco.com.
- Presentations and literature distribution at workshops.
- Annual and monthly service rep training.
- Brochures available upon request.
- Return envelope spot in March and April.
- Program, rate, and rebate pages described within the Company's web site at www.otpco.com.

This Program has been approved for continuation in the 2018 EEP.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Air Conditioning Control	**Actual**	**Proposed**	**% of Goal**
Participation	635	591	107%
Budget $	$9,326	$14,000	67%

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	19,537	18,328	107%
Demand Savings – kW Summer Coincident Peak	465.9	437.0	107%

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 2017, 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

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

- *Programs and Services Guide* sent to contractors.
- Brochures available upon request.
- Presentations and literature distribution at Electrical Workshops for contractors.
- Training material covered with service representatives in annual and monthly training.
- Bill messages included on customer monthly service statements.
- Bill inserts featuring heat pump efficiency and rebates.
- Return envelope promotions periodically throughout the year.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.

This program has been approved for continuation in the 2018 EEP. Equipment efficiency levels will follow Energy Star standards.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Air Source Heat Pumps (R)	**Actual**	**Proposed**	**% of Goal**
Participation	25	20	125%
Budget $	$20,086	$20,000	100%

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 territory.

Energy Savings & Adjustments

Air Source Heat Pumps (R)	**Actual Savings at the Generator**	**Proposed Savings at the Generator**	**% of Budget**
Energy Savings – kWh	310,718	298,204	104%
Demand Savings – kW Summer Coincident Peak	26.1	28.3	92%

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.

A minimum coefficient of performance (COP) efficiency level qualification is required for this program. During 2017 units were required to meet Energy Star qualifications listed in the chart below.

Type	**COP**	
	Open	**Closed**
Water to air	4.1	3.6
Water to water	3.5	3.1
Direct exchange	3.6	

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

- *Programs and Services Guide* sent to contractors.
- Presentations and literature distribution at Electrical Workshops for contractors.
- Training material covered with service representatives in annual and monthly training.
- Bill messages included on customer monthly service statements.
- Promotional bill inserts about heat pump efficiency and rebates.
- Return envelope promotions during May and June.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.

This program has been approved for continuation in the 2018 EEP. Required COP levels are the same for 2018.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Geothermal Heat Pumps (R)	**Actual**	**Proposed**	**% of Goal**
Participation	6	9	67%
Budget $	$12,408	$30,000	41%

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 territory.

Energy Savings & Adjustments

Geothermal Heat Pumps (R)	**Actual Savings at the Generator**	**Proposed Savings at the Generator**	**% of Budget**
Energy Savings – kWh	153,739	321,779	48%
Demand Savings – kW Summer Coincident Peak	11.4	23.9	48%

LIGHTING

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.

In addition to the rebate program, Otter Tail received SDPUC approval to include 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 2017. Each of the 274 students was given four bulbs as a take home action item. A total of 1,096 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. The Science Museum program rotates yearly to one of three sections of the Otter Tail service territory meaning each South Dakota school is offered the program every fourth year. The Science Museum visited the following schools: Wilmot Elementary, Waverly South Shore, Deuel Elementary, Laura Ingalls Wilder Elementary, Castlewood Elementary. Because most assemblies target third through fifth grades, Otter Tail expects no student to receive the bulbs more than once.

Following the school visit, the Science Museum gathered teacher/administrator feedback via e-mails and an online survey. They received ten responses from five schools. 100 percent of recipients were Satisfied or Very Satisfied in the following areas:

- Alignment with academic standards
- Level of student engagement
- Use of unique and high-quality materials and props
- Quality of instructors

Feedback on the Science Museum instructor included:

> *"She was awesome! The kids were very engaged the whole time."*
> *– Teacher, Castlewood Elementary*

> *"I loved the control she had of the students, her enthusiasm, and how she called on many students not just the same ones, she got many students involved, and she continually told the students her expectations for them. Great program. "*
> *– Teacher, Castlewood Elementary*

> *"She did a wonderful job explaining things in a way that the kids could understand.*
> *– Teacher, Laura Ingalls Wilder Elementary*

> *"I felt that Jessica did an excellent job of keeping the students engaged and on task. She asked a lot of open-ended questions and provided great information that the students could relate to. I was very impressed with the assembly and the students loved it as well! Thanks!"*
> *– Teacher, Laura Ingalls Wilder Elementary*

"She kept all the students engaged and thinking for the entire time. I've never seen kids get so excited about light bulbs before!"
– Teacher, Deuel Elementary

Other program feedback included:

"I feel so fortunate to have had the opportunity to have the Science Museum of Minnesota out to present to our 3rd and 4th grade students about electricity and how it is created. The presentation was very engaging and the discussion about the ways in which the electricity is created and sent to our homes was so powerful. One of my favorite parts of the presentation was the understanding about the different resources and their positive and negative side effects."
– Principal, Castlewood Elementary

"The hands-on activity for the coal, wind energy, and nuclear sources are just what kids this age need to see."
– 5th Grade Teacher, Wilmot Elementary

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

- Presentations and literature distribution at Electrical Workshops for contractors.
- *Programs and Services Guide* sent to contractors.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.
- Bill inserts promoting EEP program opportunities for South Dakota customers.

