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April 1, 2021



Mr. Will Seuffert  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
St. Paul, Minnesota 55101-2147

Aditya Ranade, Ph.D.  
Deputy Commissioner  
Minnesota Department of Commerce  
Division of Energy Resources  
85 7th Place East, Suite 500  
St. Paul, Minnesota 55101-2198

**RE: 2020 Demand Side Management Financial Incentive Project**  
**Docket No. E017/M-21-**  
**Annual Filing to Update the Conservation Improvement Project Rider**  
**Docket No. E017/M-21-**  
**2020 Conservation Improvement Project Status Report**  
**Docket No. E017/CIP-16-116.04**

Dear Mr. Seuffert and Dr. Aditya Ranade:

Enclosed please find Otter Tail Power Company's filing in the above referenced matter which includes:

- Executive Summary
- Summary of Filing
- Petition of Otter Tail Power Company
- Financial Incentive
- Status Report
- Conservation Cost Recovery Adjustment
- Appendix A – Tables
- Appendix B – Third Party Evaluations
- Appendix C – Project Information Sheets

A Certificate of Service is also enclosed. Otter Tail Power Company has served a copy of this filing on all parties listed on the enclosed Service List. If you or Commission Staff have any questions, please contact me at (218) 739-8639 or [JGrenier@otpc.com](mailto:JGrenier@otpc.com).

Very truly yours,

/s/ JASON GRENIER  
Jason Grenier, Manager  
Market Planning

cjh  
Enclosures  
By electronic filing  
c: Service List

## **2020 DSM INCENTIVE, FILING TO UPDATE THE RIDER, AND STATUS REPORT EXECUTIVE SUMMARY**

On April 1, 2021, Otter Tail Power Company (Otter Tail or the Company) files with the Minnesota Public Utilities Commission (Commission or MPUC) and the Minnesota Department of Commerce, Division of Energy Resources (DER) its annual report detailing the Company's previous year's Conservation Improvement Program (CIP) activities.

On April 1, 2021, Otter Tail Power Company files its 2020 Status Report.

On April 1, 2021, Otter Tail also files its annual filing to update the CIP Rider.

Otter Tail would like to emphasize the following points concerning the 2020 Conservation Improvement Program:

- The Company achieved 4.06<sup>1</sup> percent energy savings as a percent of retail energy sales, above our approved goal of 2.39 percent.
- The Company achieved energy savings of 70,649,612 kWh, exceeding goal by 170 percent. Demand savings were 119 percent of goal.
- The cost per kWh for *first year* savings is \$0.14 (14 cents) compared to a budgeted cost of \$0.17 (17 cents). Costs are in line with historical averages of \$0.13 (13 cents).
- Expenditures were over budget (106 percent) at \$9,643,680 based on an approved budget of \$9,067,147.
- Net benefits of \$35,506,108 were achieved excluding the negative net benefits from assessments.

### **Requests for Approval**

- The Company is requesting approval for \$2,864,948 in performance incentives for 2020 CIP activities, a small share of the total net benefits delivered to customers from investments in CIP.
- The Company is requesting the Conservation Cost Recovery Adjustment (CCRA) factor of \$0.00582 /kWh be reflected on customers' bills through the Resource Adjustment starting with bills rendered (dated) on and after October 1, 2021.
- As in prior years, Otter Tail is requesting a variance to Minnesota Rule 7820.3500 (E). The requested variance would allow the Company to continue to include CCRA within the Resource Adjustment on customer bills.
- The Company is requesting approval of the 2020 CIP Tracker, resulting in a year-end balance of \$2,067,599.

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<sup>1</sup> Adjusted for one-third energy savings from behavioral change programs.

Otter Tail has committed resources and developed new, creative approaches in pursuit of higher conservation goals. This pursuit includes an appropriate balance of direct and indirect impact programs. New technologies, delivery mechanisms, and segmentation strategies emphasize Otter Tail's commitment to energy efficiency. Recent accomplishments are particularly noteworthy in the face of new building codes and equipment efficiencies and saturated markets. A consistent regulatory environment is critical to overcoming these challenges as utilities continue to pursue Minnesota's Next Generation Act energy goals. Otter Tail appreciates the support from Minnesota's regulatory agencies as we work together to sustain Minnesota's energy future.

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Please note that this filing is available through the eDockets system maintained by the Minnesota Department of Commerce and the Minnesota Public Utilities Commission. Access this document by going to eDockets through the websites of the Department of Commerce or the Public Utilities Commission or going to the eDockets homepage at:

<https://www.edockets.state.mn.us/EFiling/home.jsp>

Once on the eDockets homepage, this document can be accessed through the Search Documents link and entering in docket number: 16-116.04.

Please contact Otter Tail at 800-493-3299 to request a complete copy of this filing.

**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

Status Report – 2020 CIP Activities

Docket No. E017/CIP-16-116.04

In the Matter of Otter Tail Power  
Company's Annual Filing of the  
Demand Side Management  
Financial Incentive Project

Docket No. E017/M-21-

In the Matter of Otter Tail Power  
Company's Annual Filing to  
Update the Conservation  
Improvement Project Rider

Docket No. E017/M-21-

**SUMMARY OF FILING**

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Otter Tail Power Company (Otter Tail or the Company) is pleased to report its 2020 DSM achievements. CIP program results for 2020 proved to be another successful year for Otter Tail and our customers exceeding the approved 2.39 percent energy savings goal and achieving 4.06 percent energy savings while delivering nearly \$35.4 million in customer net benefits.

Otter Tail is requesting approval of a financial incentive of \$2,864,948 to be approved and recovered through its Conservation Improvement Project (CIP) Tracker Account.

Otter Tail is requesting the Conservation Cost Recovery Adjustment (CCRA) factor of \$0.00582 /kWh be reflected on customers' bills through the Resource Adjustment starting with bills rendered (dated) on and after October 1, 2021.

As in prior years, Otter Tail is requesting a variance to Minnesota Rule 7820.3500 (E). The requested variance would allow the Company to continue to include the CCRA within the Resource Adjustment on customer bills.

Lastly, Otter Tail is requesting approval of the 2020 CIP Tracker, resulting in a year-end 2020 balance of \$2,067,599.

**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

Status Report – 2020 CIP Activities

Docket No. E017/CIP-16-116.04

In the Matter of Otter Tail Power  
Company's Annual Filing of the  
Demand Side Management  
Financial Incentive Project

Docket No. E017/M-21-

In the Matter of Otter Tail Power  
Company's Annual Filing to  
Update the Conservation  
Improvement Project Rider

Docket No. E017/M-21-

**PETITION OF OTTER  
TAIL POWER COMPANY**

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## **I. INTRODUCTION AND BACKGROUND**

Otter Tail Power Company (Otter Tail or the Company) is requesting approval of a financial incentive of \$2,864,948 to be approved and recovered through its Conservation Improvement Project (CIP) Tracker Account.

Otter Tail is requesting the Conservation Cost Recovery Adjustment (CCRA) factor of \$0.00582/kWh be reflected on customers' bills through the Resource Adjustment starting with bills rendered (dated) on and after October 1, 2021.

As in prior years, Otter Tail is requesting a variance to Minnesota Rule 7820.3500 (E). The requested variance would allow the Company to continue to include the CCRA within the Resource Adjustment on customer bills.

Lastly, Otter Tail is requesting approval of the 2020 CIP Tracker, resulting in a year-end 2020 balance of \$2,067,599.

On June 15, 1994, Otter Tail filed a petition for a CIP Adjustment to recover costs associated with CIP. On October 18, 1994, the Company filed a Motion to File Amended Petition and Accept Settlement Agreement. On December 23, 1994, the Minnesota Public Utilities Commission (Commission or MPUC) issued an Order Approving Settlement and Proposed CIP Adjustment for Otter Tail.<sup>2</sup> In this Order, the Commission approved a CIP adjustment

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<sup>2</sup> Docket No. E017/M-94-539.

mechanism to be applied to customers' bills on or after July 1, 1995, which the Company began implementing on July 1, 1995.

On January 27, 2010, the MPUC approved a new shared savings model<sup>3</sup> for 2010 and indicated the new shared savings Demand Side Management (DSM) incentive shall be in operation for the length of each utility's triennial CIP plan. Otter Tail's triennial plan is approved for 2017-2020.

On August 5, 2016 the MPUC revised the Shared Savings Model with the modifications specific to Otter Tail set forth below:

- Authorize financial incentives for a utility that achieves energy savings of at least 1.0 percent of the utility's retail sales. For a utility that achieves energy savings equal to 1.0 percent of retail sales, award the utility a share of the net benefits.
  - 8.25 percent in 2017,
  - 6.75 percent in 2018,
  - 4.75 percent in 2019, and
  - 4.75 percent in 2020.
- For each additional 0.1 percent of energy savings the utility achieves, increase the net benefits awarded to the utility by an additional 0.75 percent until the utility achieves savings of 1.7 percent of retail sales.
- For savings levels of 1.7 percent and higher, award the utility a share of the net benefits equal to the following Net Benefits Cap.
  - 13.5 percent in 2017,
  - 12.0 percent in 2018,
  - 10.0 percent in 2019, and
  - 10.0 percent in 2020.
- For all utilities, set the following Conservation Improvement Plan (CIP) Expenditure Caps:
  - 40 percent in 2017,
  - 35 percent in 2018,
  - 30 percent in 2019, and
  - 30 percent in 2020.
- The costs of any mandated, non-third-party projects (e.g., the 2007 Next Generation Energy Act assessments, University of Minnesota Initiative for Renewable Energy and the Environment costs) shall be excluded from the calculation of net benefits and energy savings achieved and incentive awarded.
- Costs, energy savings, and energy production related to Electric Utility Infrastructure Costs, solar installation, and biomethane purchases shall not be included in energy savings for DSM financial incentive purposes.

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<sup>3</sup> Docket No. E,G999/CI-08-133.

## **II. REQUEST FOR APPROVAL**

### Financial Incentive Filing

Otter Tail respectfully requests that a financial incentive of \$2,864,948 be approved and recovered through its CIP Tracker Account.

Details of the incentive calculation and corresponding evaluations of direct impact projects are included in the attached report under the Section entitled "FINANCIAL INCENTIVE."

### Conservation Improvement Project Rider

The Company is requesting the Conservation Cost Recovery Adjustment factor of \$0.00582/kWh be reflected on customers' bills through the Resource Adjustment starting with bills rendered (dated) on and after October 1, 2021.

## **III. LEGAL AUTHORITY**

The Petition for approval of Otter Tail's Financial Incentive Filing is submitted in accordance with Minn. Stat. § 216B.16, subd. 6c. The Conservation Improvement Project Rider is submitted in accordance with the Miscellaneous Tariff rules.

## **IV. REQUEST FOR VARIANCE TO MINNESOTA RULES**

Otter Tail requests a variance to Minnesota Rules 7820.3500 (E), Billing Content, which requires that a complete itemization of all charges incurred at each level of customer usage shall be included on the customer's bill. The requested variance would allow the Company to continue to include the Conservation Improvement Adjustment on customer bills within the Resource Adjustment line item.

Minnesota Rules 7829.3200 authorizes the Commission to grant a variance to its rules when (1) enforcement of the rule would impose an excessive burden on the applicant, (2) the variance would not adversely affect the public interest, and (3) the variance would not conflict with standards imposed by law. Otter Tail believes the criteria for granting variances are met since the Company has been using the combined Resource Adjustment since July 1995, and customers have become familiar with the single-line item on their bill.

The continuation of the variance would not adversely affect the public interest and may avoid customer confusion if the bill presentment was altered at this time.

And finally, there are no statutory provisions that would prohibit the variance; therefore, the requirement may be varied pursuant to Minnesota rules 7829.3200.

Once approved by the Commission, the Company will be notifying its Minnesota customers of the new CIP surcharge through an insert in the customers' bills. A surcharge notification will be included with each bill on the billing date following closest to October 1, 2021. In general, the notification will state "Beginning October 1, the Resource Adjustment includes a CCRA factor of \$0.00582/kWh that has been applied based on the Commission's (date) order."

## **V. MISCELLANEOUS FILING AND REGULATORY REQUIREMENTS**

- A. All correspondence with respect to this filing should be sent to:  
Jason Grenier  
Otter Tail Power Company  
215 South Cascade Street  
P.O. Box 496  
Fergus Falls, MN 56538-0496  
(218) 739-8639 Phone  
(218) 739-8941 FAX
- B. The effective date of the CIP Rider is October 1, 2021. The effective date of the other filings is the date of Commission approval.
- C. Otter Tail Power Company agrees that the notice and comment periods set forth in the Miscellaneous Tariff Filing rules control the time frame for processing this type of filing.
- D. The reason for the filing and its impacts is explained above and in the attached report.
- E. Minn. Rules Ch. 7690 contains the requirements and procedures for CIP filings. Minn. Stat. §§ 216B.2401, 216B.241, and 216B.2411 contain provisions utilities must meet in CIP. All compliance points are addressed in this section.



## **Statutory Requirements**

### ***2020 Minimum Spending Requirement***

Minn. Stat. § 216B.241, requires that 1.5 percent of the Company's electric gross operating revenues be spent on CIP. Otter Tail's spending in relation to approved minimum spending is as follows:

Minimum Spending Requirement	\$ 2,297,210
Approved Budget	\$ 9,067,147 <sup>4</sup>
2020 Actual Spending	\$ 9,643,680

### ***2020 Minimum Energy Savings Goal***

The Company has complied with Minn. Stat. § 216B.241 which sets the minimum energy savings goal of 1.5 percent of MWh sales, determined as a percent of 2013-2015 weather normalized sales.

Energy savings goal @ 1.5%	26,128,129 kWh
Approved Energy Savings Goal	41,576,461 kWh
2020 Actual Energy Savings	70,649,612 kWh

### ***2020 Low-Income Spending Requirement***

The Company has complied with Minn. Stat. § 216B.241, subd. 7 requiring utilities to spend 0.2 percent of residential electric gross operating revenues on low-income programs.

Low-income minimum spend @ 0.2%	\$ 110,165
Low-income approved budget	\$ 150,000
Low-income actual spend	\$ 154,246

### ***2020 Research and Development 10 Percent spending cap***

The Company has complied with Minn. Stat. § 216B.241, subd. 2c that limits spending on Research and Development to 10 percent of the minimum spending requirement.

Minimum CIP Spending Requirement	\$ 2,297,210
10 percent R&D Spending Cap	\$ 289,129
2020 Actual R&D Spending	\$ 52,614

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<sup>4</sup> Includes budget modification request approved by the DER on October 15, 2020.

### ***Distributed Energy Resource Five Percent Spending Cap***

The Company has complied with Minn. Stat. § 216B.2411, subd. 1(a) that allows utilities to spend up to five percent of the utility's minimum spending requirement on distributed generation project.

### ***Lighting Use and Recycling Programs***

The Company has complied with Minn. Stat. § 216B.241 that requires utilities to invest in projects that encourage the use of energy efficient lighting and reclamation and recycling of spent fluorescent and high intensity discharge lamps. Otter Tail met this requirement through its commercial and residential lighting programs.

### ***Sustainable Buildings Certification***

The Company has complied with Minn. Stat. § 216B.241, subd. 1f(c) that requires utilities to include in their CIP plans projects that facilitate professional engineering verification to qualify a building as ENERGY STAR labeled, Leadership in Energy and Environmental Design (LEED) certified, or Green Globes certified. The Company's Integrated Building Design Plus project facilitates sustainable building labeling and certification.

### ***Sustainable Building 2030 Standards***

The Company has complied with Minn. Stat. § 216B.241, subd. 9(e) that requires utilities to develop conservation improvement projects to support attaining energy efficiency goals consistent with Sustainable Buildings 2030 (SB 2030) standards. The Company's Integrated Building Design Plus project supports the SB 2030 standards.

### ***Triennial Decision Requirements***

The Company has complied with any additional requirements established in the DER Deputy Commissioner's Decision on November 3, 2016.

### ***Budget Modifications***

On October 10, 2013, the Deputy Commissioner of the DER issued an Order giving utilities budget flexibility criteria by segment rather than individual program budgets. Under this requirement, utilities are required to provide a letter for permission to exceed the overall budget for a segment by 25 percent or more.

Otter Tail requested a budget increase of \$2,000,000 on September 30, 2020. The DER approved the request on October 15, 2020.

***Measurement and Verification (M&V) Protocols for Large Custom CIP Projects.***

On July 23, 2008, the Deputy Commissioner approved M&V Protocols for Large Custom CIP Projects. The protocols apply to custom projects that have savings greater than one GWh and are initiated after April 1, 2008.

In 2020 Otter Tail had one custom project under the Custom Efficiency Grant program estimated to save greater than one GWh. The Company received the DER's approval of the M&V report for the project on March 17, 2020.

