

**Otter Tail Power Company
South Dakota Energy Efficiency Program 2011 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, 2011 through December 31, 2011 through Otter Tail Power Company's ("Otter Tail", "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 third Status Report provided to the South Dakota Public Utilities Commission ("Commission") and summarizes the results of the third full year of EEP activity since the Program's inception.

Direct Impact Programs

Residential

- Air Conditioning Control
- Air Source Heat Pumps
- Geothermal Heat Pumps
- Residential Demand Control

Commercial

- Air Source Heat Pumps
- Custom Efficiency
- Geothermal Heat Pumps
- Lighting
- Motors

Indirect Impact Programs

- Advertising & Education

Miscellaneous Programs

- EEP Development

Financial Incentive

Regulatory Requirements

Background

- On May 8, 2008, Otter Tail filed its proposed savings, costs, and net benefits as part of the proposed EEP filing for 2008-2009.
- On October 26, 2009, Otter Tail filed an application to update the Commission on its 2009 EEP and to request approval of its 2010 portfolio. The filing also requested budget and financial incentive modifications for 2010, but maintained energy and demand savings goals for 2010 consistent with 2008-2009 budgets.
- On February 23, 2010, the Commission granted approval of Otter Tail's request including budget and financial incentive modifications for 2010 as requested. The written Order was issued March 3, 2010.
- On March 1, 2010, Otter Tail requested approval for \$47,130 in financial incentive for 2008/2009 EEP accomplishments and requested to continue the Energy Efficiency Adjustment Rider.
- At its regularly scheduled meeting on May 4, 2010, the Commission approved Otter Tail's incentive and Energy Efficiency Adjustment Rider. The written Order was issued May 11, 2010.

- On June 16, 2010, the Company filed revised higher goals for energy and demand savings and customer participation for 2010 and continuation of the program in 2011.
- On July 27, 2010 the Commission approved Otter Tail’s request for updated energy and demand savings goals for 2010 and continuation of the program in 2011. The written Order was issued on August 2, 2010.
- On April 29, 2011, Otter Tail requested approval for a financial incentive of \$73,145, approval to continue the Energy Efficiency Adjustment Rider of \$0.00063, commensurate with the company achieving 117 percent of projected energy savings, 112 percent of proposed demand savings, 93 percent of budget and 70 percent of participation goals.
- On May 25, 2011, Otter Tail requested approval of its 2012-2013 EEP.
- On August 24, 2011, the Commission approved Otter Tail’s request for a financial incentive of \$73,145, approval to continue the Energy Efficiency Adjustment Rider of \$0.00063, the 2012-2013 EEP. The written Order was issued on August 26, 2011.

Approved 2011 South Dakota EEP goals and budgets are listed in Appendix A, Tables 1 through 3, along with actual results realized by the Company for 2011.

Overview

Overall results for the 2011 South Dakota EEP Program show the Company achieved 103 percent of budget, 161 percent of participation goals, 138 percent of projected energy savings goals, and 92 percent of proposed demand savings.

SUMMARY OF BUDGET TO ACTUALS – 2011			
RESIDENTIAL DEMAND CONTROL	BUDGET	ACTUAL RESULTS	% OF BUDGET
Expenses All Programs	\$263,000	\$272,093	103%
Participation	771	1,243	161%
Energy Savings - kWh	2,114,570	2,911,610	138%
Demand Savings - kW	649.2	594.1	92%

The Company’s 2011 EEP was a cost-effective effort that achieved significant energy savings. 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 create a sustainable energy future for South Dakota, of which energy efficiency will play a critical role.

DIRECT IMPACT – RESIDENTIAL AIR CONDITIONING CONTROL

The Air Conditioning Control Program supports the cost to promote and implement cycling of cooling systems during summer season peaks. Implementation includes the cost to install radio receivers needed to communicate the cycling commands to the cooling equipment. In exchange for participating in this program customers receive a \$7 a month bill credit during the four summer-season months.

In 2011, Otter Tail controlled air conditioning on 10 separate occasions for a total of 26 hours and 56 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:

- Bill inserts sent in March and April of 2011
- A testimonial feature story was included in our March Customer Connections newsletter
- Customer care booklet that is sent to all new customers
- Flash Ad at www.otpc.com home page during February, March, and April
- Pocket calendar and products and services guide
- Presentations and literature distribution at workshops
- Annual and monthly service rep training
- Brochures available in customer service center lobbies and by request
- Program, rate, and rebates described within the Company's web site at www.otpc.com

This Program has been approved for continuation in the 2012-2013 EEP.