This program has been approved for continuation in the Company's 2018 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Lighting (R)	**Actual**	**Proposed**	**% of Goal**
Participation	1,477	900	164%
Budget $	$14,652	$11,000	133%

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	130,948	33,209	394%
Demand Savings – kW Summer Coincident Peak	7.2	3.9	187%

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 2017, Otter Tail used the same qualifications as the prior year 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

Otter Tail promotes energy efficient heat pumps using various resources:

- Presentations and literature distribution at Electrical Workshops for contractors.
- *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 in annual and monthly training.
- Return envelope promotions periodically throughout the year.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.

This program has been approved for continuation in the 2018 EEP. Equipment efficiency specification levels will follow Energy Star guidelines in 2018.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Air Source Heat Pumps (C)	**Actual**	**Proposed**	**% of Goal**
Participation	6	25	24%
Budget $	$4,163	$18,000	23%

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 territory.

Energy Savings & Adjustments

Air Source Heat Pumps (C)	**Actual Savings at the Generator**	**Proposed Savings at the Generator**	**% of Goal**
Energy Savings – kWh	57,504	291,112	20%
Demand Savings – kW Summer Coincident Peak	3.8	25.6	15%

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:

- Presentations and literature distribution at Builder and Electrical Workshops for contractors.
- *Programs and Services Guide* available to contractors.
- *Make It Electric* newsletter for commercial and industrial customers.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.
- EEP bill inserts for South Dakota customers.

This program has been approved for continuation in the Company's 2018 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Custom Efficiency	**Actual**	**Proposed**	**% of Goal**
Participation	4	7	57%
Budget $	$60,171	$40,000	150%

Otter Tail provided incentives for four Custom Efficiency projects in 2017: commercial refrigeration equipment in a retail grocery store; new lighting project at a pork facility; conversion to a more energy efficient smoker at a meat locker; and replacement of battery chargers at a hardware distributing company. Otter Tail looks forward to working with customers interested in other custom efficiency projects such as building envelope upgrades and process improvements in the future.

Evaluation Methodology

The information required to calculate savings estimates for projects in the Custom Efficiency program come from the customer, third party engineers, and/or contractors. In cases where the customer provides savings estimates, the Company verifies the feasibility of the proposed savings, and, if necessary, makes modifications to the analysis. In most cases, Otter Tail assists its commercial and industrial customers to determine energy and demand savings required to develop a Custom Efficiency program proposal.

Energy Savings & Adjustments

Custom Efficiency Program	**Actual Savings at the Generator**	**Proposed Savings at the Generator**	**% of Goal**
Energy Savings – kWh	1,277,412	130,729	977%
Demand Savings – kW Summer Coincident Peak	233.1	45.3	515%

DRIVE POWER

About half of all electricity consumed in the U.S. flows through electric motors, 90 percent of which are alternating current motors. 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. In a single year, a fully-loaded motor operating

continuously can consume energy worth about 10 times its initial cost, making seemingly small improvements in overall drive power system efficiency pay back quickly.

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:

- Presentations and literature distribution at Builder and Electrical Workshops for contractors.
- *Programs and Services Guide* available to contractors.
- *Make It Electric* newsletter for commercial and industrial customers.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.
- EEP bill inserts for South Dakota customers.

This program has been approved for continuation in the Company's 2018 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Drive Power	**Actual**	**Proposed**	**% of Goal**
Participation	49	44	111%
Budget $	$78,878	$79,000	100%

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	622,586	1,013,339	61%
Demand Savings – kW Summer Coincident Peak	89.1	133.5	67%

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.

For 2017, Otter Tail relied on Energy Star qualifications as the minimum equipment COP efficiency requirement for this program:

Type	COP	
	Open	Closed
Water to air	4.1	3.6
Water to water	3.5	3.1
Direct exchange	3.6	

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

- Presentations and literature distribution at Builder and Electrical Workshops for contractors.
- *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 in annual and monthly training.
- Return envelope promotions periodically throughout the year.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.