***CIP Employee Related Expenses***

In its November 5, 2010 Order in Docket No. E017/M-10-220, the Commission agreed with and adopted the recommendations of the DER regarding reporting of employee expenses in utility status reports. The DER's recommendation included guidelines for public utilities to report employee related expenses that have been charged as Conservation Improvement Program (CIP) expenses. Public utilities must clearly identify all expenses in the four sections below:

- Travel expenses
- Employee meals
- Entertainment expenses, and
- Employee awards.

The DER further recommended, *“to limit the impacts on ratepayers, that these types of expenses remain a minor part of the overall annual budget or expenses, with a cap of 0.5 percent of total annual budgets or expenses.”*

Otter Tail Power summarizes the Company's 2020 employee expenses as follows:

Section	Amount	Description
Travel Expense	\$17,591	Travel expenses include mileage, rental vehicles, taxi services, and air fare for offsite meetings, customer site visits, and travel to training and conferences. All travel expenses are directly related to CIP program design, training, delivery, and promotion.
Lodging Expenses	\$3,031	Lodging expenses include any lodging used for customer site offsite meetings, customer site visits, and lodging for training and conferences. All lodging expenses are directly related to CIP program design, training, delivery, and promotion.
Meal and Entertainment Expenses	\$3,130	Meal and entertainment expenses include employee meals while attending offsite meetings, and meals while attending training and conferences. All meal and entertainment expenses are directly related to CIP program design, training, delivery, promotion, and review.
Conferences / Seminars / Trainings	\$9,247	Conferences / Seminars / Training expenses consist of registration fees.
Miscellaneous Expenses	\$0	Purchase of logo wear attire for employees while attending CIP public education forums and meetings.
TOTAL	\$32,999	

Total 2020 employee expenses that were included in Otter Tail's CIP Tracker were \$32,999. The total employee expense is 0.34 percent of the total 2020 CIP Tracker expenses of \$9,668,570. This amount is below the DER's recommended employee expense of 0.5 percent of total CIP expenses. Employee expenses were lower in 2020 due to COVID-19 restricting customer meetings, offsite training, and most travel for the majority of the year.

### **Incorporation of the Average Savings Method (ASM) to account for Behavioral Savings.**

On April 26, 2012, in Docket Nos. E,G999/CI-08-133 and E017/CIP-10-356, the Deputy Commissioner of the Department of Commerce made a decision in how to count energy savings from behavioral projects in CIP programs and the Shared Savings Demand-Side Management Financial Incentive calculations. The Commissioner ordered Average Savings Method (ASM) proposed by Staff be used with a three-year minimum lifetime, effective with the 2014 program year.

Otter Tail has implemented the Deputy Commissioner's decision for calculating the energy savings for behavioral projects. The results have been incorporated in the energy savings results counted towards the 1.5 percent energy savings goal.

## **VI. CONCLUSION**

Based on information provided throughout this filing, Otter Tail requests the following:

### **From the MPUC:**

1. Approval of the 2020 DSM Financial Incentive, totaling \$2,864,948.
2. Approval of the 2020 CIP Tracker, resulting in a year-end balance of \$2,067,599.
3. Approval to implement the CCRA factor of \$0.00582/kWh reflected on customers' bills through the Resource Adjustment starting with bills rendered on and after October 1, 2021.
4. Approval of a variance to Minnesota Rule 7820.3500 (E) to allow Otter Tail to continue to include the Conservation Improvement Adjustment in the Resource Adjustment on customer bills.

### **From the Division of Energy Resources:**

1. Approval of the individual 2020 CIP Projects, Evaluations, Energy and Demand Savings.
2. Approval of Otter Tail's response to various DER orders as indicated in the Miscellaneous Filing and Regulatory Compliance section of this filing.

If there are any questions concerning this filing, please contact Jason Grenier at (218) 739-8639 or [jgrenier@otpc.com](mailto:jgrenier@otpc.com).

Dated: April 1, 2021

**Respectfully submitted,**  
**OTTER TAIL POWER COMPANY**  
By: /s/ JASON GRENIER

Jason Grenier  
Manager, Market Planning  
Otter Tail Power Company  
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# **Financial Incentive**

## FINANCIAL INCENTIVE

Otter Tail Power Company (Company or Otter Tail) hereby submits this filing in compliance with the Minnesota Public Utilities Commission's (Commission or MPUC) January 27, 2010 Order Approving Demand Side Management (DSM) Financial Incentive Plans.<sup>1</sup>

The filing consists of the following items.

- Discussion of 2020 Financial Incentive
- Financial Incentive - Statutory Criteria
- Cost Comparisons / Net Benefits
- Request for Approval

Tables referenced in this Financial Incentive are located in Appendix A and include the following information.

Table 1	Calculation of Carrying Charge – 2020 CIP Tracker
Table 2	2020 Incentive Mechanism
Table 3	2020 Project Costs, Savings, and Benefits
Table 4	2020 Benefit Cost Ratios
Table 5	2020 CIP Program Status Report
Table 6	2020 CIP Program Status Report – Costs per kW & per kWh

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<sup>1</sup> Docket No. E,G999/CI-08-133.

## **I. DISCUSSION OF 2020 FINANCIAL INCENTIVE**

The current shared-savings financial incentive plan awards Otter Tail Power Company a share of the net benefits from investments in energy efficiency. The plan links the incentive to the utilities' performance in achieving cost-effective energy efficiency.

### **INCENTIVE CALCULATION**

On January 27, 2010, the MPUC approved a new shared savings model<sup>2</sup> for 2010 and indicated the new shared savings DSM incentive shall be in operation for the length of each utility's triennial Conservation Improvement Project (CIP) plan. Otter Tail's triennial plan is approved for 2017-2020.

On August 5, 2016, the MPUC issued an order adopting additional modifications to the Shared Savings Model recommended by the DER. On February 20, 2020, the MPUC extended the 2019 Shared Savings Model parameters through 2020. The MPUC's August 5, 2016 order incorporated the modifications set forth below. Included are the modifications that are specific to Otter Tail:

- Authorize financial incentives for a utility that achieves energy savings of at least 1.0 percent of the utility's retail sales.
- For each additional 0.1 percent of energy savings the utility achieves, increase the net benefits awarded to the utility by an additional 0.75 percent until the utility achieves savings of 1.7 percent of retail sales.
- For savings levels of 1.7 percent and higher, award the utility a share of the net benefits equal to the Net Benefits Cap of:
  - 13.5 percent in 2017,
  - 12.0 percent in 2018,
  - 10.0 percent in 2019, and
  - 10.0 percent in 2020.
- For all utilities, the following Conservation Improvement Plan (CIP) Expenditure Caps are applied:
  - 40 percent in 2017,
  - 35 percent in 2018,
  - 30 percent in 2019, and
  - 30 percent in 2020.
- The costs of any mandated, non-third-party projects (e.g., the 2007 Next Generation Energy Act assessments, University of Minnesota Initiative for Renewable Energy and the Environment costs) shall be excluded from the calculation of net benefits and energy savings achieved and incentive awarded.

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<sup>2</sup> Docket E,G999/CI-08-133.



- Costs, energy savings, and energy production related to Electric Utility Infrastructure Costs, solar installation, and biomethane purchases shall not be included in energy savings for DSM financial incentive purposes.

As part of this April 1, 2021, filing under section II, the Company is providing the 2020 proposed incentive. The following steps are used in the incentive calculation:

1. The 2020 incentive is calculated using the model provided by the Department and detailed in Appendix A, Table 2.
2. At year-end, the utility calculates the net benefits for the CIP projects based on actual participation and costs. The net benefits are the avoided costs less the total CIP costs, including both direct and indirect projects.
3. Appendix A, Table 3 lists the 2020 CIP Programs, each as proposed and approved by the Department, and each with actual 2020 results. Also listed are total program costs, resulting benefits, and net benefits for each program and as a total CIP Program.
4. **Actual energy savings was 67,344,127 kWh, excluding the Company's Publicly-Owned Property (POP) Solar and Company-Owned Street and Area Lighting (Street Lighting) programs' allocated savings, or 3.87 percent of historic average retail sales. CIP costs totaled \$9,549,826 and excludes the return on the LED Street and Area Lighting project's investment. The Company's total net benefits are calculated to be \$35,036,825, excluding assessments, House Therapy, POP Solar, and LED Street Lighting.** The 2020 results for energy savings, costs, and net benefits are entered in the post-year financial incentive tool as shown in Appendix A, Table 2.
5. Appendix A, Table 4 outlines the benefit/cost ratios for each 2020 program. Figures are listed for each project "as filed" as part of the 2017-2020 CIP Triennial Filing and "as actual" reflecting 2020 actual participation, savings, and costs.
6. As detailed in Appendix A, Table 2, the total incentive amount achieved in 2020 is **\$2,864,948.**

## II. FINANCIAL INCENTIVE - STATUTORY CRITERIA

Minn. Stat. §216B.16, subd. 6c(b), sets forth four statutory criteria with respect to approval by the Minnesota Public Utilities Commission of utility financial incentive plans for energy conservation improvements. In approving incentive plans, the Commission shall consider:

1. whether the plan is likely to increase utility investments in cost-effective energy conservation.
2. whether the plan is compatible with the interest of utility ratepayers and other interested parties.
3. whether the plan links the incentive to the utility's performance in achieving cost-effective conservation.
4. whether the plan is in conflict with other provisions of this chapter.

Consistent with the Commission's January 27, 2010 Order Approving Demand Side Management Financial Incentive Plans in Docket No. E,G999/CI-08-133, the following discussion describes how Otter Tail's proposed 2020 Demand Side Management financial incentive in the present docket is consistent with each of these statutory criteria.

Otter Tail's financial incentive mechanism is consistent with the considerations set forth by the Commission as follows:

1. Increase investments: The incentive mechanism encourages increased utility investment in cost-effective conservation, recognizing higher incentives for greater net benefits.
2. Interest of ratepayers and others: The current mechanism is in the interest of ratepayers because it awards utilities a percentage of net benefits achieved. The mechanism does not award the incentives for simply complying with statutory spending, but encourages additional cost-effective energy-efficiency investment, which is in the ratepayer's interest.
3. Links incentive to performance: The current incentive is a shared savings mechanism that awards utilities a share of the net benefits from investments in energy efficiency. There is a direct link between the amount of the incentive and the utility's performance of achieving cost-effective efficiency. As cost-effectiveness increases, net benefits increase, and thus, the incentive increases until the utility reaches the expenditure cap.
4. Conflict with other provisions: Otter Tail does not believe the current incentive conflicts with other provisions of law. It does not result in unjust or unreasonable rates since the mechanism awards for cost-effective energy efficiency at a cost less than supply side options.

### III. COST COMPARISONS / NET BENEFITS

In 2020, Otter Tail's average first year cost per kWh saved was 14 cents, which is equivalent to the five-year average of 14 cents. As noted in the Table 1, the average first year costs per kWh range have remained relatively consistent.

<b>Table 1: History of Otter Tail's CIP Achievements, Tracker, and Incentives (2016-2020)</b>					
	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
DSM Financial Incentive	\$5,031,678	\$2,642,360	\$3,004,311	\$2,718,378	\$2,864,948
CIP Expenditures	\$7,770,781	\$6,605,899	\$9,027,762	\$9,116,722	\$9,643,680
Achieved Energy Savings (kWh)	57,504,891	52,497,167	73,255,915	69,248,477	70,649,612
Average Cost per kWh Saved	\$0.14	\$0.13	\$0.12	\$0.13	\$0.14

## NET BENEFITS

The definition of “net benefits” used in the financial incentive calculation is the total utility benefits less the total utility costs for the entire CIP portfolio for a single year. These figures are derived from a single year (2020) benefit/cost analysis using DSMore™ software. The utility benefits are aggregated for the lifetime of all CIP energy efficiency measures, discounted back to 2020 dollars using the utility discount rate of 7.51 percent for the utility test as approved in the 2016 General Rate Case and 2.68 percent for the societal test as approved in the 2017-2020 CIP filing.

As shown in Table 3 of Appendix A, the estimated net benefits for the 2020 Proposed CIP are \$15,924,289<sup>3</sup>. Additional details of the total costs and the total benefits from benefit/cost analysis of the 2020 Proposed CIP portfolio include:

<b>Program Costs - Proposed 2020**</b>	
Delivery/Implementation/Administration Costs	\$3,864,210
Incentives	\$3,202,937
<b>Total Costs</b>	<b>\$7,067,147</b>
<b>Program Benefits - Proposed 2020*</b>	
Avoided T&D Electric	\$4,181,716
Cost-Based Avoided Electric Production	\$14,045,869
Cost-Based Avoided Electric Capacity	\$6,763,852
Cost-Based Avoided Ancillary	\$0
<b>Total Benefits</b>	<b>\$24,991,436</b>
<b>Net Benefits - Proposed 2020</b>	<b>\$17,924,289</b>
<b>Benefit/Cost Results - Proposed 2020</b>	<b>3.54</b>

\* Benefits are based on lifetime benefits, discounted back to 2020 dollars using 7.51 percent utility discount rate.

\*\* Costs include assessments.

As shown in Table 3 of Appendix A, the actual net benefits of \$35,375,536<sup>4</sup> for 2020 CIP are higher than the proposed net benefits. Additional details of the total costs and the total benefits from the DSMore analysis of the 2020 Actual CIP portfolio include:

<sup>3</sup> This number reflects total net benefits and not the net benefits included in the calculation of the financial incentive.

<sup>4</sup> This number reflects total net benefits and not the net benefits included in the calculation of the financial incentive.

<b>Program Costs - Actual 2020**</b>	
Delivery/Implementation/Administration Costs	\$3,766,733
Incentives	\$5,876,947
<b>Total Costs</b>	<b>\$9,643,680</b>
<b>Program Benefits - Actual 2020*</b>	
Avoided T&D Electric	\$8,097,164
Cost-Based Avoided Electric Production	\$25,346,892
Cost-Based Avoided Electric Capacity	\$11,575,161
Cost-Based Avoided Ancillary	\$0
<b>Total Benefits</b>	<b>\$45,019,217</b>
<b>Net Benefits - Actual 2020</b>	<b>\$35,375,536</b>
<b>Benefit/Cost Results - Actual 2020</b>	<b>4.67</b>

\* Benefits are based on lifetime benefits, discounted back to 2020 dollars using 7.51 percent utility discount rate.

\*\* Costs include assessments.

<b>CIP Cost Breakdown - 2020</b>				
	<b>Proposed Costs</b>		<b>Actual Costs</b>	
Delivery	\$3,864,210	55%	\$3,766,733	39%
Incentives	\$3,202,937	45%	\$5,876,947	61%
<b>Total CIP Costs</b>	<b>\$7,067,147</b>	<b>100%</b>	<b>\$9,643,680</b>	<b>100%</b>

#### IV. SUMMARY OF PROPOSAL

Otter Tail's 2020 CIP energy savings more than doubled Minnesota's energy savings goal of 1.50 percent and finished at 3.87 percent of historical sales. The MPUC's August 5, 2016, Order adopting Modifications to Shared Savings Demand-Side Management Financial Incentive Plan reaffirmed the basis of the utility's financial incentive is to share the net benefits from the conservation programs between customers and the utility. For 2020 CIP results, the utility was eligible to receive 10 percent of the total net benefits delivered to its customers but not to exceed 30 percent of total expenses. Applying these factors Otter Tail qualifies for a \$2,864,948 financial incentive.

Otter Tail's proposed 2020 financial incentive is consistent with Minn. Stat. §216B.16, subd. 6c(b), since it supports an increase in cost-effective utility investments, links the utility's

performance to achieving cost-effective conservation, and does not conflict with other provisions of Minn. Stat. §216B.16.

## **V. REQUEST FOR APPROVAL**

### **FINANCIAL INCENTIVE FILING**

Otter Tail respectfully requests the MPUC to approve the 2020 CIP performance financial incentive amount of \$2,864,948 be recoverable through its CIP Tracker Account.

If there are any questions concerning this filing, please contact Jason Grenier at (218)739-8639 or [jgrenier@otpc.com](mailto:jgrenier@otpc.com).

Dated: April 1, 2021

Respectfully submitted,  
OTTER TAIL POWER COMPANY

By: /s/ JASON GRENIER

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# **Status Report**

# Status Report

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## **STATUS REPORT - 2020 CIP PROGRAMS**

The 2020 Conservation Improvement Program (CIP) Status Report has been combined with the 2020 Financial Incentive Filing, produced annually on April 1. The Status Report covers all 2020 programs, including direct impact, indirect impact, and miscellaneous programs. Participation, program costs, and energy and demand savings for all programs are outlined in Appendix A, Table 5. The programs described in this Status Report are approved for the 2020 CIP Plan unless stated otherwise.