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
AIR CONDITIONING CONTROL	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	30	29	97%
Budget \$	\$6,000	\$10,140	169%

Evaluation Methodology

Company-specific load shapes were developed for summer air conditioning control analysis.

Energy Savings & Adjustments

Air conditioning control per participant produces energy savings of approximately 45 kWh per household, and impacts summer peak demand by 1.0 kW at the meter.

AIR CONDITIONING CONTROL	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	1,464	1,415	97%
Demand Savings – kW Summer Coincident Peak	31.22	30.18	97%

AIR SOURCE HEAT PUMPS (Residential)

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 2011, Otter Tail relied on Energy Star qualifications for the minimum equipment efficiency requirement for this program. Minimum efficiency requirements for 2011 were 8.2 HSPF, 14.5 SEER, and 12 EER for split system installations, and 11.0 ER and 8.0 HSPF for package-terminal heat pump installations.

Otter Tail Power Company promotes energy efficient heat pumps through the following resources.

- *Guide to the programs and services* sent to contractors
- Brochures available in customer service center lobbies and by request
- *New construction resource* packets
- Presentations and literature distribution at Builder, Electrical and Electric Technologies Workshops for contractors
- Training material covered with service representatives in annual and monthly training
- Bill messages included on all customer monthly service statements
- Bill inserts about heat pump efficiency, tax credits, financing, and rebates
- Program, rate, technology, and rebate descriptions on the Company's web site: www.otpc.com

Rising energy costs and emphasis on energy efficiency helped drive participation in air source heat pump installations.

This Program has been approved for continuation in the 2012-2013 EEP.

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
AIR SOURCE HEAT PUMPS (R)	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	20	29	145%
Budget \$	\$14,000	\$18,705	134%

Evaluation Methodology

Energy savings estimates from the State of Minnesota’s Division of Energy Resources (“DER”) Deemed Savings Database are used for cooling energy savings assumptions. The Company’s engineering estimates are used to determine energy savings for heating for each air source heat pump system installed.

Energy Savings & Adjustments

Average annual energy savings at the meter are 8,800 kWh per unit, with peak demand savings of 1.5 kW per unit installed. Average unit installed in 2011 was 2.82 tons.

AIR SOURCE HEAT PUMPS (R)	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	168,130	274,340	163%
Demand Savings – kW Winter Coincident Peak	28.94	47.22	163%

GEOTHERMAL HEAT PUMPS (Residential)

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 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.

A minimum Energy Star qualification is required for this program. During 2011 units were required to meet an Energy Star qualification listed in the chart below.

Type	COP	
	Open	Closed
Water to air	3.8	3.5
Water to water	3.4	3.0
Direct exchange	3.6	

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

- *Guide to programs and services* sent to contractors
- Brochures available in customer service center lobbies and by request
- *New construction resource* packets
- Presentations and literature distribution at Builder, Electrical and Electric Technologies Workshops for contractors
- Training material covered with service representatives in annual and monthly training
- Bill messages included on all customer monthly service statements
- Promotional bill inserts about heat pump efficiency, tax credits, financing, and rebates
- Program, technology, rate, and rebate descriptions within the Company's web site at www.otpc.com

Rising and volatile energy costs and energy efficiency emphasis coupled with federal tax incentives have helped drive participation in geothermal heat pump installations. Due to greater customer investment, goals are harder to predict and may not always be met.

This Program has been approved for continuation in the 2012 – 2013 EEP. Required COP levels will be adjusted to match Energy Star program requirements as listed below.

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

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
GEOHERMAL HEAT PUMPS (R)	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	10	8	80%
Budget \$	\$19,000	\$7,860	41%

Evaluation Methodology

Engineering estimates are used to determine energy savings from each geothermal heat pump system installed.

Energy Savings & Adjustments

On average the energy savings at the meter is 10,235 kWh per unit, with peak demand savings of 7.9 kW per unit installed.

GEOHERMAL HEAT PUMPS (R)	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	120,400	88,017	73%
Demand Savings – kWh Winter Coincident Peak	86.00	67.58	79%

RESIDENTIAL DEMAND CONTROL

The Residential Demand Control (“RDC”) Program provides rebates for residential customers to purchase in-home demand response devices. Otter Tail directly controls the energy from end uses that customers have chosen such as water heaters, dryers, and electric space heating systems. The RDC unit causes reductions in energy use by sending a signal during a control period triggering the RDC to drop connected load to reach the preset demand goal. If the house energy load remains above the selected demand level, a signal notifies the customer to take action to shut off other loads. Customers receive a lower energy rate for allowing the company to control their load.