This program has been approved for continuation in the 2018 EEP. Equipment efficiency levels will follow Energy Star guidelines in 2018.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Geothermal Heat Pumps (C)	**Actual**	**Proposed**	**% of Goal**
Participation	5	16	31%
Budget $	$21,882	$73,000	30%

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 Territory.

Energy Savings & Adjustments

Geothermal Heat Pumps (C)	**Actual Savings at the Generator**	**Proposed Savings at the Generator**	**% of Goal**
Energy Savings – kWh	249,507	730,265	34%
Demand Savings – kW Summer Coincident Peak	31.8	93.0	34%

LIGHTING

The U.S. Energy Information Administration estimates that in 2017, about 273 billion kWh of electricity were used for lighting by the commercial and residential sectors in the U.S, representing about 7 percent of total U.S. electricity consumption. The commercial sector alone, including commercial and institutional buildings, and public street and highway lighting, consumed about 143 billion kWh for lighting, equal to about 11 percent of total commercial sector electricity consumption in 2017.

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 2017 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:

- Presentations and literature distribution at Builder and Electrical Workshops for

contractors.

- *Programs and Services Guide* sent to contractors.
- *Make It Electric* newsletter for commercial and industrial customers.
- Program, technology, and rebate information available on the Company's web site at www.otpco.com.
- EEP bill inserts for South Dakota customers.

This program has been approved for continuation in the Company's 2018 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2017			
Lighting (C)	**Actual**	**Proposed**	**% of Goal**
Participation	93	38	245%
Budget $	$217,741	$127,000	171%

Advancements in LED product technology continued to play a key role in participation that exceeded expectations in Otter Tail's 2017 Lighting program. Product efficiency, improved light quality, reduced maintenance costs, and utility incentives have all contributed in increasing program participation.

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	2,119,879	957,826	221%
Demand Savings – kW Summer Coincident Peak	371.5	210.0	177%

INDIRECT IMPACT

ADVERTISING & EDUCATION

The residential Advertising & Education program for 2017 includes:

- Educational outreach to South Dakota school children in third through fifth 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.otpco.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 2017. 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 Home Energy Analyzer is an online 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 104 South Dakota residential customers during 2017.

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

This program has been approved for continuation in 2018.

Participation & Budget

SD 2017 A&E Detailed Participation	
Science Museum School Tour	274
Home Energy Analyzer	104
Total	378

PARTICIPATION AND BUDGET – 2017			
Advertising and Education	**Actual**	**Proposed**	**% of Goal**
Participation	378	400	95%
Budget $	$11,937	$12,000	99%

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 – 2017			
EEP Development	**Actual**	**Proposed**	**% of Goal**
Participation	N/A	N/A	N/A
Budget $	$12,114	$25,000	48%

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 $463,357 in 2017. The approved budget for 2017 was $449,000. The maximum incentive that can be awarded is 30 percent of $449,000, or $134,700. Total net benefits provided to South Dakota customers by 2017 EEP projects was $2,447,623. **The proposed incentive is 5.50 percent of net benefits provided by the program.**

Otter Tail requests approval of a financial incentive of $134,700 as calculated and shown in Appendix A, Table 4.

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, 2017. 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 $0.00138/kWh. Otter Tail proposes changing the EEP factor to $0.00155. Appendix A, Table 6 presents the EEP tracker account balances for year-end 2017 and projections for 2018 through June 2019. When including the financial incentive amount of $134,700 in the tracker, carrying charges, and approval to increase the EEP factor, Otter Tail forecasts the tracker balance to be approximately $0 on July 1, 2019. 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 2018 - June 2018	July 2018 - June 2019
Beginning Balance	**$24,284**	**$55,977**
Carrying Charges	$1,806	$4,239
EEP Program Expenses	$340,552	$449,000
EEP Incentive Proposed	$0	$134,700
EEP Rider Revenue	($310,665)	($643,916)
Ending Balance	**$55,977**	**$0**
EEP Factor	**$0.00138/kWh**	**$0.00155/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, 2018 effective date (Appendix B: Energy Efficiency Adjustment Rider). The EEP cost recovery rider included in this filing reflects the proposed EEP factor of $0.00155/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 12% from $0.00138/kWh to $0.00155/kWh and is effective with bills rendered on and after July 1, 2018. The panel below shows the residential customer impact at different kWh levels.*
>
> ***Monthly residential customer impacts***
> *250 kWh, $0.35 to $0.39, increase $0.04*
> *500 kWh, $0.69 to $0.78, increase $0.09*
> *750 kWh, $1.04 to $1.16, increase $0.13*
> *1,000 kWh, $1.38 to $1.55, increase $0.17*
> *1,500 kWh, $2.07 to $2.33, increase $0.26*
> *2,000 kWh, $2.76 to $3.10, increase $0.34*

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.