### Direct Impact Programs

#### Residential

- Air Conditioning Control
- Appliance Recycling
- Electronically Commutated Motors
- Energy Feedback
- Energy Star Lighting
- Heat Pumps
- Home Insulation
- Home Transformer
- School Kits
- Smart Thermostats
- Water Heater Store & Save

#### Low-Income

- House Therapy

#### Commercial

- Adjustable Speed Drives
- Air Conditioning Control
- Commercial Direct Install
- Compressed Air Efficiency
- Custom Efficiency Grants
- Heat Pumps
- Commercial & Industrial Focused Efficiency
- Lighting – Retrofits
- Lighting – New Construction
- Motors
- Recommissioning
- Refrigeration

Other

- Company-Owned Street & Area Lighting
- Publicly Owned Property (POP) Solar

Indirect Impact Programs / Regulatory Requirements

- Advertising & Education
- Compressed Air Audits
- Integrated Building Design Plus
- Financing
- Implementation & Training
- Program Development
- PUC / Regulatory (NGEA) Assessments
- Transmission & Distribution Cost Study

Miscellaneous / Inactive Program Costs

- Accounting Adjustments
- Town Energy Challenge Pilot
- Carrying Charges

## DIRECT IMPACT – RESIDENTIAL

### AIR CONDITIONING CONTROL

The CoolSavings air conditioning control program targets residential customers with central air conditioning. Customers are encouraged to enroll in the program and receive a \$8.25/month credit prorated for each of the four summer months (June-September).

Otter Tail Power Company (the Company, Otter Tail) promotes air conditioning control using various resources listed below:

- Bill inserts sent to customers in February and April 2020.
- A media campaign in conjunction with the Advertising and Education program.
- Customer care booklet sent to all new customers.
- Hero-spots on the Company website during March and April.
- Bill messages – January and March.
- Return envelope promotion April through July.
- *Programs and services guide* provided to contractors and employees.
- Digital billboard spot in March.
- Agency training for House Therapy contractors.
- Brochures available upon request.
- Program, rate, and rebate page described within the Company’s web site.

In 2020, Otter Tail controlled air conditioning six days totaling 8 hours and 13 minutes. This control time is within the 300-hour control limit in the air conditioning rider.

### Participation & Budget

PARTICIPATION AND BUDGET – 2020			
Air Conditioning Control (R)	Actual	Proposed	% of Goal
Participation	2,855	4,679	61%
Budget \$	\$58,658	\$87,000	67%

### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company’s triennial plan.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Air Conditioning Control (R)</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	88,537
Demand Savings – kW	2,111.23

### **APPLIANCE RECYCLING**

The Appliance Recycling program offers residential customers a \$50 incentive to recycle inefficient but operating refrigerators and freezers at no cost to the customer. In 2020 we offered eight LED bulbs in addition to the \$50 recycling incentive to participants. This has helped retain customer interest in the program as reflected in participation. We will continue with the additional incentive in 2021.

Otter Tail temporarily ceased operations of the Appliance Recycling program in 2020 due to COVID-19 pandemic concerns over the safety of Otter Tail customers and personnel employed by Appliance Recycling Centers of America (ARCA), our implementation contractor. As the pandemic situation evolved and more information regarding accepted safety practices became available, Otter Tail worked closely with ARCA in developing safe, contact-free optional appliance pickup procedures enabling continued participation in the program.

Otter Tail promotes appliance recycling using various resources:

- Bill inserts targeted at residential customers in May and August.
- Print advertising in May and September.
- Radio campaign on targeted Minnesota stations in May.
- Digital media campaign in September.
- Web page content including hero ads placed on the Company's home page and program information including instructions about how to schedule appliance pickup.
- Digital billboard spot in May, June, and July.
- Bill message in May and June.
- Inclusion as appropriate on Home Energy Reports mailed to customers through the Energy Feedback program.

### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Appliance Recycling</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	359	230	156%
Budget \$	\$147,254	\$65,000	227%

### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Appliance Recycling</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	366,546
Demand Savings – kW	53.15

### **ELECTRONICALLY COMMUTATED MOTORS**

The Electronically Commutated Motors (ECM) program encourages customers to install an efficient ECM as a part of a new heating system rather than selecting a system with a lower efficiency motor option. ECMs use significantly less electricity to deliver warm air from the furnace and cool air from the central cooling system for space conditioning. ECMs can result in up to 75 percent less energy consumption than standard fan motors.

ECM efficiency was marketed to customers and contractors through:

- Bill inserts sent in May and August targeted at residential customers.
- *Programs and services guide* provided to contractors and employees.
- Program information on the Company's web page, [www.otpc.com](http://www.otpc.com).

Otter Tail provides customers a \$100 rebate for a contractor-installed unit.

## Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Electronically Commutated Motors</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	286	120	238%
Budget \$	\$41,427	\$30,000	138%

## Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company’s triennial plan.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Electronically Commutated Motors</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	224,150
Demand Savings – kW	65.66

## **ENERGY FEEDBACK**

The Energy Feedback program consists of two program components: Aclara Technologies Home Energy Analyzer (HEA) and an Opower Home Energy Report (HER). These behavior-based energy savings programs aim to maximize energy savings achieved through behavior changes that result from providing customers comparative energy use information.

The HEA component is an opt-in program that provides feedback to residential users through an online interface. The HER project is an opt-out program based on direct mail delivery of up to four comparative energy usage reports to participating Minnesota residential customers each year.

**Home Energy Analyzer-** HEA enables users to understand their individual energy use through online presentation of up to 24 months of billing history and analytics. It includes a “My Energy” portal that features a home energy profile, into which details about the age and size of home, appliance inventory, insulation and window features, heating system, and energy consumption are compiled and included in energy analysis. Customers can set a personal savings goal and are presented options that will help them achieve their desired goals.

Minnesota residential customers were encouraged to participate in use of the HEA tool in the following ways:

- Company's web site, including hero-spot ads presented on the home page, and a program page within the website.
- Bill inserts sent in May, August, September, and November to all residential customers.
- Digital billboard spot beginning in August and continuing through December.
- Through a digital media campaign during the last quarter of the year.
- Customer service guide sent to all new customers.
- Online services brochure sent to all new customers.

To encourage customer participation the Company offered an incentive to customers to use the tool to update their home energy profile. Customers completing that step were presented with more accurate energy benchmarking analysis within the HEA portal and received a \$20 gift card.

**Opower Home Energy Reports** – The HER program delivers comparative energy usage information to selected Minnesota residential customers. As more people began to work from home and participate in online learning because of COVID-19, we worked with Opower to modify the HER report modules to soften neighbor comparison messages and to provide guidance about easy ways to save energy while spending more time at home.

HERs contain various personalized components, including:

- Comparisons of recent energy use to a group of nearby similar homes.
- Comparison of recent energy use to current use, tracking changes over time.
- Energy efficiency tips selected based on the home's energy use pattern and season, and household heating type.

Participation in the program is defined as any Minnesota residential customer that received one or more personalized HER during 2020.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Energy Feedback</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Aclara HEA Participation	1,479	2,500	59%
Opower HER Participation	29,263	28,000	105%
Budget \$	\$353,237	\$302,100	117%

## Evaluation Methodology – Home Energy Analyzer

Annually since 2010, Otter Tail contracted with Integral Analytics to perform an evaluation of the Bill Analyzer project. The methodology used in 2010 was approved by DER staff. The evaluation relied upon a statistical analysis of the actual billed electricity consumption before and after participation in the HEA project.

The evaluation found that savings varied by the component or level of the HEA tool the participant used. As in the past, in addition to calculating the savings by component, Integral Analytics also calculated an average overall savings calculation. In 2020, the evaluation demonstrated an average 225 kWh per year as measured at the meter.

In addition to analysis of post-participation usage compared to the customer's own pre-participation usage, Integral Analytics completed an analysis of the participant group against a randomly selected control group.

The HEA evaluation is included in Appendix B-Third Party Evaluations.

## Evaluation Methodology – Opower HER

The 2020 evaluation of energy savings for the Opower HER program was completed by Opower using integrated data from a variety of sources that allow for detailed analysis of energy savings results. The evaluation is included in Appendix B – Third Party Evaluations. The data included:

1. **Consumption data:** Otter Tail provided weekly updates of monthly consumption data for all households in the program, including historical consumption information.
2. **Parcel data:** Opower received data, to the extent available from a third-party vendor, about household parcels, including house size, age and value, heating and cooling type, as well as pool and hot tub data. Parcel data elements for age and value are static. Other data elements may be updated at the customer's request.
3. **Demographic data:** Opower received demographic data, to the extent available from a third-party vendor, about participants, including household income, age of occupant(s), number of occupants, and an owner/renter indicator. The number of occupants is a field that is available for update at customer's request.

Opower's analysis of the HER program relies upon a fixed-effects regression model. This statistical methodology is standard procedure for the analysis of controlled experiments, is a well-accepted practice within the energy efficiency program measurement and verification



community, and closely resembles the “Large Scale Data Analysis” techniques described in the Model Energy Efficiency Program Impact Evaluation Guide from the National Action Plan on Energy Efficiency.

In 2016, updates were made to the Modeled Savings Methodology to improve the accuracy of the reporting. These changes include:

- Establishing the relationship between the monthly savings rate and the cumulative number of print reports received per person in the wave up to that month.
- Applying the forecasted savings rate in each month to the usage of the modeled wave.
- Adapting the algorithm to apply to rolling enrollment waves.

Otter Tail received approval from the MN DER on October 7, 2016, to apply a revised Modeled Savings Methodology to calculate energy savings.

Overall adjusted energy savings associated with the HER program in 2020 totaled 11,336 MWh, equal to an average 387.38 kWh per participant household.

#### Energy Savings & Adjustments

In accordance with the Decision of the DER, these full savings are used in calculating the net benefits and cost effectiveness of the Energy Feedback program. For 2020, the energy savings associated with behavioral change has been reduced by two-thirds, based on the Decision<sup>1</sup> by the Deputy Commissioner of the DER.

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Aclara Home Energy Analyzer</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	119,400
Demand Savings – kW	56.45

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Opower Home Energy Reports</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	4,067,321
Demand Savings – kW	3,638.1

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<sup>1</sup> April 26, 2012, Docket Nos. E,G999/CI-08-133, E017/CIP-10-356.

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Energy Feedback Combined Results</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	4,186,721
Demand Savings – kW	3,694.55

## **ENERGY STAR LIGHTING**

The Energy Star Lighting program aims to increase the market share for ENERGY STAR qualified LEDs, while educating both consumers and retailers about the benefits of energy efficient lighting.

Through the services of Slipstream, Otter Tail offers the Energy Star Lighting campaign with the following objectives:

- Leverage manufacturer dollars for instant consumer rebate incentives averaging \$1.56 per LED bulb.
- Leverage advertising dollars for retailers.
- Highlight Otter Tail’s sponsorship of the promotions through press releases, in-store displays, and special public relations events and LED bulb sales.
- Implement the program with seamless coordination with other Energy Star Lighting promotions throughout Minnesota and the Midwest.

There were approximately 24 retailers in our service territory that participated in the 2020 campaign, contributing to distribution of approximately 195,000 bulbs.

Otter Tail promotes the Energy Star Lighting program using various resources listed below:

- Bill inserts in May, August, and October.
- Television, radio, and digital media spots.
- *Programs and services guide* provided to contractors and employees.
- The Company’s web site.
- Energy efficient lighting modules on Home Energy Reports mailed to customers through the Energy Feedback program.
- Factsheets available upon request.

Other unique promotions included the following:

- The Company provided eight LED bulbs for each customer who recycled either a refrigerator or freezer through the Appliance Recycling program. This extended customer education about LED bulbs and increased the total bulb distribution.
- The Company distributed LED holiday light strings in the 2020 program in collaborations with local food shelves and Ruby’s Pantry food distribution events. In community food

shelf collaborations, Otter Tail gave LED holiday light strings to customers in exchange for nonperishable food or monetary donations. The Company organized and staffed these events in Hallock, Crookston, Bemidji, and Fergus Falls. Otter Tail also worked closely with local, volunteer-based Ruby's Pantry food distribution centers in Fergus Falls, Perham, and Barrett by including free LED strings with food shares. The Company held all events outdoors with COVID-19 precautionary measures in place. Results included donations of 3,287 pounds of food and \$1,930 in cash donations to food shelves, a separate \$1,000 cash donation to the Fergus Falls Veteran's Home, and distribution of 9,237 LED holiday light strings. In a separate collaboration with community food shelves, Otter Tail distributed four-packs of LED bulbs to local food shelves, who then included bulbs in orders for food shelf clients through normal business operations. The Company allocated 30% of all expenses and energy savings for this effort to the House Therapy program.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Energy Star Lighting</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	195,661	110,000	178%
Budget \$	\$555,380	\$360,000	154%

#### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Energy Star Lighting</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	7,160,979
Demand Savings – kW	783.97

## HEAT PUMPS

### (Residential)

The 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 or geothermal heat pumps. The Company relies on Energy Star qualifications as the minimum equipment efficiency requirement for air source and geothermal heat pumps.

In 2020 air source heat pumps met the following minimum rating requirements.

Air Source Heat Pumps			
Energy Star	HSPF	SEER	EER
Split System	> or = 8.5	> or = 15.0	12.5
Package Terminal	-	-	> or = 12.0
CCHP- Ducted	> or = 9.0	> or = 15.0	-
CCHP- Ductless	> or = 10.0	> or = 15.0	-

A special category of air source heat pump, the cold climate heat pump (CCHP), was included in our 2020 program. CCHPs are identified as rated with a heating seasonal performance factor (HSPF) of 10 or greater and either labeled Energy Star or have minimum ratings of 15 seasonal energy efficiency ratio (SEER).

In 2020 geothermal heat pumps met the following minimum rating requirements.

Geothermal Heat Pumps			
Type	Loop Type	COP	EER
Water to air	Open loop	4.1	21.1
Water to air	Closed loop	3.6	17.1
Water to water	Open loop	3.5	20.1
Water to water	Closed loop	3.1	16.1
Direct exchange		3.6	16.0

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

- *Programs and services guide* provided to contractors and employees.
- Media campaigns including television, radio, and digital media during March and in conjunction with the Advertising and Education Program and digital media and radio during August focused on educating customers about the high efficiencies of cold climate heat pumps.
- Bill messages included on customer statements during April, May, July, and August.

- Bill inserts during June.
- Digital billboard image from May through June.
- Program, rate, technology, and rebate pages described within the Company's web site.
- Hero spots on the home page of the website January, February, and June. CCHP received spots in April, May, and September.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Heat Pumps (R)</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	288	102	282%
Budget \$	\$722,199	\$275,000	263%

#### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Heat Pumps (R)</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	3,611,077
Demand Savings – kW	311.20

### **HOME INSULATION**

The Home Insulation program targets residential customers with primary electric heat by offering rebates for contractor-installed weatherization and insulation measures.

Otter Tail promoted the Insulation program through:

- Bill inserts sent to all residential customers in the months of May and August.
- A digital media campaign during April.
- Promoted on digital billboards in April.
- Program information included as a home page hero spot during March and September as well as on program pages on the Company's web site.

We will continue to offer incentives and seek additional marketing channels to drive increased participation.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Home Insulation</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	16	40	40%
Budget \$	\$23,476	\$45,000	52%

#### Evaluation Methodology

Otter Tail collected information on the measures completed by the customers, including weatherization, attic and ceiling/roof insulation, and/or wall insulation, square footage of area being insulated and the pre- and post-insulation values.

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Home Insulation</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	76,306
Demand Savings – kW	2.57

#### **HOME TRANSFORMER**

The Home Transformer program aims to identify and assist customers in reducing energy loss and waste in their home and to save energy and money through efficiency improvements.

Through the program, the Company offers customers with homes featuring electric space- and water-heating an energy audit and installations of select energy-efficiency products at no cost to the customer. Products included:

- An energy audit, a blower door test, and thermal imaging analysis.
- A detailed report on audit findings, including recommendations for energy saving measures with estimated costs, annual savings, and simple payback for each measure.
- Efficiency products, installation demonstration, and education.
  - Electric measures – LED bulbs and engine block heater timer.

- Heating and cooling measures – exterior door sweep, outlet gaskets, caulking, weather-stripping for windows.
- Water heating measures – pipe insulation, low-flow showerheads and faucet aerators, temperature assessment and setback of water heater temperature if warranted to enhance residence safety and energy savings.

Otter Tail relied on a local community action agency for the technical expertise needed to provide professional home energy audits and direct installs of energy efficiency measures. Otter Tail promoted the program through strategically scheduled bill inserts targeting customers with electric space- and water-heating systems.

### **Minnesota Energy Resources Partnership**

Otter Tail partners with Minnesota Energy Resources Corporation (MERC) and Center for Energy and Environment (CEE) to provide audits and direct-install of energy saving measures for customers in both multifamily buildings and single-family homes. The partnership allows both utilities to more cost effectively offer audits and direct install measures at no cost to customers. These partnerships have traditionally focused on natural gas heated buildings with five or more units as well as single-family homes. However, in 2020 Otter Tail worked directly with CEE to explore opportunities in multifamily buildings completed prior to the MERC partnership for electric energy saving direct installs of LED bulbs.