Participation goals in South Dakota were not met in 2011, similar to other states served by the company. Otter Tail has offered the RDC option for decades and participation in recent years has leveled off, suggesting market penetration may be occurring.

This Program is not included in our 2012-2013 program.

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
RESIDENTIAL DEMAND CONTROL	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	6	2	33%
Budget \$	\$5,000	\$1,134	23%

Evaluation Methodology

The Company historically has claimed energy and demand savings for each RDC unit installed based on prior studies of customer data.

Energy Savings & Adjustments

This load management program typically results in 7.263 kW of peak demand savings per residential installation and energy savings of 556.1 kWh at the meter.

RESIDENTIAL DEMAND CONTROL	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	3,587	1,196	33%
Demand Savings – kW Winter Coincident Peak	46.85	15.62	33%

DIRECT IMPACT – COMMERCIAL

AIR SOURCE HEAT PUMPS (Commercial)

The Air Source Heat Pump Program targets commercial customers currently using or considering the installation of less efficient resistance electric heating and cooling systems by offering rebates for high-efficiency air source heat pumps. For 2011, Otter Tail relied on Energy Star qualifications as the minimum equipment efficiency requirement for this program. These efficiency requirements for 2011 were 8.2 HSPF, 14.5 SEER, and 12 EER for split system installations. Minimum requirements for packaged-terminal heat pump installations were 11.0 EER and 8.0 HSPF.

Otter Tail promotes energy efficient heat pumps using various resources.

- Presentations and literature distribution at Builder, Electrical and Electric Technologies Workshops for contractors
- *Guide to programs and services* sent to contractors
- Brochures available in customer service center lobbies and by request
- *New construction resource* packets
- Bill messages included on customer statements
- Bill inserts about heat pump efficiency, tax credits, financing, and rebates
- Training material covered with service representatives in annual and monthly training
- Program, technology, rate, and rebate descriptions within the Company's web site at www.otpc.com

Rising and volatile energy costs and emphasis on energy efficiency have helped drive participation in air source heat pump installations.

This Program has been approved for continuation in the 2012-2013 EEP. Required equipment efficiency specification levels will be adjusted each year to match Energy Star program requirements.

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
AIR SOURCE HEAT PUMPS (C)	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	22	19	86%
Budget \$	\$25,000	\$36,515	146%

Participation in the commercial Air Source Heat Pump program was from varying commercial customers. One church installed four units and another installed one unit for

a total of five units. Other installations consisted of a city installing two units and three other commercial accounts installing 12 units in total.

Evaluation Methodology

Engineering estimates from the State of Minnesota DER Deemed Savings Database are used for cooling energy savings assumptions. The Company’s engineering estimates are used to determine energy savings for heating for each air source heat pump system installed.

Energy Savings & Adjustments

Annual energy savings on average at the meter are 26,219 kWh with peak demand savings of 3.5 kW per unit installed. The average unit installed doubled in size from 3.6 tons in 2010 to 8.4 tons in 2011.

AIR SOURCE HEAT PUMPS (C)	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	184,943	535,523	290%
Demand Savings – kW Winter Coincident Peak	24.84	71.93	290%

CUSTOM EFFICIENCY PROGRAM

The Custom Efficiency Program pays incentives to commercial and industrial customers for energy saving installations including new energy-efficient equipment and process changes. The Program is intended to provide incentives to customers considering energy efficiency technologies or applications not currently available within the prescriptive rebate programs. Six efficiency projects were performed in 2011 as shown in the following table. As repetitive grant applications are received for similar technologies, Otter Tail will consider if it is economical and expedient to develop additional prescriptive programs.

Efficiency Custom Projects Type of System Installation	Quantity
Building Window and Insulation Upgrade	1
Refrigeration System Upgrade	1
Variable Speed Drive on Blower	4

Otter Tail promotes the custom efficiency program through a variety of promotional resources.

- Presentations and literature distribution at Builder, Electrical and Electric Technologies Workshops for contractors
- *Guide to programs and services* available to contractors
- *Make It Electric* newsletter for commercial and industrial customers
- Program, rate, and rebates described within 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 2012-2013 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2010			
CUSTOM EFFICIENCY	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	6	6	100%
Budget \$	\$74,000	\$76,297	103%

Evaluation Methodology

Impact savings estimates from the Custom Efficiency Program come directly from the customer, who submits detailed information showing demand and energy savings for each proposed measure. The Company verifies the feasibility of the proposed savings, and if necessary, makes modifications to the proposed analysis. Otter Tail offers assistance for our commercial and industrial customers to help them determine the energy and demand savings necessary in developing a Custom Efficiency Program proposal. Customers often work with internal or third-party engineers to determine and verify savings.

