

**STATE OF SOUTH DAKOTA
BEFORE THE
SOUTH DAKOTA PUBLIC UTILITIES COMMISSION**

In the Matter of Otter Tail Power Company's
2016 South Dakota Energy Efficiency Plan Status
Report and 2017 Annual Filing to Update the
Energy Efficiency Adjustment Rider

Docket No. EL17-

SUMMARY OF FILING

Status Report

Overall results for the 2016 South Dakota Energy Efficiency Plan (EEP) Program show Otter Tail Power Company (Otter Tail, the Company) achieved 103 percent of budget, 311 percent of participation goals, 101 percent of projected energy savings goals, and 152 percent of proposed demand savings. A summary of each of the programs offered to South Dakota customers in 2016 is presented. Summary tables of actual results compared to goals are provided in Appendix A, Tables 1 through 3.

Financial Incentive

The South Dakota Public Utilities Commission approved a "percent of approved budget" method for calculating the financial incentive, which would equal \$105,900. A summary spreadsheet is presented in Appendix A, Table 4.

Energy Adjustment Rider

The Company is proposing an increase to the Energy Efficiency Adjustment Rider from \$0.00114 to \$0.00138. This adjustment is to be reflected on customers' bills as a separate line item starting with bills rendered (dated) on or after July 1, 2017. The EEP tracker balance is provided in the attached report under the section "ENERGY ADJUSTMENT RIDER." A summary spreadsheet is presented in Appendix A, Table 5 and Appendix B presents a copy of the Energy Efficiency Adjustment Rider.

Conclusion

Otter Tail requests approval of the 2016 Financial Incentive, totaling \$105,900. The Company also requests an update to the Energy Efficiency Adjustment Rider to \$0.00138 on customer's bills. The next status report will be filed on May 1, 2018, with the program subject to modifications as proposed and approved by the Commission at that time.

**Otter Tail Power Company
South Dakota Energy Efficiency Program 2016 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, 2016, through December 31, 2016, 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 eighth Status Report provided to the South Dakota Public Utilities Commission (Commission, SDPUC) and summarizes the results of the eighth 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 May 1, 2013, Otter Tail requested approval of its 2014-2015 EEP, Docket no. EL13-016.
- On June 24, 2013, Otter Tail resubmitted its 2014-2015 EEP. The revised EEP plan reflected avoided costs based on a summer peak, which is consistent with the Midcontinent Independent System Operator (MISO) region. All tables and benefit/cost test were updated to reflect Otter Tail's capacity resource needs based on summer peak.
- At the November 5, 2013 SDPUC meeting, the Commission voted unanimously to approve Otter Tail's proposed EEP for 2014-2015.
- At the December 3, 2013 SDPUC meeting, the Commission voted unanimously to reconsider the 30 percent over-budget provision within the 2014-2015 EEP. The majority of the SDPUC voted to amend the approval previously given in the Order by changing the 30 percent allowance to exceed the budget, to a 10 percent over budget allowance.

At the July 7, 2015 SDPUC meeting, the Commission voted unanimously to extend Otter Tail’s 2014-15 Energy Efficiency Plan, and annual budgets therein, through 2016.

Overview

Overall results for the 2016 South Dakota EEP Program show the Company achieved 311 percent of projected participation goals, 101 percent of projected energy savings goals, and 152 percent of projected demand savings while maintaining spending at 103 percent of the budget.

Summary of Budget to Actuals – 2016			
	Budget	Actual Results	% of Budget
Expenses All Programs	\$353,000	\$362,330	103%
Participation	904	2,809	311%
Energy Savings - kWh	2,808,649	2,844,054	101%
Demand Savings - kW	409.120	623.60	152%

The Company’s 2016 EEP achieved significant energy and demand savings, stayed within allowed budget, 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 2016 South Dakota EEP goals and budgets are listed in Appendix A, Tables 1 through 3, along with actual results for 2016.

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 2016, Otter Tail controlled air conditioning 25 days totaling of 46 hours and 38 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 March, May, and December of 2016.
- Television and radio campaign conducted in conjunction with other company promotions.
- Customer care booklet that is sent to all new customers.
- Home page hero spots in April and May on www.otpc.com.
- Presentations and literature distribution at workshops.
- Annual and monthly service rep training.
- Brochures available upon request.
- Program, rate, and rebate pages described within the Company's web site at www.otpc.com.

This Program has been approved for continuation in the 2017 EEP.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Air Conditioning Control	Actual	Proposed	% of Goal
Participation	115	30	383%
Budget \$	\$11,607	\$14,000	83%

The program exceeded participation by nearly 400 percent due to one service representative setting and achieving a personal goal to enroll 100 customers before he retired. Since most equipment was installed in one area, the program exceeded the participation goal and remained within budget.