Multifamily customers with 5 or more units receive:

- A comprehensive analysis of the building's energy use.
- A building assessment report with information on cost-effective energy efficiency improvements for the property and no-cost control adjustments.
- Assessment of major energy end-uses and building components such as insulation levels, heating system, domestic hot water system, building controls, lighting, and appliances. Customers that pursued projects received referrals to authorized contractors and information on MERC and Otter Tail Power rebates.
- Boiler control assessment and adjustments to maximize energy savings and occupant comfort.
- Installation of energy saving measures including:
  - LED bulbs
  - low-flow showerheads
  - faucet aerators
  - pipe wrap on boiler and domestic hot water pipes
  - temperature assessment and setback of water heater when warranted to maximize residence safety and energy savings.

Single-family home residents receive a similar report focusing on opportunities in the single-family home along with free LED bulbs.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Home Transformer</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	37	100	37%
Budget \$	\$25,040	\$87,000	29%

Participation was lower than expected due to temporarily ceasing program operations out of COVID-19 related safety concerns for both Otter Tail’s contracted implementation partners and participating customers. The Company was able to provide audits for customers willing to allow auditors into homes with all proper safety precautions, including masks, other personal protective equipment, and social distancing measures in place.

The results of targeted outreach and implementation with CEE created opportunities in multifamily buildings. These buildings, however, were eligible for participation in the Company’s House Therapy program. The participation numbers reflected in the table above consequently do not represent these multifamily buildings participating in the Home Transformer program. Multifamily buildings identified through outreach completed with CEE are instead reflected as participants in Otter Tail’s Low Income sector House Therapy program.

#### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company’s triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Home Transformer</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	172,666
Demand Savings – kW	31.94



## **SCHOOL KITS**

The School Kit program offered energy efficient items and educational materials primarily to fifth grade students, and on a limited basis to sixth grade students, in school districts throughout Otter Tail's service area. Otter Tail implemented the LivingWise program using AM Conservation Group, a contracted third-party.

AM Conservation Group's representatives successfully completed outreach by contacting schools throughout our service territory currently educating students of Otter Tail customers. With school districts across the state closing in the first quarter of 2020 due to COVID-19 concerns, most program activity took place in the fall of 2020.

AM Conservation Group ordered the kits, assembled in reusable tote bags, and shipped the required inventory to participating schools. Kits included: a power cord timer, six 9-Watt LED Energy Star bulbs, two faucet aerators, a high efficiency showerhead and a temperature gauge for the refrigerator. Along with the products, the kits included information about the products and installation instructions.

Integration into lesson plans for teachers was another key deliverable for the School Kit program by providing all teachers at participating schools with an instruction guide and lesson plans. Participating students received a workbook and study guide following the teacher's instruction guide.

### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>School Kits</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	1,556	1,000	156%
Budget \$	\$110,086	\$130,000	85%

The program exceeded expected participation with impressive levels of satisfaction reported by teachers participating in the program. All participating teachers indicated they would conduct this program again with future classes; they recommend the program to other colleagues; and further indicated that parents supported the program as part of their child's education curriculum.

### Evaluation Methodology

Energy and demand savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>School Kits</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	1,806,407
Demand Savings – kW	148.96

### **SMART THERMOSTATS**

The Smart Thermostat program offers rebates to customers who buy and install a qualified Tier II or Tier III thermostat. Tier II thermostats are communicating thermostats that give users access to set points and schedule from anywhere using a smart device including a mobile phone, tablet, or computer. Tier III are analytics-capable thermostats that offer energy saving features in addition to those of the Tier II thermostats, including coaching, HVAC diagnostics, comparative information, and geofencing. The tier level and the type of heating system determined the level of rebate a customer received. A customer without primary electric heating but with a central cooling system would receive a lesser rebate.

Otter Tail promoted the Smart Thermostat program through:

- Media campaigns including television and radio in February and November.
- Bill inserts sent to all residential customers in October.
- Digital billboard displays in January and February.
- Hero spots on the home page of the website in February.

## Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Smart Thermostats</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	234	140	167%
Budget \$	\$105,643	\$50,000	211%

## Evaluation Methodology

The Company uses the methodology from the TRM for calculating savings for installing a Tier II or Tier III smart thermostat. Otter Tail plans to continue offering a prorated rebate based on reduced savings for those customers installing a smart thermostat with electric cooling only.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Smart Thermostats</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	351,415
Demand Savings – kW	10.70

### **WATER HEATING STORE & SAVE**

#### **(Residential)**

Controlled water heating storage is one of Otter Tail’s largest residential direct load management programs. The program gives participating customers a discounted rate or a bill credit in exchange for the customer allowing the Company to curtail their water heating energy use during peak and high energy price periods. During a control event, water heaters are interrupted entirely for the duration of the control period, which can occur at any time of the year.

Water heaters were controlled approximately 118 hours in 2020 over 187 days. Otter Tail uses a control protocol of more frequent, shorter duration control events based on pricing signals aimed at maximizing savings to customers from water heater control.

Otter Tail promoted controlled-service water heating during 2020 using the following resources:

- Through a digital media campaign during June.
- Bill messages included on customer statements in February.
- Bill inserts in May, August, and November.
- Digital billboard display in February, March, and July.
- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Home page hero ad in August and November and program, rate, and rebate pages within the Company’s web site.

## Participation & Budget

Otter Tail initially filed the Water Heating Store & Save program with 100 percent residential participation. The program has a ratio of 94 percent residential and 6 percent commercial. Otter Tail has included participation data for both classes in this section of the Status Report.

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Water Heating Control</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	15,660	16,165	97%
Budget \$	\$20,855	\$35,000	60%

#### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Water Heating Control (R&amp;C)</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	567,556
Demand Savings – kW	11,462.37

## DIRECT IMPACT – LOW INCOME

### HOUSE THERAPY

The House Therapy program's primary focus is audit and weatherization services for low-income residential customers, both renters and owners. The following table provides details on measures installed and participant status as owners or renters.

House Therapy -- Owner / Renter Detail 2020			
Installed measures	Owners	Renters	Total
Audit	78	0	78
Engine Block Timer	72	0	72
Faucet Aerator	77	0	77
Freezer	12	0	12
LED	9,118	1,742	10,860
Low-flow Showerhead	32	0	32
Pipe Insulation	6	0	6
Refrigerator	34	0	34
Water Heater	21	0	21
Water Heater - Reduce Temperature	39	0	39
Water Heater--Controlled Ser. Rate	11	0	11

House Therapy -- Owner / Renter Detail - 2020				
	CAP Spending	Percent	Participation	Percent
Owners	\$78,959	87%	80	96%
Renters	\$12,194	13%	3	4%
Total	\$91,153	100%	83	100%

Otter Tail relies on local Community Action Program (CAP) Agencies to provide valuable technical expertise and implementation services for the House Therapy program. COVID-19 presented challenges for implementation of the House Therapy program in 2020, forcing CAP agencies to temporarily discontinue in-home audits and other related services for nearly half the year. Local CAP agencies further reported delays in delivery and installation of Energy Star appliances and continue to do so. Even with these challenges, Otter Tail is proud of the effort put forth by our CAP agency partners as well as internal staff. Specific efforts included:

- 1) CAP agency success in returning to client homes through use of proper PPE and social distancing measures to complete 78 audits for Otter Tail customers.

- 2) A community manufactured housing development blitz completed jointly with Clean Energy Resource Teams (CERTs) and one CAP agency. Through the Blitz, Otter Tail provided all 20 mobile homes in this development with nine-watt LED bulbs and educational materials on weatherization, energy assistance options, and Otter Tail's House Therapy program. The CAP partner was able to implement this strategy through proper social distancing practices.
- 3) A strategic partnership with Fergus Falls Habitat for Humanity to install an Energy Star cold climate air source heat pump in a remodeled home.
- 4) A strategic partnership with Center for Energy and Environment including outreach and direct install of LED bulbs in income-qualified multifamily buildings. Results included completion of 12 assessments in buildings with no prior participation in either Otter Tail's Home Transformer program through its MERC partnership or in the House Therapy program. The effort further resulted in direct install of 1,742 LED bulbs in 211 individual multifamily housing units over three buildings.
- 5) A collaborative effort with 21 local community food shelves to reach low-income residents throughout Minnesota. Otter Tail was able to direct ship four-packs of Energy Star LED bulbs to community food shelves, who in turn were successful in distributing 27,648 bulbs from June through October. Otter Tail has accounted for 30% of the expense of this initiative and likewise documented 30% of the savings from this effort to the House Therapy program per prior approval from Minnesota Department of Commerce (Department) staff.
- 6) Strategic partnerships with Ruby's Pantry food distribution centers to include free LED holiday strings with all food shares picked up by customers through special, socially distanced outdoor food distributions. The Company did not allocate any energy savings or expense from these activities to House Therapy because income qualification is not a qualifier for clients to take part in Ruby's Pantry food distribution. The Company was pleased to provide LED strings to customers purchasing affordable food shares distributed by Ruby's Pantry in 2020.

Otter Tail is extremely grateful to all who played a critical role in its 2020 House Therapy program, including Center for Energy and Environment, Clean Energy Resource Teams, Slipstream, local food shelves, and Ruby's Pantry.

The Company typically meets yearly with the local CAP Agencies to review the program and ensure House Therapy is implemented as cost-effectively as possible. With COVID-19 concerns throughout much of 2020, Company staff instead chose to meet virtually with smaller groups of CAP agency representatives to review 2020 activities and discuss upcoming program changes. The Company commends the agencies' commitment to providing weatherization expertise and excellence in implementation services for this program even with the COVID-19 related challenges throughout 2020.

Otter Tail promotes House Therapy using various resources:

- Residential bill inserts.
- As part of the environment disclosure insert posted on our website annually.
- Through the Company's website including providing a list of each of the agencies that implement the program.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>House Therapy</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	83*	130	64%
Budget \$	\$154,246	\$150,000	103%

\*Total participation of 83 includes 211 individual rental apartments from three separate multifamily buildings participating in House Therapy but reported by the Company as only three participants. The Company also reported the 8,294 LED bulbs distributed in its local food shelf campaign as a single homeowner participant even though these measures likely reached many residences made up of both owners and renters. The Company did not report any participants from its residential Energy Star Lighting program, including Ruby's Pantry LED holiday string distributions or in-store sales of LED bulbs as participants in House Therapy.

#### Evaluation Methodology

In 2020, the TRM was used for many of the House Therapy components. Where TRM was not available, engineering estimates were used. Energy and demand savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>House Therapy</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	470,642
Demand Savings – kW	57.76

## DIRECT IMPACT – COMMERCIAL

### ADJUSTABLE SPEED DRIVES

Induction motors are the workhorses of industry, used widely, and often exclusively, in virtually every manufacturing plant and office building. However, the single most potent source of energy savings in induction motor systems lies not in the motor itself but rather in the controls that govern the motor's operation. Adjustable speed drives are one method of modifying or controlling motor operation that is a proven option for improving performance and efficiency in drive systems.

Otter Tail promotes adjustable speed drives using various resources.

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Bill inserts promoting drive power system efficiency to commercial and industrial customers in July and December.
- Program, technology, and rebate information available on the Company's web site.

#### Participation & Budget

PARTICIPATION AND BUDGET – 2020			
Adjustable Speed Drives	Actual	Proposed	% of Goal
Participation	152	164	93%
Budget \$	\$443,184	\$390,000	114%

#### Evaluation Methodology

The Company utilizes engineering calculations that are based on methodologies developed by the Electric Power Research Institute for fan- and pump-based adjustable speed drive systems. Hours of operation and associated loading factors are provided by the customer as inputs for the energy and demand savings calculations. Energy and demand savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.



## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Adjustable Speed Drives</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	7,382,209
Demand Savings – kW	925.48

### **AIR CONDITIONING CONTROL**

The CoolSavings air conditioning control program targets small commercial customers in Minnesota with central air conditioning systems. Customers are encouraged to enroll in the program and receive a bill credit of \$6 per ton of connected load for each summer month (June-September).

Otter Tail promotes the program through the following resources:

- Personal business contacts.
- Bill insert targeting commercial customers during February and April.
- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Program, technology, and rebate information available on the Company's web site.
- Otter Tail's Advertising and Education program targeting small- to mid-size businesses.

In 2020, Otter Tail controlled air conditioning six days, totaling 8 hours and 10 minutes. This control time is within the 300-hour control limit in the air conditioning rider.

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Air Conditioning Control (C)</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	302	546	55%
Budget \$	\$5,226	\$32,000	16%

### Evaluation Methodology

Current energy and demand savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Air Conditioning Control (C)</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	32,500
Demand Savings – kW	1,687.86

### **COMMERCIAL DIRECT INSTALL**

The Commercial Direct Install (CDI) program offers free energy assessments and installation of low-cost energy efficiency measures for participating small- to mid-sized commercial customers. The program capitalizes on personal interactions to educate customers in this often-overlooked market segment on:

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

The free energy assessment provides the customer with a simple two-page report identifying opportunities for investing in energy efficiency measures and further educates customers on the subject. At the same time, direct-installation of easily installed energy efficiency measures at no cost to the participant provides real-world examples of technologies readily available for reducing energy expenses in small- to mid-size businesses.

Otter Tail promotes the CDI program through a targeted strategy based on community size and geographic location. The Company relies on personal contacts with city administration and government, Chamber of Commerce personnel, and any other business organizations to determine overall interest in implementing the program. The Company has also leveraged valuable assistance from CERTs in conducting outreach with potential participants. Once Otter Tail has discussed the program with community civic and business leaders, promotion of the CDI program for potential participants includes the following steps:

1. Otter Tail coordinates a mutually convenient time between internal staff, CERTs staff, and the Company’s third-party implementation partner to conduct door-to-door outreach efforts at the community business district level.
2. Otter Tail notifies community government and city leaders of the scheduled outreach and direct install dates, verifying that local law enforcement is aware of both door-to-door promotion efforts and implementation of the direct install measures.
3. CERTs staff spends one to two days visiting potential participants, providing information about the program, and scheduling dates for the program implementation while determining customer interest.

4. Otter Tail, CERTs, and Otter Tail's program implementation partner discuss results from CERTs outreach efforts and businesses requesting participation in the CDI program.
5. Otter Tail's program implementation partner completes assessments for participating businesses and installation of all pertinent measures complimentary to program participants.
6. Following completion of all direct installation measures, Otter Tail follows up with participating businesses on opportunities for efficiency identified during the assessment completed by the Company's implementation partner.

With COVID-19 related safety concerns, Otter Tail immediately put implementation of the Commercial Direct Install program on hold in spring of 2020. The Company closely monitored COVID-19 impacts in the smaller communities targeted through the program and was pleased to begin implementation activities through the summer months with proper personal protection equipment and strict social distancing measures in place. Implementation continued into early fall, until the Company ceased all implementation activities with concerns over rising COVID-19 cases. The Company further supported a phone-based outreach strategy by CERTs throughout 2020.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Commercial Direct Install</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	208	154	135%
Budget \$	\$44,766	\$41,000	109%

#### Evaluation Methodology

The Company uses TRM savings algorithms and assumptions and customer-specific operational data where applicable.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Commercial Direct Install</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	445,087
Demand Savings – kW	56.04

## COMPRESSED AIR EFFICIENCY

The Compressed Air Efficiency program provides incentives to commercial and industrial customers for implementing efficiency improvements in compressed air systems and for adhering to Otter Tail's proposed guidelines in completing studies focusing on compressed air system efficiency.

Compressed air systems afford users relatively easy distribution of and access to a robust power source present in nearly all industrial facilities, with this compressed air resource often referred to as the fourth utility in industrial plants. At the same time compressed air generation is one of the most energy-intensive utilities in industrial facilities with efficiency of compressed air systems typically at only ten to fifteen percent. Consequently, any improvements in compressed air system efficiency can lead to reduction of facility energy consumption on the order of 20 to 50 percent.

Otter Tail promoted Compressed Air Efficiency using various resources:

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Program, technology, and rebate information available on the Company's web site.

### Participation & Budget

PARTICIPATION AND BUDGET – 2020			
Compressed Air Efficiency	Actual	Proposed	% of Goal
Participation	2	23	9%
Budget \$	\$20,370	\$140,000	15%

### Evaluation Methodology

Otter Tail uses the TRM, when available, and the Wisconsin and Vermont TRMs in its absence. All savings algorithms include actual data from historical Otter Tail compressed air assessment performed by independent third-party engineers or vendors.

### Energy Savings & Adjustments

ENERGY AND DEMAND RESULTS – 2020	
Compressed Air Efficiency	At the Generator (DSMore Summer Coincident Peak kW)
Energy Savings – kWh	42,787
Demand Savings – kW	7.55

## 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. During 2020 Otter Tail relied on Energy Star qualifications as the reference for equipment efficiency requirements.

Air source heat pumps met the following rating requirements:

Air Source Heat Pumps			
Energy Star	HSPF	SEER	EER
Split System	> or = 8.5	> or = 15.0	12.5
Package Terminal	-	-	> or = 12.0
CCHP- Ducted	> or = 9.0	> or = 15.0	-
CCHP- Ductless	> or = 10.0	> or = 15.0	-

For 2020, Otter Tail also promoted a special category of air source heat pumps, the Cold Climate Heat Pump (CCHP). CCHPs are identified as rated with a HSPF of 10 or greater for ductless unit and a HSPF of 9 or greater for ducted units. They must also be labeled Energy Star or have a minimum rating of 15 SEER.