Energy Savings & Adjustments

Energy savings are based on customer efficiency proposals, generally developed by third-party engineers and reviewed and verified by Otter Tail engineering staff.

Custom Efficiency Program	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	967,500	1,426,047	147%
Demand Savings – kW Winter Coincident Peak	121.59	191.60	158%

The Custom Efficiency Program exceeded expectations for both energy (kWh) and demand (kW) savings in 2012. Otter Tail is pleased with continued interest from commercial and industrial customers in custom efficiency solutions and the energy and demand savings results from the custom efficiency projects.

GEOTHERMAL HEAT PUMPS (Commercial)

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. During 2011 units were required to meet Energy Star qualifications as listed in the chart below.

Type	COP	
	Open	Closed
Water to air	3.8	3.5
Water to water	3.4	3.0
Direct exchange	3.6	

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

- Presentations and literature distribution at Builder, Electrical and Electric Technologies Workshops for contractors
- *Guide to programs and services* available to contractors
- Brochures available in customer service center lobbies and by request
- *New construction resource* packets
- Bill messages included on customer statements
- Bill inserts about heat pump efficiency, tax credits, financing, and rebates
- Training material covered with service representatives in annual and monthly Program, technology, rate, and rebates described within the Company's web site at www.otpc.com

Rising and volatile energy costs, federal incentives, and energy efficiency emphasis has helped drive participation in geothermal heat pump installations.

This Program has been approved for continuation in the 2012-2013 EEP. Required COP levels will be adjusted to match Energy Star program requirements as listed below.

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

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
GEOTHERMAL HEAT PUMPS (C)	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	25	16	64%
Budget \$	\$45,000	\$13,294	30%

Participation in the Geothermal Heat Pumps Program is difficult to predict and budget. A single commercial customer can install 1 unit or 50 units, depending on the installation. In years where large quantities are installed in facilities such as schools, 50 to 100 units are common. In years where there are no large installations, a total of two to five units for the entire year may be realized. In 2011, participation was comprised of two total customers installing 16 units: a school installed 14 units, and a city installed two units.

Evaluation Methodology

Engineering estimates are used to determine energy savings from each geothermal heat pump system installed.

Energy Savings & Adjustments

Average annual energy savings at the meter is 9,160 kilowatt-hours, with peak demand savings of 6.6 kW per unit installed. The average unit decreased in size by almost one half, from 4.8 tons in 2010 to 2.7 tons in 2011.

GEOHERMAL HEAT PUMPS (C)	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	350,719	157,553	45%
Demand Savings – kW Winter Coincident Peak	234.73	113.36	48%

LIGHTING

The Lighting Program provides rebates to commercial and industrial customers for retrofit installations of 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 various electronic ballast configurations; and LED lighting systems.

The 2011 program offered customers a tremendous opportunity to accelerate change-out of their old, inefficient lighting systems. Federal legislation impacting the manufacturing of fluorescent ballasts that do not meet the efficiency requirements of the 2007 Energy Independence and Security Act (“EISA”) at some point will restrict availability of replacement ballasts for older, inefficient fluorescent fixtures. Lack of these ballasts will make T12 lighting harder to maintain. By July of 2012, EISA will take effect for fluorescent lamp efficiency, specifically for many T12 fluorescent lamp configurations. EISA legislation will certainly begin reshaping the market for energy efficient lighting, but in the interim programs like the Lighting Retrofit at Otter Tail continue providing an added incentive for customers to adopt the most efficient lighting technology available faster than they likely would have without CIP efficiency incentives.

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
- *Guide to programs and services* sent to contractors
- *Make It Electric* newsletter for commercial and industrial customers
- Program, technology, and rebate descriptions within 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 2012-2013 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2010			
COMMERCIAL LIGHTING	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	12	16	133%
Budget \$	\$30,000	\$44,276	148%

Participation in the Lighting Program exceeded goals in 2011. External market forces in 2011 were likely significant factors in actual participation exceeding goal. Anecdotal evidence suggest that fewer construction projects in both the commercial and residential sectors due to continued slow economic growth resulted in electrical contractors turning to revenue from lighting retrofit projects to meet their business revenue targets.