Evaluation Methodology

Otter Tail analyzed a sample of air conditioning control customer's interval data to estimate energy savings. Otter Tail examined the interval data; prior to load-control,

during load-control, and for several hours post load-control to establish estimated savings.

Energy Savings & Adjustments

On average, air conditioning control per participant produces energy savings of approximately 48 kWh per household, and impacts summer peak demand by approximately 0.71 kW at the generator.

Air Conditioning Control	Actual Savings at the Generator	Budgeted Savings at the Generator	% of Budget
Energy Savings – kWh	5,549	1,448	383%
Demand Savings – kW Summer Coincident Peak	81.70	21.31	384%

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 2016, 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 = 8.2	> or = 14.5	12.0
Package Terminal			> or = 11.0

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 Builder and 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.
- Program, rate, and rebate descriptions on the Company’s web site www.otpc.com.

This program has been approved for continuation in the 2017 EEP. Equipment efficiency levels will follow Energy Star standards.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Air Source Heat Pumps (R)	Actual	Proposed	% of Goal
Participation	16	25	64%
Budget \$	\$9,980	\$19,000	53%

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	147,592	222,277	66%
Demand Savings – kW Summer Coincident Peak	4.13	6.46	64%

GEOHERMAL 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 2016, 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.
- Brochures available upon request.
- Presentations and literature distribution at Builder and 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.
- Program, rate, and rebate descriptions within the Company’s web site at www.otpco.com.

This program has been approved for continuation in the 2017 EEP. Required COP levels are the same for 2017.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Geothermal Heat Pumps (R)	Actual	Proposed	% of Goal
Participation	1	10	10%
Budget \$	\$2,309	\$23,000	10%

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	27,544	206,583	13%
Demand Savings – kW Summer Coincident Peak	1.74	17.44	10%

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 the following efficient technologies: screw-in compact fluorescent; fluorescent fixtures with T-8 and T-5 lamps and various electronic ballast configurations; and LED lighting.

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

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

This program has been approved for continuation in the Company's 2017 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Lighting (R)	Actual	Proposed	% of Goal
Participation	281	340	83%
Budget \$	\$5,961	\$4,000	149%

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	46,536	24,098	193%
Demand Savings – kW Summer Coincident Peak	1.71	2.16	79%

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 2016, 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 = 8.2	> or = 14.5	12.0
Package Terminal			> or= 11.0

Otter Tail promotes energy efficient heat pumps using various resources:

- Presentations and literature distribution at Builder and Electrical Workshops for contractors.
- *Programs and Services Guide* sent to contractors.
- Brochures available upon request.
- 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.
- Program, rate, and rebate descriptions within the Company’s web site at www.otpc.com.

This program has been approved for continuation in the 2017 EEP. Equipment efficiency specification levels will follow Energy Star guidelines in 2017.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Air Source Heat Pumps (C)	Actual	Proposed	% of Goal
Participation	3	15	20%
Budget \$	\$1,586	\$13,000	12%

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	21,447	134,044	16%
Demand Savings – kW Summer Coincident Peak	0.78	3.88	20%

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.otpc.com.
- EEP bill inserts for South Dakota customers.

This program has been approved for continuation in the Company's 2017 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Custom Efficiency	Actual	Proposed	% of Goal
Participation	2	5	40%
Budget \$	\$30,921	\$71,000	44%

Otter Tail provided incentives for two Custom Efficiency projects in 2017: commercial

refrigeration equipment in a retail grocery store and a building envelope project at a public school. 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

Energy savings are based on custom efficiency proposals and reviewed and verified by Otter Tail engineering staff.

Custom Efficiency Program	Actual Savings at the Generator	Proposed Savings at the Generator	% of Goal
Energy Savings – kWh	247,505	968,760	26%
Demand Savings – kW Summer Coincident Peak	50.14	134.55	37%

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.otpc.com.
- EEP bill inserts for South Dakota customers.

This program has been approved as the Drive Power program for continuation in the Company's 2017 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Drive Power	Actual	Proposed	% of Goal
Participation	37	31	119%
Budget \$	\$47,399	\$63,000	75%

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	390,627	482,713	81%
Demand Savings – kW Summer Coincident Peak	67.36	104.76	64%

GEOHERMAL 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 2016, 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.
- Brochures upon request.
- 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.
- Program, rate, and rebates described within the Company’s web site at www.otpc.com.