The Geothermal Heat Pump program capitalizes on a renewable technology and targets commercial customers currently using or considering the installation of less efficient resistance electric heating and cooling systems by offering rebates for high-efficiency geothermal heat pumps. Geothermal heat pumps met the following rating requirements:

Geothermal Heat Pumps			
Type	Loop Type	COP	EER
Water to air	Open loop	4.1	21.1
Water to air	Closed loop	3.6	17.1
Water to water	Open loop	3.5	20.1
Water to water	Closed loop	3.1	16.1
Direct exchange		3.6	16.0

Otter Tail promotes energy efficient heat pumps using various resources:

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.

- Media campaigns including television, radio, and digital media during March and in conjunction with the Advertising and Education Program and digital media and radio during August focused on educating customers about the high efficiencies of cold climate heat pumps.
- Bill messages included on customer statements during April, May, July, and August.
- Bill inserts during June.
- A digital billboard image from May, through June.
- Hero spots on the home page of the website January, February, April, May, and September.
- Program, technology, and rebate information available on the Company's web site.
- Otter Tail's Advertising and Education program targeting small- to mid-size businesses.
- Participation in the Company's Integrated Building Design Plus program.

To increase participation, the Company offered rebates and financing at 1.9 percent in 2020.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Heat Pumps (C)</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	281	84	335%
Budget \$	\$821,014	\$205,000	400%

#### Evaluation Methodology

Energy savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Heat Pumps (C)</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	4,376,181
Demand Savings – kW	485.53

## GRANTS (CUSTOM PROJECTS)

The Grants program offers customized incentives to commercial and industrial customers for conservation and efficiency improvements. In 2020, Otter Tail analyzed a variety of customer-submitted grant projects with 24 of these projects approved for incentives.

Custom Projects	Quantity
Air Handling Equipment	1
Automation	1
Building Envelope Improvements	1
Chiller System	2
Cooking Equipment	1
Cooling System	6
Heat Recovery System	1
Heating System	2
Integrated Building Design Plus	1
Motors	1
Process Improvements	3
Production Equipment	1
Pump	1
Refrigeration System	1
Variable Speed Drive	1
<b>Total</b>	<b>24</b>

Otter Tail promotes the Grant program through a variety of resources:

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Bill inserts in April and October.
- Program, technology, and rebate information available on the Company's web site.
- Participation in the Company's Integrated Building Design Plus program.

### Participation & Budget

PARTICIPATION AND BUDGET – 2020			
Custom Efficiency Grants	Actual	Proposed	% of Goal
Participation	24	37	65%
Budget \$	\$395,369	\$339,000	117%

## Evaluation Methodology

Each custom grant measure is evaluated on an individual basis and estimated energy savings are calculated by Otter Tail and are specific to each individual measure. The Company will also consider and verify estimated energy savings when submitted by a qualified and independent third-party energy services provider. Otter Tail helps as needed for our commercial and industrial customers to help determine the energy and demand savings needed to develop a grant proposal and often works with internal or third-party engineers to determine and verify savings.

The Large Custom Grant Measurement and Verification (M&V) protocols affect any large project with estimated savings exceeding one million kilowatts hours. The protocols include several options for measurement and verification of large grant projects that meet the protocol criteria. Otter Tail had one project that qualified for formal M&V in 2020 under the Custom Efficiency Grants program. Otter Tail received an email notification approving the M&V report on March 17, 2020 from Department staff.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Custom Efficiency Grants</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	4,302,172
Demand Savings – kW	802.53

## **COMMERCIAL & INDUSTRIAL FOCUSED EFFICIENCY**

Otter Tail's largest industrial customers collectively make up less than two percent of all Minnesota customers but account for more than 60 percent of total retail energy sales. As significant consumers of electricity, the industrial sector often provides abundant opportunities for improvements in energy management practices and implementation of energy efficiency upgrades.

The Commercial and Industrial Focused Efficiency program targets Otter Tail's largest energy-using customers with potential for improvements in production processes, end-use efficiency, and energy management practices. The program uses a proactive approach to benchmarking energy management practices and identifies specific opportunities for efficiency improvements in large commercial and industrial facilities.

Implementation of the Commercial and Industrial Focused Efficiency program consists of the following strategies:



1. **Proactive participant identification.** Otter Tail considers anticipated customer engagement and energy savings potential while screening potential participants. The program focuses on customers with annual savings potential of 250,000 kWh or greater, typically requiring annual consumption of at least 5,000,000 kWh. Potential participants bringing engaged, enthusiastic management and employee teams to the table are more likely to pursue the most cost-effective energy saving behaviors and opportunities.
2. **Energy management benchmarking.** For qualifying customers, Otter Tail funds the Envinta One2Five energy management benchmarking analysis early in the process. The benchmarking session focuses on management practices related to energy efficiency by incorporating participation from across the customer's organization.
3. **Project identification.** Forming an engaged and knowledgeable energy management team is imperative to identifying efficiency opportunities on the customer site. To further facilitate identification of efficiency measures, Otter Tail funds the cost of engineering studies needed to identify and evaluate energy savings opportunities above a \$500 copay from the participant. Possible efficiency measures include lighting, drive-power systems, process efficiency improvements, refrigeration systems, compressed air systems, and custom efficiency projects.
4. **Project implementation.** Working in tandem with the customer's representation on the energy management team, Otter Tail develops a schedule of efficiency projects with bonus incentives provided in exchange for the participant's completion of all measures before established deadlines. Efficiency measures might include projects traditionally accounted for under Otter Tail's prescriptive rebate programs, but Otter Tail attributes energy savings for each efficiency measure to the Commercial and Industrial Focused Efficiency program.
5. **Measurement and verification.** Otter Tail follows the Measurement and Verification Protocols for end-use efficiency projects meeting the formal measurement and verification requirements established by the DER.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Industrial Focused Efficiency</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	7	1	700%
Budget \$	\$483,466	\$220,000	220%

Participation numbers represent the Company's strategy of cost effectively reaching smaller customers through the program, while still integrating the key steps of identifying savings opportunities and providing bonus incentives in exchange for commitment from customers to implement measures by established deadlines.

### Evaluation Methodology

Otter Tail developed energy savings estimates through both established methodologies for prescriptive measures and through engineering calculations for custom measures implemented by the customer.

### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Industrial Focused Efficiency</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	3,606,813
Demand Savings – kW	592.97

### **LIGHTING RETROFIT**

The U.S. Energy Information Administration (EIA) estimates that in 2020, the U.S. residential and commercial sectors used about 219 billion kWh of electricity for lighting. This was about 8 percent of the total electricity consumed by these sectors and about 6 percent of total U.S. electricity consumption. The commercial sector, which includes commercial and institutional buildings, and public street and highway lighting, consumed about 157 billion kWh for lighting, equal to about 12 percent of total commercial sector electricity consumption in 2020. Otter Tail's Lighting Retrofit program provides cash incentives to commercial and industrial customers for purchasing and installing energy-efficient lighting technologies, including LED lamps and fixtures and lighting controls.

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

- *Taking Care of Business* commercial and industrial CIP brochure.
- Bill inserts targeting commercial and industrial customers in June and August.
- Personal interactions between customers and Company program implementation staff.
- *Programs and services guide* provided to contractors and employees.
- Program, technology, and rebate information available on the Company's web site.
- Otter Tail's Advertising and Education program targeting small- to mid-size businesses.

## Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Lighting Retrofit</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	1,015	560	181%
Budget \$	\$2,440,369	\$1,086,000	225%

## Evaluation Methodology

Otter Tail uses the TRM to calculate impact savings for the Lighting Retrofit 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. The TRM establishes hours of operation. In accordance with the TRM protocols, energy and demand savings adjustments of 9.5 and 25.4 percent respectively were allocated to those businesses having electric mechanical cooling. This is consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Lighting Retrofit</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	22,660,448
Demand Savings – kW	3,296.39

## **LIGHTING – NEW CONSTRUCTION**

Opportunities exist for customers to implement lighting technologies that are more efficient than widely accepted, standard efficiency lighting systems during the new construction process.

Examples of these technologies and systems have included:

- High intensity fluorescent.
- High performance T8 lamps & ballasts/reduced wattage T8 lamps.
- LED fixtures and lamps.
- Occupancy, daylighting, and networked-based lighting controls.

Otter Tail promotes the Lighting-New Construction program using various resources:

- *Taking Care of Business* commercial CIP brochure.
- Bill inserts targeting commercial and industrial customers in June and August.
- *Programs and services guide* provided to contractors and employees.

- Program, technology, and rebate information available on the Company's web site.
- Personal consultations between program implementation staff and customers.
- Otter Tail's Advertising and Education program targeting small- to mid-size businesses.
- Participation in the Company's Integrated Building Design Plus program.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Lighting – New Construction</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	314	241	130%
Budget \$	\$154,419	\$211,000	73%

#### Evaluation Methodology

Otter Tail uses the TRM to calculate impact savings for the program. For newly installed lighting systems, qualifying installed measures are compared to baseline efficiency systems to determine kilowatt-hour savings. Hours of operation are determined by the TRM according to customer type. In accordance with the TRM protocols, energy and demand savings adjustments of 9.5 and 25.4 percent respectively were allocated to those businesses having electric mechanical cooling.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Lighting – New Construction</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	2,695,101
Demand Savings – kW	407.20

### **MOTORS**

The goal of the Motors program is to reduce system peak demand and energy use by offering customers incentives to purchase and install motors that meet or exceed NEMA Premium® efficiency ratings in various applications. The Motors program covers motor sizes from one horsepower up to 500 horsepower and includes additional incentives for customers upgrading to high-efficiency motors with explosion-proof enclosures.

Otter Tail promotes the Motors program through a variety of resources:

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.

- Through bill inserts targeting commercial and industrial customers in July and December.
- Otter Tail's Advertising and Education program targeting small- to mid-size businesses.
- Personal consultations between program implementation staff and customers.
- Program, technology, and rebate information available on the Company's web site.
- Participation in the Company's Integrated Building Design Plus program.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Motors</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	199	215	93%
Budget \$	\$146,408	\$137,000	107%

<b>Motor Types Rebated</b>	
New / replace non-operating	51
Replace operating	148
Total Motors Rebated	199

#### Evaluation Methodology

Otter Tail used Minnesota's TRM data, when applicable, along with engineering estimates and MotorMaster software to determine energy savings for specialty motors currently not in the TRM. For 1 to 200 horsepower motors installed in new applications and for motors replaced at failure, Otter Tail used NEMA Premium efficiency levels as baseline efficiency for totally enclosed fan-cooled and open drip-proof motors. NEMA efficiency rating, horsepower, motor speed, run-time hours, and quantity are taken from the customer's application form.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Motors</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	1,136,203
Demand Savings – kW	234.55

## RECOMMISSIONING/RETROCOMMISSIONING (RCx)

The *Energy Star Building Manual* defines commissioning as the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained to the owner's operational needs.

- Recommissioning is the term used for applying the process to a building that has been commissioned previously (either during construction or as an existing building).
- Retrocommissioning is the systematic process applied to existing buildings that have never been commissioned to ensure that their systems can be operated and maintained according to the owners' needs.

Building tune-ups, RCx Lite, and building optimization all refer to an evolution of the traditional RCx process. The approach starts by targeting the most common RCx measures with the highest chances of returning payback on operations and maintenance improvements. Often, these operation and maintenance improvements are associated with advanced control strategies. Engineering firms completing RCx Lite studies are often capable of identifying these measures through spot inspections of direct digital control systems without the added costs of seasonal monitoring and functional performance testing completed through formal RCx studies. Consequently, the RCx Lite process can identify up to 75 percent of the savings of a more formal RCx study at approximately 25 percent of the cost.

Otter Tail's RCx program provides incentives to qualifying commercial customers to complete RCx studies and implement cost effective, energy savings measures. The RCx program proposes a tiered approach to delivering RCx services. The RCx Lite tier provides incentives for building tune-ups, where the RCx tier incentivizes customers to implement formal RCx studies with more expansive measures. Potential participants must complete a pre-approval application form prior to initiating any RCx projects to be assured of eventual study funding from Otter Tail. Not all buildings and building types are ideal candidates for achieving energy savings through traditional RCx efficiency measures; the pre-approval process increases the likelihood that customers with buildings and building types with the best RCx opportunities capitalize on the RCx process.

Otter Tail promotes the RCx program through a variety of resources:

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Bill inserts targeting commercial and industrial customers in March and October.
- Targeted campaigns featuring direct customer contact based on business type, energy use intensity, and geographic location.
- Brochures and literature explaining the RCx process and program.
- Personal consultations between program implementation staff and customers.

- Program, technology, and rebate information available on the Company's web site.

### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>RCx</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	7	4	175%
Budget \$	\$129,329	\$188,000	69%

### Evaluation Methodology

#### ***Traditional RCx***

Otter Tail, together with a third-party engineering consulting firm, reviews the RCx study for accuracy of calculations, assumptions, and completion of all required RCx study requirements. The third-party engineering firm does not provide direct RCx services for customers or compete with engineering firms providing these services. Otter Tail works with the customer and the customer's engineering firm as needed to assure engineering calculations, assumptions, and the study all meet the Company's RCx program requirements.

#### ***Turn-key RCx***

Otter Tail uses savings calculations developed by the Company's program implementation consultant using engineering fundamentals, site data, and energy modeling. To evaluate those savings, Otter Tail and its third-party program implementation consultant perform post-installation functional testing at each facility. This on-site M&V confirms each measure's implementation in accordance with the engineering recommendations. The savings calculations are revised based on observed conditions post-implementation and reflect any alteration to the measure that results from customer implementation.

### Energy Savings

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>RCx</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	663,206
Demand Savings – kW	277.71

## REFRIGERATION

The U.S. Energy Information Administration estimates in 2019 refrigeration accounted for over 14% of electricity consumption in the commercial sector. Otter Tail's Refrigeration program is designed to promote high-efficiency refrigeration technologies, including measures to upgrade compressor, condenser, and display case efficiency. The program incentivizes the installation of efficiency measures in both retrofit and new-construction applications in commercial sectors with intensive demand for commercial refrigeration.

Otter Tail promotes the Refrigeration program using various promotional resources:

- *Taking Care of Business* commercial CIP brochure.
- *Programs and services guide* provided to contractors and employees.
- Program, technology, and rebate information available on the Company's web site.

### Participation & Budget

PARTICIPATION AND BUDGET – 2020			
Refrigeration	Actual	Proposed	% of Goal
Participation	78	86	91%
Budget \$	\$126,148	\$130,000	97%

### Evaluation Methodology

The Company uses the TRM and engineering estimates for each refrigeration measure. Energy and demand savings for this program are consistent with Attachment B: Electric Product Assumptions, approved in the Company's triennial plan.

### Energy Savings & Adjustments

ENERGY AND DEMAND RESULTS – 2020	
Refrigeration	At the Generator (DSMore Summer Coincident Peak kW)
Energy Savings – kWh	918,420
Demand Savings – kW	122.63



## DIRECT IMPACT – OTHER

### COMPANY-OWNED STREET & AREA LIGHTING

Otter Tail provides illumination services to 161 Minnesota communities and other customers through company ownership, operation, and maintenance of approximately 19,677 street and area lighting fixtures. Customers receive hassle-free illumination service, including equipment installation, asset rental, electricity, and maintenance for a convenient monthly charge on the customer's electric service bill. Otter Tail installs street and area lighting fixtures at the request of our customers and, consequently, classifies electricity consumption for company-owned street and area lighting fixtures as customer electricity usage.

The objective of the Company-owned Street and Area Lighting program is to retrofit all Company-owned street and area light fixtures used in providing illumination services for retail customers from HID to LED technology.

#### Participation & Budget

PARTICIPATION AND BUDGET – 2020			
Company-Owned Street & Area Lighting	Actual	Proposed	% of Goal
Participation	5,511	3,892	142%
Budget \$	\$724,726	\$846,327	86%

Otter Tail worked closely with leaders of municipal governments in launching its successful street and area lighting retrofit campaign in 2018 and continued this strategy through 2020. Critical public relations milestones accomplished jointly with municipal streetlighting customers included:

- In-person discussions and meetings with key municipal administrators and government leaders.
- Development of public relations kits, including direct mailers, community posters, and news releases.
- Web pages with specialized LED street and area light information.
- Training for internal Otter Tail staff, including talking points and frequently asked questions.

The Company was able to minimize third party-program administration expenses by leveraging services offered through existing relationships with key vendors as well as internal procedures already in place for existing street and area lighting services. Otter Tail is very pleased with the quality and performance of LED lighting products used in the retrofits. Customer feedback on the new LEDs has also been extremely positive, with little to no customer complaints. Field

representatives for Otter Tail continue to report how well the project has been received for being such a significant change in our communities.