Evaluation Methodology

Engineering calculations are used for impact savings for energy and demand from the Commercial Lighting Program.

Lighting loggers were utilized in previous years in other states to verify customer information concerning hours of operation. As an aggregate, results from the loggers were very close to the customers' estimates of annual hours of operation. Errors were slightly on the side of *underestimating* rather than overestimating the annual hours of usage from the newly installed lights. Based on this information, the Company is satisfied using customers' estimates of hourly usage in the calculation of energy impacts from the Commercial Lighting Program.

Energy Savings & Adjustments

For retrofit lighting, lighting systems being installed are compared with systems being removed to determine the change in wattage. The hours of operation are multiplied by the watts to determine energy savings. Company personnel perform necessary verification.

COMMERCIAL LIGHTING	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	280,094	354,062	126%
Demand Savings – kW Winter Coincident Peak	69.03	47.55	69%

Energy savings exceeded goal in 2011, likely reflected by participation goals exceeding goals as well.

MOTORS

The goal of the Motors Program is to educate dealers and customers on the benefits of installing new and replacement electric motors that meet the National Electrical Manufacturers Association (“NEMA”) Premium® efficiency requirements. The Program provides incentives to customers for the purchase of NEMA Premium® rated electric motors. The Motors Program is designed to reduce system peak demand and energy use by offering customers incentives to purchase NEMA Premium® efficiency motors from one horsepower up to 500 horsepower in size.

Otter Tail promotes the Motors Program through a variety of promotional resources.

- Presentations and literature distribution at Builder, Electrical and Electric Technologies Workshops for contractors
- *Guide to programs and services* available to contractors
- *Make It Electric* newsletter for commercial and industrial customers
- Program, rate, and rebates described within the Company’s web site at www.otpc.com
- EEP bill inserts for South Dakota customers

For 2012-2013, Otter Tail has revised the Motors Program to reflect NEMA Premium® as the baseline efficiency in new and replaced-on-failure applications for motors from 1 to 200 horsepower. Otter Tail has developed new rebate qualifying efficiency tables for use in 2012 with efficiency levels exceeding present NEMA Premium® efficiency ratings by at least one full NEMA efficiency band.

Otter Tail anticipates a period of adjustment in program participation beginning in 2012. Motor manufacturers are still not offering products in most open drip-proof configurations that exceed NEMA Premium® efficiency levels by one full NEMA band. Options are more abundant for totally-enclosed fan-cooled motors, but educating dealers and potential participants remains a challenge. Otter Tail has taken the important first steps in educating customers, dealers, and other program stakeholders about the industry’s baseline efficiency changes, but adequate market awareness will take more time and effort into 2012 and beyond.

A second 2012 modification includes the addition of rebate incentives for customers installing high-efficiency, explosion-proof motors. Availability of explosion-proof motors that meet or exceed NEMA Premium® efficiency levels is limited, so Otter Tail has developed a separate set of qualifying efficiency levels for motors with explosion-proof enclosures that exceed Energy Policy Act “EPAct” efficiency levels. Engineering calculations for energy savings are adjusted accordingly.

This Program has been approved for continuation in the Company’s 2012-2013 Plan.

Participation & Budget

PARTICIPATION AND BUDGET – 2010			
MOTORS	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	15	36	240%
Budget \$	\$10,000	\$21,776	218%

The 2011 Motors Program exceeded participation goals. The Company attributes this to a heightened interest in energy efficiency and associated energy savings.

Evaluation Methodology

The Company uses estimates from the State of Minnesota DER Deemed Savings Database, the Company’s engineering estimates, and motor usage information from customers to determine the energy savings for each installed motor.

Energy Savings & Adjustments

Engineering estimates from the State of Minnesota DER Deemed Savings Database and the Company’s engineering estimates are being used to calculate impact savings in the Motors Program. The Company also used data from Bonneville Power's MotorMaster software project to develop standard motor efficiency numbers.