This program has been approved for continuation in the 2017 EEP. Equipment efficiency levels will follow Energy Star guidelines in 2017.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Geothermal Heat Pumps (C)	Actual	Proposed	% of Goal
Participation	26	25	104%
Budget \$	\$41,478	\$57,000	73%

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	479,694	523,938	92%
Demand Savings – kW Summer Coincident Peak	38.27	43.59	88%

LIGHTING

The U.S. Energy Information Administration estimates that in 2016, about 279 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 150 billion kWh for lighting, equal to about 11 percent of total commercial sector electricity consumption in 2016.

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 following efficient technologies: screw-in compact fluorescent; fluorescent fixtures with T-8 and T-5 lamps and electronic ballasts; and LED lighting systems. The 2016 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.otpc.com.
- EEP bill inserts for South Dakota customers.

This program has been approved for continuation in the Company's 2017 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2016			
Lighting (C)	Actual	Proposed	% of Goal
Participation	77	23	335%
Budget \$	\$178,664	\$54,000	331%

Advancements in LED product technology played a key role in participation that exceeded expectations in Otter Tail’s 2016 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 has documented all existing lighting wattage that is removed at each site and compared that 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	1,477,560	244,790	604%
Demand Savings – kW Summer Coincident Peak	396.90	74.97	529%

INDIRECT IMPACT

ADVERTISING & EDUCATION

The residential Advertising & Education program for 2016 includes:

- Educational outreach to South Dakota school children in grades four through six.
- General advertisement of energy efficiency program opportunities through bill inserts and newsletters.
- Promotion and education about energy efficient technologies 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 2016 to schools located in the company's South Dakota service territory. The 50-minute assembly focused on the science of energy, energy resources, and energy conservation and efficiency. Through demonstrations and audience participation using unique equipment displays, students learn about using energy wisely. *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 is offered to schools on a first-come, first-served basis for those schools that respond to the invitation and did not have the lyceum the prior year at no added expense. During 2016, six assemblies were conducted reaching 267 students.

The general advertisement component of the Advertising and Education program included support for developing and producing bill inserts that promote the EEP program portfolio, including the heat pump and CoolSavings air conditioning cycling program, as well as informing customers about the availability of the Home Energy Analyzer (HEA) tool on the website

Online resources available to South Dakota customers include web pages detailing EEP programs, YouTube videos demonstrating how to make energy efficient repairs to homes, and access to the HEA tool that helps residential customers analyze their energy use and identify ways to reduce energy use and costs. Calculation of website page visits and YouTube video views by South Dakota customers is estimated at ten percent of overall unique visits to energy efficiency topic pages. During 2016, an estimate 1,854 page views and YouTube video views were accessed by South Dakota customers. The Home Energy Analyzer tool was accessed by 130 South Dakota customers.

This program has been approved for continuation in 2017.

Participation & Budget

SD 2016 A&E Detailed Participation	
Science Museum School Tour	267
Website page and video views	1,854
Home Energy Analyzer	130
Total	2,251

PARTICIPATION AND BUDGET – 2016			
Advertising and Education	Actual	Proposed	% of Goal
Participation	2,251	400	563%
Budget \$	\$13,530	\$10,000	135%

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 – 2016			
EEP Development	Actual	Proposed	% of Goal
Participation	N/A	N/A	N/A
Budget \$	\$18,895	\$25,000	76%

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 \$362,330 in 2016. The approved budget for 2016 was \$353,000. The maximum incentive that can be awarded is 30 percent of \$353,000, or \$105,900. Total net benefits provided to South Dakota customers by 2016 EEP projects was \$3,298,618. **The proposed incentive is only 3.21 percent of net benefits provided by the program.**

Otter Tail requests approval of a financial incentive of \$105,900 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, 2015. 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 \$0.00114/kWh. Otter Tail proposes changing the EEP factor to \$0.00138. Appendix A, Table 6 presents the EEP tracker account balances for year-end 2016 and projections for 2017 through June 2018. When including the financial incentive amount of \$105,900 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, 2018. 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 2017 - June 2017	July 2017 - June 2018
Beginning Balance	(\$15,484)	\$16,678
Carrying Charges	(\$21)	\$4,418
EEP Program Expenses	\$284,587	\$448,794
EEP Incentive Proposed	\$0	\$105,900
EEP Rider Revenue	(\$252,404)	(\$575,790)
Ending Balance	\$16,678	\$0
EEP Factor	\$0.00114/kWh	\$0.00138/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, 2017 effective date (Appendix B: Energy Efficiency Adjustment Rider). The EEP cost recovery rider included in this filing reflects the proposed EEP factor of \$0.00138/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.

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.