The Company-owned Street and Area Lighting program has been a success from the operations/installation side as well. Otter Tail was able to install 5,511 LEDs, while only spending 86 percent of budget or \$724,726. By managing expenses closely Otter Tail has ultimately saved customers money, in addition to the energy savings of the LEDs. This project has become an immense value for customers by reducing energy use, increasing customer satisfaction, and improving safety while keeping costs below budget. The following table summarizes expenses for the Company-owned Street and Area Lighting program for the year:

<b>Summary of 2020 Tracker Account for Street &amp; Area Lighting</b>	<b>Budgeted Expenses</b>	<b>Actual Expenses</b>
CIP Program Evaluation	\$3,000	\$2,959
CIP Rebate (reduction to rate base)	\$178,572	\$250,530
Admin. Costs (external project management and adverting/printing)	\$125,000	\$407
Retirement and Disposal Costs	\$432,803	\$376,975
Return on Incremental Costs of New Lights	\$106,952	\$93,855
<b>Total Recovery through CIP Tracker</b>	<b>\$846,327</b>	<b>\$724,726</b>

#### Evaluation Methodology

The Company compares the fixtures being installed to the fixtures being removed to determine energy and demand savings. The savings calculation utilizes the TRM values for hours of operation. Specifics are included in Attachment B: Electric Product Assumptions.

#### Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Company-Owned Street &amp; Area Lighting</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	3,305,486
Demand Savings – kW	0.00

## **PUBLICLY OWNED PROPERTY (POP) SOLAR**

The objective of the POP Solar program is to demonstrate the benefits of solar PV generation to rural Minnesota communities, educational facilities, and local and tribal governments by offering incentives for universal solar projects. The project provides incentives for installation of non-residential solar PV systems in public sector facilities. The POP Solar program is an example of universal solar, which shares the benefits of solar with all members of the community, university, public school, tribal properties, or other public owned properties.

### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Publicly Owned Property Solar</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	0	16	0%
Budget \$	\$141,188	\$229,720	61%

Otter Tail’s Energy Management Representatives continually promote the POP program to public entities across Otter Tail’s service territory. The Company fell short of our participation goal for 2020 but did provide assistance in the form of an extra incentive to a University for additional equipment costs to complete six 39 kW solar systems. Without this extra incentive the projects would have experienced further delays as the University worked to secure further funding. The projects were successfully completed and began operation in early 2021.

Even with Otter Tail’s attractive 40 percent rebate for solar projects, customers are still expressing concerns over the upfront costs competing with other capital projects, age of current roof surface, long payback period, and adequate land availability. Otter Tail is concerned about the likelihood of future solar projects, even with great interest expressed by public institutions. The Company has revisited its rebate level for the program in 2021. Due to low historic participation the Company has increased the rebate level from \$1,250/kW or approximately 40 percent of project costs to \$1,500/kW, approximately 50 percent of projects costs for 2021. The Company is hopeful additional public entities will take advantage of this increased offering going forward.

### Evaluation Methodology

Otter Tail installs production metering with data recorders and the required communications infrastructure needed to store customer-owned, solar PV production in the Company’s web-based Power Profiler application. Otter Tail uses this production data to accumulate solar renewable energy credits to comply with Minnesota’s Solar Energy Standard.

## Energy Savings & Adjustments

<b>ENERGY AND DEMAND RESULTS – 2020</b>	
<b>Publicly Owned Property Solar</b>	<b>At the Generator (DSMore Summer Coincident Peak kW)</b>
Energy Savings – kWh	0
Demand Savings – kW	0.00

## **INDIRECT IMPACT PROGRAMS / REGULATORY REQUIREMENTS**

### **ADVERTISING & EDUCATION – Residential & Commercial**

#### ***Advertising & Education – Residential***

The Advertising & Education program for 2020 targeted Minnesota customers and students with reinforcing messages to make conserving energy a lifestyle. The program is designed to include three approaches to achieve its goals:

- *Advertising* that increases awareness of and educates about energy efficient technologies and motivates individuals to act to conserve energy.
- *Internet-based resources* including YouTube.com videos and web-based content on the Company website.
- *Classroom based presentations* targeting fourth through sixth graders with educational messages about energy production, energy use, and conservation that reaches across all economic groups.

#### **Advertising**

Several full media campaigns ran in 2020 that focused on reaching residential customers with energy efficient technology options. These included:

- Cold climate heat pumps: A television campaign was completed to educate customers about higher-efficiency air source heat pumps.
- Air conditioning cycling: A television campaign was completed to educate customers about the energy saving and peak demand reducing option available through allowing the company to cycle central cooling systems during peak summer periods.
- Smart thermostats: A media campaign that included television, radio, and digital media was conducted to educate customers about the energy savings opportunity available from using smart programmable thermostats.

Additional advertising support included preparation of consistent energy efficiency messaging about residential CIP programs including digital billboard space, program ads placed in a regional magazine and newsletters, as well as a catalog of Conservation Improvement Program offerings available to the Minnesota residential customers and contractor education pieces.

### **Internet-based resources**

This program supports development of promotional and educational materials for the Company website and social media channels. These materials encourage participation in direct impact energy efficiency programs in the CIP portfolio. Data are collected from web analytic tools used on the company websites. Minnesota customer web participation is calculated as 45 percent of the unique visitor count to the website material. This represents the portion of Company customers located in Minnesota.

Home page and program support pages are placed on [www.otpc.com](http://www.otpc.com) to promote CIP programs including insulation rebates, air-conditioning cycling program, Energy Star lighting, Home Energy Analyzer, heat pumps, smart thermostats, off-peak water heating, and appliance recycling. Visitors were tracked as participation resulting from these ads.

An educational YouTube video series continued to be presented to customers focused on home insulation and maintenance topics:

- Weatherization.
- Furnace filter change out.
- Sealing attic access doors.
- Sealing attic bypass leaks.
- Insulating and sealing rim joists.

### **Classroom presentations**

The Science Museum of Minnesota contracted to continue conducting an interactive lyceum program to reach fourth through sixth graders at Minnesota schools. This event, normally scheduled for the fall, was put on hold, and ultimately cancelled due to COVID-19 interrupting classroom school sessions. The in-person assembly program will be brought back when COVID-19 restrictions lift and conditions warrant that the program may be offered safely. In response to the loss of this program to reach school age children Otter Tail contracted to work with the Science Museum to develop a virtual option to share the same energy-related content to school districts in our service area. That material will be released in early 2021. The program is popular with the school districts and program material is in line with the Minnesota school curriculum standards. We anticipate offering both the in person and virtual options to schools in the future.

Otter Tail is working with a local child-focused activity center, Otter Cove Children's Museum, during 2020 to develop interactive energy and conservation focused exhibits and a hands-on learning program. Otter Cove is a unique new resource in the region that targets children up to age 10, offering indoor play space with both educational exhibits and a playground structure under the same roof. Design of Discover Energy exhibits began in 2020 and will be completed during 2021. Because of the unique nature of this center, children from throughout Otter Tail's Minnesota service area may be reached.

### **Additional activities**

Energy efficiency and conservation related literature is made available to Minnesota customers upon request including conservation articles included in the Company's bimonthly newsletter, with one issue specially designed for kids.

### **Participation & Budget**

<b>2020 A&amp;E Residential Detailed Participation</b>	
Science Museum School Tour	0
Web visits tied to advertising spots	5,999
YouTube videos	5,462
Total	11,461

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Advertising &amp; Education</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	11,461*	10,000	115%
Residential Budget \$	\$275,049	\$175,000	157%

\*Web-based ad participation was not included when the original participation goal was established but was added as an effective means to reach customers.

### ***Advertising and Education – Commercial***

Otter Tail's Advertising and Education program operated in conjunction with the Company's Commercial Direct Install program again in 2020. The combined program effort provided participating customers in the hard-to-reach small- to mid-sized commercial segment with no-cost energy assessments identifying the top energy efficiency opportunities in the customer's business. The Company's Advertising and Education budget provided funds for free customer assessments, while the Commercial Direct Install program provided customers with installation of low-cost, easily installed energy efficiency measures while the assessment was taking place in the customer's place of business.

Participating customers anecdotally expressed satisfaction with the Company's effort to provide free installation of energy efficient technologies. Otter Tail is also following up with all participating customers regarding efficiency opportunities identified during facility assessments. The Company appreciates the opportunity to facilitate completion of efficiency measures by reaching out to local contractors and providing expertise to small- to mid-sized commercial customers on energy efficient opportunities in the customers' businesses.

## Participation & Budget

<b>2020 A&amp;E Commercial Detailed Participation</b>	
Appleton	39
Browns Valley	20
Canby	48
Dawson	54
Graceville	21
Hendricks	24
Herman	10
Hoffman	29
Lake Benton	29
Minneota	26
Wheaton	39
Total	339

<b>ACTUAL / BUDGET – 2020</b>			
<b>Advertising &amp; Education</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	339	100	339%
Commercial Budget \$	\$121,031	\$67,000	181%

### **COMPRESSED AIR AUDITS - Commercial**

The Compressed Air Audit program pays up to 50 percent of compressed audit costs, with a maximum of \$10,000 per participant. The project relies on industry consultants to provide professional audit services with an unbiased report on saving energy with compressed air system improvements.

## Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Compressed Air Audits</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	1	4	25%
Budget \$	\$4,263	\$20,000	21%

## **FINANCING – Commercial**

The Financing program is designed to provide low-interest loans for installation of air source and geothermal heat pump systems. The difference between the interest expense at the Company's after-tax cost of capital and the expense at the customer's interest rate is the cost charged to the CIP Tracker Account. The interest rate was 1.9 percent for 2020.

Otter Tail promotes the low-interest Financing program in various resources.

- *Taking Care of Business* commercial CIP booklet.
- *Programs and services guide* provided to contractors and employees.

## **Participation & Budget**

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Financing</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	2	5	40%
Commercial Budget \$	\$11,173	\$50,000	22%

## **INTEGRATED BUILDING DESIGN PLUS - Commercial**

In the integrated building design process, architects, engineers, and energy experts team up early in the design process to coordinate and optimize the design of all components and systems. This team functions and works according to clearly defined goals:

- Design a building with operating costs as low as possible without sacrifices to occupant comfort.
- Design a building with as little environmental impact as possible.
- Design a building that will boost worker productivity.
- Incorporate all features with minimal increases in first costs.

The greatest opportunities to reduce the future energy use of a new building occur during the design development phase. However, the decisions made during commercial building design are often driven by aesthetics, capital costs, and designer familiarity. Information on how these decisions will impact energy consumption and operating costs is often not readily available to building design teams. Obtaining data on energy impacts is the primary barrier to analyzing effects of various design decisions on building energy efficiency, as accurate projections require complex, detailed analysis and energy modeling. Most design firms do not have the time or budget to perform the required analyses, and without the need to regularly exercise such skills, the firms also lack the critical staffing needed to perform specialized energy analysis and modeling.



The objective of Otter Tail's Integrated Building Design Plus (IBD+) program is to optimize the energy efficiency of new construction projects by encouraging greater design team cooperation in an integrated building design process. Otter Tail encourages participation in the IBD+ program by providing:

- design assistance consulting services for participating customers and design teams,
- reimbursements to design team members for added time required to participate in the integrated building design process,
- identification of energy savings for various design packages compared to the baseline design efficiency of Minnesota State Energy Code,
- identification of incentives available through Otter Tail's prescriptive Lighting, Motors, Adjustable Speed Drives, Heat Pumps, and custom Grants programs, and
- training for design team professionals in proper design of geothermal and other high efficiency HVAC systems.

Otter Tail promotes the IBD+ program using the following resources:

- *Taking Care of Business* commercial CIP brochure mailed to targeted commercial and industrial customers annually.
- *Annual Program and Services Guide* sent to contractors and dealers.
- The Company's website. The website also features a link to an electronic program application form.
- Through the design assistance consultant's network, membership, and participation as professionals in architectural and engineering organizations, including ASHRAE, AIA and IES.
- Funding for the added costs of design team participation.
- Payment of all approved energy design assistance fees for customers.

#### Participation & Budget

<b>PARTICIPATION AND BUDGET – 2020</b>			
<b>Integrated Building Design Plus</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Participation	4*	6	67%
Budget \$	\$236,932	\$234,000	101%

\*The four IBD+ participants are included here, however their energy efficiency measures are evaluated and included as participants within their corresponding programs.

#### **IMPLEMENTATION & TRAINING – Residential & Commercial**

The Implementation and Training program provides instruction about energy efficient technologies and DSM trends for the Company's design, implementation, and customer service staff. This program also provides training for customers, electricians, insulation installers, other

contractors, and Company representatives. In January and February 2020, Otter Tail co-sponsored electrician code credit events with Minnkota Electric Cooperative. Workshops were promoted on our website, in newsletters, and through direct mail pieces. The program also funded training for Otter Tail staff interested in learning about energy efficiency in commercial food service equipment.

#### Participation & Budget

<b>ACTUAL / BUDGET – 2020</b>			
<b>Implementation &amp; Training</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Residential Participation	3	175	2%
Residential Budget \$	\$52,759	\$40,000	132%
Commercial Participation	319	250	128%
Commercial Budget \$	\$60,158	\$60,000	100%

#### **PROGRAM DEVELOPMENT**

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

The last several years Otter Tail has reported its work and findings from its Grid-enabled Water Heating Store & Save pilot project. The water heater pilot project operationally concluded in March 2020. The final report was to be included in this Status Report filing but is still in its final stages of review. Otter Tail will file the final report for the pilot project once it is received from the vendor and reviewed. Otter Tail expects to receive this report in quarter two of 2021. The final report will provide an overview of the pilot, estimated energy savings, costs, and estimated potential benefits if the project were brought to scale.

Otter Tail also used development funding for appropriate development research and information from internal and external sources, including E-Source.

Otter Tail's 2011-2013 CIP plan included developing and maintaining a system capable of providing the data necessary for reporting, forecasting, tracking, and processing CIP rebates. The 2017-2020 CIP plan continues work on this system, which is now operating as our rebate processing and data tracking tool. Continuing work includes adding new programs, development of management dashboards, reporting tools for program management, and development of an online customer portal for submitting rebate applications or checking the status of rebates.

<b>ACTUAL / BUDGET – 2020</b>			
<b>Program Development</b>	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
Planning – Regulatory Affairs	\$313,205	\$300,000	104%
Research & Development	\$52,614	\$180,000	29%

## **REGULATORY REQUIREMENTS**

### **PUC ASSESSMENTS / REGULATORY (NGEA) ASSESSMENTS**

<b>PUC ASSESSMENTS / REGULATORY (NGEA) ASSESSMENTS</b>			
	<b>Actual</b>	<b>Proposed</b>	<b>% of Goal</b>
PUC Assessments	\$33,817	\$20,000	169%
Regulatory Assessments (NGEA)	\$96,755	\$110,000	88%
Transmission & Distribution Cost Study	\$0	\$0	0%

<b>ASSESSMENTS</b>	
NGEA Assessment – Technical Assistance	\$15,797
NGEA Assessment – R&D Grant	\$71,085
NGEA Assessment – Facilities Efficiency	\$9,873
Total NGEA Assessments	<b>\$ 96,755</b>
Direct PUC Assessments	\$33,817
Transmission & Distribution Cost Study	\$0
Total	<b>\$130,572</b>

## **MISCELLANEOUS / INACTIVE PROGRAM COSTS**

These are inactive and miscellaneous programs. The associated costs, including closing costs for these programs, were charged to the 2020 CIP tracker account. Each is detailed separately below.

### **ACCOUNTING ADJUSTMENTS**

Four accounting adjustments were required in 2020 totaling a decrease in costs of \$7,759: three adjustments in the Energy Star Lighting program to record a true up to the 2019 year-end estimated billing from Slipstream, bulbs purchased in 2019 but handed out in 2020 in the Appliance Recycling program, and bulbs installed in income-qualified buildings that were unable to be recorded under the House Therapy program due to wattage, reflecting a decrease in costs of \$7,059. Lastly, an adjustment in the House Therapy program to record the transfer of bulb costs to the Energy Star Lighting program resulted in a decrease in costs of \$700.

Since 1993, Otter Tail has implemented an internal process to handle moving incorrect charges between project work orders. A line item has been added to the CIP Tracker Account to reflect those charges in transition. The Company believes this method allows us to report current year program costs more accurately.

## **INACTIVE PROGRAMS**

### **TOWN ENERGY CHALLENGE PILOT**

The Rothsay High School SC/EC (Student's for Community Energy Challenge) team (seventh through twelfth grade) promoted conservation at the school and in the community for a five-year commitment. Although the project is now completed, the students who served on the team were given small college scholarships based on the number of years of service to be collected their first year of college. The final scholarships for this program were awarded in 2020. The program has now been completed and is not part of Otter Tail's approved 2021-2023 CIP triennial plan.

## **CARRYING COSTS**

Charges totaled \$24,889 for carrying costs on the balance of the CIP Tracker, as shown in Appendix A, Table 1.