NEMA efficiency rating, horsepower, motor speed, and quantity are taken from the application form. A 78 percent loading factor was used in the calculation for kilowatt-hour savings. A nominal efficiency for each motor speed and horsepower was determined, based on an average of standard motors from Motor Master software. Run time hours were collected from customer rebate form information. The formula for energy savings is shown below.

$$\text{Energy Saved (kWh)} = \text{Hours} * \text{Quantity} * 0.746 \text{ kW/horsepower Conversion Factor} * \text{Loading Factor} * \text{Horsepower} * (1/\text{standard efficiency} - 1/\text{motor efficiency})$$

MOTORS	Budgeted Savings at the Generator	Actual Savings at the Generator	% of Budget
Energy Savings – kWh	37,733	73,457	195%
Demand Savings – kW Winter Coincident Peak	6.00	9.06	151%

INDIRECT IMPACT

ADVERTISING & EDUCATION - Residential

The residential Advertising & Education Program for 2011 includes:

- Educational outreach to South Dakota school children in grades four through six.
- General advertisement of energy efficiency program opportunities through bill inserts, literature available to customers upon request, and through company newsletters.
- Internet based resources available on the company website www.otpc.com.

The educational outreach program was operated through the Minnesota Science Museum, which was contracted to provide an energy-focused lyceum at six schools in the Otter Tail Power Company South Dakota service territory during May 2011. The *Energy Connections* assembly program is a 50-minute assembly focusing on the science of energy and energy conservation. Through dynamic demonstrations and audience participation using one-of-a-kind equipment displays, students are encouraged to use energy wisely. *Energy Connections* aims to help 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. Program results for 2011 include six assemblies reaching 385 students. The program is offered to schools on a first-come, first-served basis for those schools that respond to the invitation.

The general advertisement component of the Advertising and Education program included support for developing and printing bill inserts promoting the EEP program portfolio and fulfillment of customer requests for literature about the technologies featured in the portfolio, rebate programs, and general conservation tips and articles. 76 requests for follow up literature were sent to South Dakota customers in 2011.

Online resources included website updates and pages detailing EEP programs offered in South Dakota. During 2011, 621 customers accessed pages specific to EEP plan.

This Program has been approved for continuation in the 2012 - 2013 EEP.

Participation & Budget

PARTICIPATION AND BUDGET – 2011			
ADVERTISING & EDUCATION	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	625	1082	173%
Budget \$	\$10,000	\$10,287	103%

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 – 2011			
EEP DEVELOPMENT	BUDGET	ACTUAL RESULTS	% OF BUDGET
Participation	N/A	N/A	N/A
Total EEP Development 2011	\$25,000	\$31,807	127%

FINANCIAL INCENTIVE

As outlined in the May 8, 2008 updated EEP filing, Otter Tail historically utilized a shared-savings incentive that awards the Company a small share of the total net benefits from investments in energy efficiency. The net benefits are derived from the avoided costs from this investment.

On August 26, 2011, the Commission's Order approved a financial incentive of \$73,145 based on 30 percent of actual 2010 spending of \$243,816. The Commission's approval was consistent with South Dakota Staff's August 17, 2011, letter which recommended, "the incentive payment available to OTP, based on the fixed percentage incentive method, be limited to a fixed percentage of approved budget."

As shown in Appendix A, Table 1, the Company spent \$272,093 in 2011. The approved budget for 2011 was \$263,000. Otter Tail has continued to use the method approved by the Commission for the calculation of the 2011 financial incentive. Therefore, the maximum incentive that can be awarded is 30 percent x \$263,000, which equals \$78,900. The proposed incentive is only three percent of net benefits provided by the program.

Otter Tail requests approval of a financial incentive of \$78,900 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, 2011. 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. We are not currently recovering any of these costs in base rates; therefore, Otter Tail 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 \$0.00063/kWh. Otter Tail proposes to increase the EEP factor to \$0.00088/kWh. Appendix A, Table 6 presents the EEP tracker account balances for year-end 2011 and projections for 2012 through June 2013. When including the financial incentive amount of \$78,900 in the tracker, and approval of the increase to the EEP factor, Otter Tail forecasts the tracker balance to be near zero at \$1,913.56 on July 1, 2013. The following table summarizes the expenses and revenues discussed above.

	Jan. 2012- June 2012	July 2012 - June 2013
Beginning Balance	\$45,767	\$9,035
Carrying Charges	\$965	\$4,284
EEP Program Expenses	\$95,248	\$272,008
EEP Incentive Proposed	0	\$78,900
EEP Rider Revenue	-\$132,945	-\$362,314
Ending Balance	\$9,035	\$1,914
EEP Factor	\$0.00063/kWh	\$0.00088/ 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, 2012 effective date (Appendix B: Energy Efficiency Adjustment Rider). The EEP cost recovery rider included in this filing reflects the proposed EEP factor of \$0.00088/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 in each business office in Otter Tail's affected electric service territory in South Dakota 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.