The Commission and Otter Tail have agreed that allowing carrying charges to be added to the CIP Tracker Account will compensate the Company for the time value of the money invested in CIP programs.

As approved in the MNPUC's September 26, 2015 Order, Docket No. E017/M-14-201, the monthly carrying charge on the CIP tracker-account balance has been set to the short-term cost of debt rate approved in the Company's last rate case. The MPUC's December 24, 2020 Order, Docket No. E017/GR-20-719, set the short-term cost of debt at 3.37 percent, effective January 1, 2021. Otter Tail applied this rate to the CIP tracker-account balance per the MPUC's order.

Otter Tail does not count the carrying cost charges toward the spending requirement (see Appendix A, Table 5 Status Report Recap) but does include the charges in the CIP Tracker for recovery.

# **Conservation Cost Recovery Adjustment**

## CONSERVATION COST RECOVERY ADJUSTMENT

This filing constitutes the 27th Annual Filing to Update the Conservation Improvement Program (CIP) Rider (Annual Filing) that Otter Tail Power Company (Otter Tail, the Company) has made with the Minnesota Public Utilities Commission (Commission, MPUC) to update the CIP Rider adjustment, more commonly referred to as the Conservation Cost Recovery Adjustment (CCRA).

The CCRA may be adjusted annually by approval of the Commission. The recoverable CIP tracker balance is determined as described below, starting with the Commission accepted CIP tracker account balance as of the end of the prior year. The following adjustments are made from this starting point:

1. Add financial incentives awarded by the Commission not reflected in the prior year-end CIP tracker balance;
2. Add current year CIP approved spending levels;
3. Subtract current year CIP cost recovery through base rates as estimated based on Company's projected retail sales.

All costs appropriately charged to the CIP tracker account shall be eligible for recovery through this rider and all revenues received from the application of the CCRA shall be credited to the CIP tracker account. Table 1 illustrates the last ten years of the CCRA charge.

**Table 1**

<b>Year</b>	<b>CIP Surcharge / CCRA Factor</b>	<b>Previous Year Ending Tracker Balance</b>
Jul 2012 / Jun 2013	3.80% / \$0.00142/kWh	\$5,188,129
Jul 2013 / Jun 2014	\$0.00175/kWh	\$3,572,621
Oct 2014 / Sep 2015	\$0.00263	\$4,835,558
Oct 2015 / Sep 2016	\$0.00287	\$5,731,183
Oct 2016 / Sep 2017	\$0.00275	\$4,333,061
Oct 2017 / Sep 2018	\$0.00536	\$4,835,852
Oct 2018 / Dec 2019	\$0.00600	\$7,365,957
Jan 2020 / Sept 2020	\$0.00710	\$5,994,017
Oct 2020 / Sept 2021	\$0.00485	\$3,955,955
Oct 2021 / Sept 2022	\$0.00582	\$2,067,599

Otter Tail has included the CIP tracker, Exhibit 1, which uses the Commission approved per-kWh method from January 2021 through September 2021. For October 2021 through September 2022, Otter Tail is proposing to change the surcharge to \$0.00582/kWh. Exhibit 2 illustrates the monthly impacts for each of the Company's ten rate classes.

## Calculation of CCRA and Conservation Cost Recovery Charge (CCRC)

During the 21-month period from end of year 2020 through the end of September 2022, Otter Tail plans to reduce the CIP Tracker balance of \$2,067,599 to an estimated \$6,444 as illustrated in Table 2 below.

**Table 2**

	<b>Jan 2021 - Sep 2021</b>	<b>Oct 2021 - Sep 2022</b>
<b>Beginning Balance</b>	<b>\$2,067,599</b>	<b>\$1,405,642</b>
Carrying Charges	\$5,454	(\$9,924)
CIP Program Expenses	\$5,113,952	\$8,600,000
CIP Incentive Proposed	\$2,864,948	\$3,000,000
CCRC through Base Rates	(\$2,723,438)	(\$3,598,271)
CCRA - CIP Rider	(\$5,922,872)	(\$9,391,004)
<b>Ending Balance</b>	<b>\$1,405,642</b>	<b>\$6,444</b>
<b>CCRA Method</b>	<b>\$0.00485/ kWh</b>	<b>\$0.00582/ kWh</b>

In addition, Otter Tail estimates the following impacts to the CIP Tracker balance during the 21-month period:

- \$19,574,430 of additional expenses from carrying charges, CIP incentive, and CIP program expenses.
- \$6,321,709 collected from the CCRC.
- \$15,313,875 collected from the CCRA, of which \$9,391,004 will be collected during the 12 months from October 2021-September 2022.

As illustrated in Exhibit 1, the proposed change in the surcharge will increase the CCRA by approximately 20 percent. By October 1, 2021, the CIP tracker balance is projected to decrease to an estimated \$6,444. Otter Tail currently receives or pays a carrying charge on the outstanding CIP tracker account balance based on its short-term cost of debt rate. As approved in the MNPUC's September 26, 2015 Order, Docket No. E017/M-14-201, the monthly carrying charge on the CIP tracker-account balance has been set to the short-term cost of debt rate approved in the Company's last rate case. The MPUC's December 24, 2020 Order, Docket No. E017/GR-20-719, set the short-term cost of debt at 3.37 percent, effective January 1, 2021. Otter Tail applied this rate to the CIP tracker-account balance per the MPUC's order.

The amounts on lines 4 and 5 of Exhibit 1 reflect the projected expenditures and financial incentive for 2020 and 2021 through September 2022. Line 6 removes from the CIP tracker the portion of CIP costs that are included in base rates. The base rate amount from January 2021 through September 2022 is calculated each month as forecasted retail sales multiplied by the

approved CCRC in base rates of \$0.00223/kWh. This rate was approved in Otter Tail's 2016 general rate case (Docket No. E017/GR-15-1033). In Otter Tail's current rate case, Docket No. E017/GR-20-719, Otter Tail has proposed to roll the CCRC \$0.00223/kWh into the CCRA rate. Once final rates are approved in the rate case docket, by the MPUC, Otter Tail will make any approved adjustments to the CCRC and CCRA rates.

The proposed 2021/2022 CCRA is calculated assuming the rate is approved and is effective October 1, 2021. If implementation of the 2021/2022 CCRA occurs after October 1, 2021, the CCRA may need to be adjusted to recover the approved revenue requirements over the remaining months of the period, through September 2022. This approach would ensure cost recovery and approved eligible costs match. If it is necessary to adjust the CCRA, Otter Tail proposes to calculate the final 2021/2022 CCRA and include it with the corresponding rate schedule pages in a compliance filing in this docket.

The redline and final versions of the CIP rider rate schedules are included immediately following Exhibits 1 and 2. The CIP rider rate schedule included in this filing accommodates the change to the CCRA based on the proposed \$0.00582 /kWh method of recovery. Once the 2021/2022 CCRA is approved, Otter Tail will file the corresponding rate schedule that complies with the Commission's Order in this docket.

## **CONCLUSION**

Otter Tail respectfully requests the following from the MPUC:

1. Approval of the 2020 CIP Tracker, resulting in a year-end balance of \$2,067,599.
2. Approval to implement the CCRA factor of \$0.00582/kWh reflected on customers' bills through the Resource Adjustment starting with bills rendered on and after October 1, 2021.
3. Approval of a variance to Minnesota Rule 7820.3500 (E) to allow Otter Tail to continue to include the Conservation Improvement Adjustment within the Resource Adjustment on customer bills.



**Exhibit 1 is Provided Separately  
as an Excel Spreadsheet**

**Otter Tail Power Company**  
**Comparison of Monthly Bill Impacts**

**Exhibit 2**

CIP Surcharge (CCRA) is based on \$0.00582 / kWh

Rate Class	Bills	Average kWh/Bill	Average \$/Bill before CCRA	Monthly Impacts			
				Current CCRA	Proposed CCRA	Monthly Bill \$ Change	Monthly Bill % Change
Residential	49,223	760	\$83.97	\$3.69	\$4.42	\$0.74	0.88%
Farm	1,282	2,605	\$266.33	\$12.63	\$15.16	\$2.53	0.95%
General Service	10,363	2,586	\$266.65	\$12.54	\$15.05	\$2.51	0.94%
Large General Service	431	133,438	\$6,118.31	\$647.18	\$776.61	\$129.44	2.12%
Irrigation	217	1,536	\$129.40	\$7.45	\$8.94	\$1.49	1.15%
Outdoor Lighting	232,692	54	\$14.20	\$0.26	\$0.31	\$0.05	0.37%
Municipal Pumping	476	3,266	\$282.76	\$15.84	\$19.01	\$3.17	1.12%
Deferred Load and Water Heating Control	8,161	314	\$25.79	\$1.52	\$1.83	\$0.30	1.18%
Interruptible Load	73,650	131	\$7.97	\$0.64	\$0.76	\$0.13	1.60%
Fixed Time of Delivery	225	5,469	\$230.01	\$26.52	\$31.83	\$5.30	2.31%

\*All average data comes from Otter Tail's proposed rates in Schedule-E that was filed November 2, 2020 in compliance to the ALJ's (Docket no. E017/GR-20-719).



Fergus Falls, Minnesota

## CONSERVATION IMPROVEMENT PROJECT (CIP) RIDER

DESCRIPTION	RATE CODE
Conservation Surcharge	MCIP
CIP Exempt Adjustment Credit	MCCRC

**RULES AND REGULATIONS:** Terms and conditions of this electric rate schedule and the General Rules and Regulations govern use of this rider.

**APPLICATION OF RIDER:** This rider is applicable to any electric service under all of the Company's retail rate schedules, except for Standby Service, Section 11.01 and those customers who have been granted an exemption under a large customer facility. The exemptions are as follows:

“Large Customer Facility” customers that have been exempted from the Company’s Conservation Improvement Program charges pursuant to Minn. Stat. 216B.241, Subd. 1a (b) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the “Large Customer Facility” customers can no longer participate in the Company’s Energy Conservation Improvement Program.

**CONSERVATION SURCHARGE AND EXEMPTION ADJUSTMENT:** There shall be added to each non-exempt Customer's bill a Conservation Surcharge based on the applicable Conservation Surcharge Factor multiplied by the Customer's monthly energy use. The Conservation Surcharge shall not be applied to Meter(s) on Customer Account(s) granted exemption by the Commissioner of the Minnesota Department of Commerce, Division of Energy Resources (or successor agency) from CIP costs pursuant to Minn. Stat. 216B.241. Meter(s) on Customer Account(s) granted an exemption shall receive a Conservation Cost Recovery Charge (CCRC) Exemption Adjustment Credit.

The Conservation Surcharge Factor is \$0.00~~485~~582 per kWh.

R

**DETERMINATION OF CONSERVATION SURCHARGE FACTOR:** The Conservation Surcharge shall be the quotient of the Recoverable CIP Tracker Balance, divided by projected Minnesota non-exempt retail energy sales for a designated 12-month recovery period. The Surcharge may be adjusted annually by approval of the Minnesota Public Utilities Commission (MNPUC). The Recoverable CIP Tracker Balance is determined as described below, starting with the MNPUC accepted CIP Tracker account balance as of the end of the prior year. From this starting point:

1. Add financial incentives awarded by the MNPUC not reflected in the prior year-end CIP Tracker balance;



Fergus Falls, Minnesota

Minnesota Public Utilities Commission  
Section 13.02  
**ELECTRIC RATE SCHEDULE**  
**Conservation Improvement Project (CIP) Rider**

Page 1 of 2  
Twenty-first Revision

**CONSERVATION IMPROVEMENT PROJECT (CIP) RIDER**

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Conservation Surcharge	MCIP
CIP Exempt Adjustment Credit	MCCRC

**RULES AND REGULATIONS:** Terms and conditions of this electric rate schedule and the General Rules and Regulations govern use of this rider.

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**R**

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1. Add financial incentives awarded by the MNPUC not reflected in the prior year-end CIP Tracker balance;

## **Appendix A- Tables**

**Table 1**  
**2020 CALCULATION OF CARRYING CHARGE ON CONSERVATION DOLLARS HELD IN CIP TRACKER ACCOUNT**  
**Financial Incentive Project - Conservation Improvement Programs**  
**Otter Tail Power Company**

	Capital Expenditures (A)	Operating Expenses (B)	Revenues Received (C)	Dr. 1860.3100 Cr. 4310.4000 Carrying Charge 2.55% (D)	Balance Account 1860.3000 + 1860.3100 (E)
Balance Dec. 31, 2019					3,955,954.60
<b>January:</b>					
Carrying Charge	--	--	--	8,422.56	8,422.56
Trf Carrying Charge Bal					0.00
Labor Accrual Adj					0.00
Activity	0.00	273,483.85	(1,540,621.72)	--	(1,267,137.87)
Deferred Taxes	--	--	--	--	--
Balance January 31, 2020	0.00	273,483.85	(1,540,621.72)	8,422.56	2,697,239.29
<b>February:</b>					
Carrying Charge	--	--	--	5,742.65	5,742.65
Labor Accrual Adj					0.00
Activity	0.00	393,189.37	(1,459,032.89)	--	(1,065,843.52)
Deferred Taxes	--	--	--	--	--
Balance February 29, 2020	0.00	666,673.22	(2,999,654.61)	14,165.21	1,637,138.42
<b>March:</b>					
Carrying Charge	--	--	--	3,485.60	3,485.60
Labor Accrual Adj					0.00
Activity	0.00	861,809.36	(1,368,399.79)	--	(506,590.43)
Deferred Taxes	--	--	--	--	--
Balance March 31, 2020	0.00	1,528,482.58	(4,368,054.40)	17,650.81	1,134,033.59
<b>April:</b>					
Carrying Charge	--	--	--	2,414.45	2,414.45
Labor Accrual Adj					0.00
Activity	0.00	604,508.99	(1,273,990.79)	--	(669,481.80)
Deferred Taxes	--	--	--	--	--
Balance April 30, 2020	0.00	2,132,991.57	(5,642,045.19)	20,065.26	466,966.24
<b>May:</b>					
Carrying Charge	--	--	--	994.21	994.21
Bonus/Incentive					0.00
Labor Accrual Adj					0.00
Activity	0.00	532,057.36	(1,036,968.62)	--	(504,911.26)
Deferred Taxes	--	--	--	--	--
Balance May 31, 2020	0.00	2,665,048.93	(6,679,013.81)	21,059.47	(36,950.81)
<b>June:</b>					
Carrying Charge	--	--	--	(78.67)	(78.67)
Bonus/Incentive					0.00
Labor Accrual Adj					0.00
Activity	0.00	557,425.90	(1,014,779.11)	--	(457,353.21)
Deferred Taxes	--	--	--	--	--
Balance June 30, 2020	0.00	3,222,474.83	(7,693,792.92)	20,980.80	(494,382.69)
<b>July:</b>					
Carrying Charge	--	--	--	(1,052.58)	(1,052.58)
Bonus/Incentive					0.00
Labor Accrual Adj					
Activity	0.00	645,486.14	(1,288,520.50)	--	(643,034.36)
Deferred Taxes	--	--	--	--	--
Balance July 31, 2020	0.00	3,867,960.97	(8,982,313.42)	19,928.22	(1,138,469.63)

Table 1

**2020 CALCULATION OF CARRYING CHARGE ON CONSERVATION DOLLARS HELD IN CIP TRACKER ACCOUNT**  
**Financial Incentive Project - Conservation Improvement Programs**  
**Otter Tail Power Company**

	Capital Expenditures (A)	Operating Expenses (B)	Revenues Received (C)	Dr. 1860.3100 Cr. 4310.4000 Carrying Charge 2.55% (D)	Balance Account 1860.3000 + 1860.3100 (E)
<b>August:</b>					
Carrying Charge	--	--		(2,423.90)	(2,423.90)
Bonus/Incentive		2,718,378.00			2,718,378.00
Labor Accrual Adj					0.00
Activity	0.00	803,752.88	(1,226,472.70)	--	(422,719.82)
Deferred Taxes	--	--	--	--	--
Balance August 31, 2020	0.00	7,390,091.85	(10,208,786.12)	17,504.32	1,154,764.65
<b>September:</b>					
Carrying Charge	--	--	--	2,458.59	2,458.59
Lost Margin & Bonus/Incentive					0.00
Labor Accrual Adj					0.00
Activity	0.00	820,986.93	(1,128,340.98)	--	(307,354.05)
Deferred Taxes	--	--	--	--	--
Balance September 30, 2020	0.00	8,211,078.78	(11,337,127.10)	19,962.91	849,869.19
<b>October:</b>					
Carrying Charge	--	--	--	1,809.44	1,809.44
Lost Margin & Bonus/Incentive					0.00
Labor Accrual Adj					0.00
Activity	0.00	786,911.54	(1,043,579.09)	--	(256,667.55)
Deferred Taxes	--	--	--	--	--
Balance October 31, 2020	0.00	8,997,990.32	(12,380,706.19)	21,772.35	595,011.08
<b>November:</b>					
Carrying Charge	--		--	1,266.83	1,266.83
Labor Accrual Adj					0.00
Activity	0.00	1,189,336.51	(916,658.63)	--	272,677.88
Deferred Taxes	--	--	--	--	--
Balance November 30, 2020	0.00	10,187,326.83	(13,297,364.82)	23,039.18	868,955.79
<b>December:</b>					
Carrying Charge	--	--	--	1,850.08	1,850.08
Lost Margin & Bonus/Incentive					0.00
Labor Accrual Adj					0.00
Activity	0.00	2,174,731.64	(977,938.43)	--	1,196,793.21
Deferred Taxes	--	--	--	--	--
Balance December 31, 2020	0.00	12,362,058.47	(14,275,303.26)	24,889.26	2,067,599.07

**Table 2**  
**2020 INCENTIVE MECHANISM**  
**Financial Incentive Project - Conservation Improvement Programs**  
**Otter Tail Power Company**

<b>Inputs</b>	<b>2020</b>	
3-year Weather-Normalized Sales Average (kWh)	1,741,875,298	(2013-2015 WN Sales)
1.0% Energy Savings	17,418,753	
Size of steps in Energy Savings	1,741,875	
Estimated CIP Expenditures	\$9,067,147	
Estimated CIP Energy Goal	41,576,461	
Estimated Net Benefits at Approved Goal	\$17,919,790	excludes Company-Owned Street Lighting, POP Solar, and Assessments
Energy savings at 1.5%	26,128,129	
<b>Incentive Calibration</b>	<b>2020</b>	
Max Percent of Benefits Awarded	10.0%	maximum net benefits awarded
Earning Threshold	1.0%	
Max Achievement Level	1.7%	
Max Percent of Expenditures	30.0%	
Increment (% Points)	7.5	% Points
<b>Actual Electric CIP Incentive Results</b>	<b>2020</b>	
Spending	\$9,643,680	
Energy Saved	67,344,127	excludes Company-Owned Street Lighting and POP Solar
Net Benefits Achieved	\$35,036,825	excludes House Therapy, Company-Owned Street Lighting, POP Solar, and Assessments
<b>Resulting Incentive</b>		
Achievement Level	3.87%	
Percent of Net Benefits Awarded	10.00%	
Financial Incentive without Expenditure Cap	\$3,503,683	
Expenditure Cap	\$2,864,948	excludes Company-Owned Street Lighting return on incremental costs
<b>Financial Incentive Award -- 2020 Results</b>	<b>\$2,864,948</b>	
<b>Incentive/First Year kWh Saved \$</b>	<b>\$0.0425</b>	
<b>Incentive/Net Benefits</b>	<b>8.18%</b>	
<b>Incentive/CIP Expenditures</b>	<b>29.71%</b>	



**Table 3**  
**2020 PROJECT COSTS, SAVINGS, AND BENEFITS**  
**Financial Incentive Project**  
**Otter Tail Power Company**

	2020 Proposed Savings, Costs, and Benefits				2020 Actual Savings, Costs, and Benefits			
	kWh Savings	Expenditures	Total Benefits	Net Benefits	kWh Savings	Expenditures	Total Benefits	Net Benefits
<b>Residential</b>								
Residential Air Conditioning Control	145,101	\$87,000	\$392,968	\$305,968	88,537	\$58,658	\$239,778	\$181,121
Appliance Recycling	241,851	\$65,000	\$105,727	\$40,727	366,546	\$147,254	\$162,130	\$14,877
Energy Star Lighting	3,939,958	\$360,000	\$2,602,173	\$2,242,173	7,160,979	\$555,380	\$4,498,379	\$3,942,999
Electronically Commutated Motors	90,418	\$30,000	\$108,826	\$78,826	224,150	\$41,427	\$263,831	\$222,404
Energy Feedback Program	3,322,502	\$302,100	\$755,824	\$453,724	4,186,721	\$353,237	\$942,476	\$589,239
Residential Heat Pumps	1,639,537	\$275,000	\$1,268,541	\$993,541	3,611,077	\$722,199	\$2,373,286	\$1,651,087
Home Insulation	165,584	\$45,000	\$105,172	\$60,172	76,306	\$23,476	\$45,851	\$22,374
Home Transformer	540,788	\$87,000	\$462,931	\$375,931	172,666	\$25,040	\$199,379	\$174,339
School Kit Program	1,154,443	\$130,000	\$529,526	\$399,526	1,806,407	\$110,086	\$1,792,408	\$1,682,322
Smart Thermostats	312,221	\$50,000	\$100,861	\$50,861	351,415	\$105,643	\$127,973	\$22,330
Water Heater Store & Save	585,858	\$35,000	\$1,011,427	\$976,427	567,556	\$20,855	\$1,304,335	\$1,283,480
Advertising & Education	0	\$175,000	\$0	(\$175,000)	0	\$275,049	\$0	(\$275,049)
Implementation & Training	0	\$40,000	\$0	(\$40,000)	0	\$52,759	\$0	(\$52,759)
Budget Modification Request	0	\$500,000	\$0	(\$500,000)	0	\$0	\$0	\$0
<b>Total - Residential</b>	12,138,261	\$2,181,100	\$7,443,976	\$5,262,876	18,612,358	\$2,491,064	\$11,949,827	\$9,458,763
<b>Low-Income</b>								
House Therapy	230,355	\$150,000	\$122,641	(\$27,359)	470,642	\$154,246	\$294,229	\$139,983
<b>Total - Low-Income</b>	230,355	\$150,000	\$122,641	(\$27,359)	470,642	\$154,246	\$294,229	\$139,983
<b>Commercial</b>								
Adjustable Speed Drives	5,563,485	\$390,000	\$3,140,311	\$2,750,311	7,382,209	\$443,184	\$4,631,398	\$4,188,214
Commercial Cool Savings	58,960	\$32,000	\$390,814	\$358,814	32,500	\$5,226	\$215,429	\$210,203
Commercial Direct Install	505,708	\$41,000	\$101,368	\$60,368	445,087	\$44,766	\$99,545	\$54,780
Compressed Air Efficiency	1,026,919	\$140,000	\$498,233	\$358,233	42,787	\$20,370	\$31,070	\$10,700
Custom Efficiency Grants	2,389,608	\$339,000	\$2,281,921	\$1,942,921	4,302,172	\$395,369	\$3,354,069	\$2,958,700
Commercial Heat Pumps	1,125,092	\$205,000	\$835,639	\$630,639	4,376,181	\$821,014	\$3,655,886	\$2,834,872
Commercial & Industrial Focused Efficiency	1,614,600	\$220,000	\$1,169,617	\$949,617	3,606,813	\$483,466	\$1,262,552	\$779,086
Lighting Retrofit	6,538,110	\$1,086,000	\$3,910,602	\$2,824,602	22,660,448	\$2,440,369	\$14,637,900	\$12,197,531
Lighting - New Construction	3,625,635	\$211,000	\$2,347,597	\$2,136,597	2,695,101	\$154,419	\$1,792,875	\$1,638,457
Motors	761,519	\$137,000	\$472,582	\$335,582	1,136,203	\$146,408	\$890,794	\$744,386
Recommissioning/Retrocommissioning	2,174,328	\$188,000	\$547,009	\$359,009	663,206	\$129,329	\$445,153	\$315,824
Refrigeration	1,243,764	\$130,000	\$491,220	\$361,220	918,420	\$126,148	\$423,294	\$297,145
Advertising & Education	0	\$67,000	\$0	(\$67,000)	0	\$121,031	\$0	(\$121,031)
Compressed Air Audits	0	\$20,000	\$0	(\$20,000)	0	\$4,263	\$0	(\$4,263)
Integrated Building Design Plus	0	\$234,000	\$0	(\$234,000)	0	\$236,932	\$0	(\$236,932)
Financing	0	\$50,000	\$0	(\$50,000)	0	\$11,173	\$0	(\$11,173)
Implementation & Training	0	\$60,000	\$0	(\$60,000)	0	\$60,158	\$0	(\$60,158)
Budget Modification Request	0	\$1,500,000	\$0	(\$1,500,000)	0	\$0	\$0	\$0
<b>Total - Commercial</b>	26,627,727	\$5,050,000	\$16,186,914	\$11,136,914	48,261,127	\$5,643,625	\$31,439,965	\$25,796,339

**Table 3**  
**2020 PROJECT COSTS, SAVINGS, AND BENEFITS**  
**Financial Incentive Project**  
**Otter Tail Power Company**

	2020 Proposed Savings, Costs, and Benefits				2020 Actual Savings, Costs, and Benefits			
	kWh Savings	Expenditures	Total Benefits	Net Benefits	kWh Savings	Expenditures	Total Benefits	Net Benefits
<b>Other Projects</b>								
Company-Owned Street & Area Lighting	2,355,868	\$846,327	\$969,353	\$123,026	3,305,486	\$724,726	\$1,335,196	\$610,470
Publicly-Owned Property Solar	224,250	\$229,720	\$268,553	\$38,833	0	\$141,188	\$0	(\$141,188)
<b>Total - Other</b>	2,580,118	\$1,076,047	\$1,237,906	\$161,859	3,305,486	\$865,913	\$1,335,196	\$469,282
<b>Program Development And Regulatory Requirements</b>								
Planning - Regulatory Affairs	0	\$300,000	\$0	(\$300,000)	0	\$313,205	\$0	(\$313,205)
Research & Development	0	\$180,000	\$0	(\$180,000)	0	\$52,614	\$0	(\$52,614)
NGEA - Regulatory Assessments	0	\$110,000	\$0	(\$110,000)	0	\$96,755	\$0	(\$96,755)
PUC Assessments	0	\$20,000	\$0	(\$20,000)	0	\$33,817	\$0	(\$33,817)
Transmission & Distribution Cost Study	0	\$0	\$0	\$0	0	\$0	\$0	\$0
<b>Total - Development &amp; Regulatory Requirements</b>	0	\$610,000	\$0	(\$610,000)	0	\$496,391	\$0	(\$496,391)
<b>Miscellaneous/Inactive</b>								
Town Energy Challenge	0	\$0	\$0	\$0	0	\$200	\$0	(\$200)
Company CIP Projects	0	\$0	\$0	\$0	0	\$0	\$0	\$0
Accounting Adjustments	0	\$0	\$0	\$0	0	(\$7,759)	\$0	\$7,759
<b>Total - Miscellaneous</b>	0	\$0	\$0	\$0	\$0	(\$7,559)	\$0	\$7,559
<b>Total - All CIP</b>	41,576,461	\$9,067,147	\$24,991,436	\$15,924,289	70,649,612	\$9,643,680	\$45,019,217	\$35,375,536

All numbers are for a single year - 2020. DSMORE software was used for the analysis, with figures discounted to 2020.

Table 4

## 2020 CIP Program Status Report / CIP Tracker Recap

## Financial Incentive Project -- 2020 Conservation Improvement Programs

## Otter Tail Power Company

	As Filed - 2020 Proposed Benefit/Cost Ratios				Actual - 2020 Benefit/Cost Ratios			
	Utility Test	RIM Test	Societal Test	Participant Test	Utility Test Ratio	RIM Test Ratio	Societal Test Ratio	Participant Test Ratio
<b>Residential</b>								
Residential Air Conditioning Control	4.52	3.76	4.54	inf.	4.09	3.44	4.10	inf.
Appliance Recycling	1.63	0.41	2.62	inf.	1.10	0.36	1.66	inf.
Energy Star Lighting	7.23	0.46	7.11	18.07	8.10	0.44	5.81	13.96
Electronically Commutated Motors	3.63	0.61	3.78	8.63	6.37	0.62	5.23	9.25
Energy Feedback Program	2.50	0.54	2.87	inf.	2.67	0.53	3.07	inf.
Residential Heat Pumps	4.61	0.46	2.89	6.69	3.29	0.38	2.13	5.35
Home Insulation	2.34	0.33	1.88	6.29	1.95	0.30	1.79	7.63
Home Transformer	5.32	0.53	10.04	inf.	7.96	0.70	31.11	inf.
School Kit Program	4.07	0.43	12.44	inf.	16.28	0.95	75.93	inf.
Smart Thermostats	2.02	0.29	2.82	23.58	1.21	0.28	1.46	11.69
Water Heater Store & Save	28.90	10.12	29.09	inf.	62.54	15.19	62.85	inf.
Advertising & Education	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Implementation & Training	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
<b>Total - Residential</b>	4.43	0.56	4.55	14.84	4.80	0.54	4.01	10.31
<b>Low-Income</b>								
House Therapy	0.82	0.30	9.64	inf.	1.91	0.38	13.07	inf.
<b>Total - Low-Income</b>	0.82	0.30	9.64	inf.	1.91	0.38	13.07	inf.
<b>Commercial</b>								
Adjustable Speed Drives	8.05	0.63	6.11	6.84	10.45	0.65	7.93	8.30
Commercial Cool Savings	12.21	4.66	12.23	inf.	41.22	6.34	41.29	inf.
Commercial Direct Install	2.47	0.53	6.94	inf.	2.22	0.49	2.91	10.83
Compressed Air Efficiency	3.56	0.69	3.63	4.44	1.53	0.52	0.88	1.17
Commercial Heat Pumps	6.73	0.85	2.43	1.80	4.09	0.62	1.87	2.11
Custom Efficiency Grants	4.08	0.59	2.45	3.00	9.25	0.94	6.12	4.44
Commercial & Industrial Focused Efficiency	5.32	0.80	3.29	3.39	2.61	0.68	0.85	0.86
Lighting Retrofit	3.60	0.64	1.58	1.76	6.00	0.62	3.04	3.39
Lighting - New Construction	11.13	0.70	8.13	8.38	11.61	0.66	5.08	5.37
Motors	3.45	0.60	1.96	2.30	6.08	0.68	7.49	8.51
Recommissioning/Retrocommissioning	2.91	0.61	2.51	4.17	3.44	0.80	3.44	6.51
Refrigeration	3.78	0.68	3.73	5.12	3.36	0.62	2.58	3.26
Advertising & Education	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Compressed Air Audits	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Integrated Building Design Plus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	inf.
Financing	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Implementation & Training	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
<b>Total - Commercial</b>	4.56	0.68	1.82	1.92	5.57	0.66	3.05	3.31

**Table 4**  
**2020 CIP Program Status Report / CIP Tracker Recap**  
**Financial Incentive Project -- 2020 Conservation Improvement Programs**  
**Otter Tail Power Company**

	As Filed - 2020 Proposed Benefit/Cost Ratios				Actual - 2020 Benefit/Cost Ratios			
	Utility Test	RIM Test	Societal Test	Participant Test	Utility Test Ratio	RIM Test Ratio	Societal Test Ratio	Participant Test Ratio
<b>Other Projects</b>								
Company-Owned Street & Area Lighting	1.15	0.26	2.82	inf.	1.84	1.32	5.48	inf.
Publicly-Owned Property Solar	1.17	0.51	0.69	0.83	0.00	0.00	0.00	inf.
<b>Total - Other</b>	1.15	0.29	1.77	5.74	1.54	1.16	5.30	inf.
<b>Program Development And Regulatory Requirements</b>								
Planning - Regulatory Affairs	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Research & Development	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
NGEA - Regulatory Assessments	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
PUC Assessments	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Transmission & Distribution Cost Study	0.00	0.00	0.00	inf.	inf.	inf.	inf.	inf.
<b>Total - Development &amp; Regulatory Requirements</b>	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
<b>Miscellaneous/Inactive</b>								
Town Energy Challenge - Inactive	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
Company CIP Projects	0.00	0.00	0.00	inf.	inf.	inf.	inf.	inf.
Accounting Adjustments	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
<b>Total - Miscellaneous</b>	0.00	0.00	0.00	inf.	0.00	0.00	0.00	inf.
<b>Total - All CIP</b>	3.54	0.59	2.12	3.21	4.67	0.62	3.24	4.56

**Table 5**  
**2020 CIP Program Status Report / CIP Tracker Recap**  
**Financial Incentive Project -- 2020 Conservation Improvement Programs**  
**Otter Tail Power Company**

	2020 Expenditures			2020 Participation			2020 Energy Savings - kWh			2020 Coincident Demand Savings - kW		
	Actual	Budget	% of Goal	Actual	Budget	% of Goal	Actual	Budget	% of Goal	Actual	Budget	% of Goal
<b>Residential</b>												
Residential Air Conditioning Control	\$58,658	\$87,000	67%	2,855	4,679	61%	88,537	145,101	61%	2,111.23	3,460.06	61%
Appliance Recycling	\$147,254	\$65,000	227%	359	230	156%	366,546	241,851	152%	53.15	34.05	156%
Energy Star Lighting	\$555,380	\$360,000	154%	195,661	110,000	178%	7,160,979	3,939,958	182%	783.97	477.29	164%
Electronically Commutated Motors	\$41,427	\$30,000	138%	286	120	238%	224,150	90,418	248%	65.66	27.55	238%
Energy Feedback Program	\$353,237	\$302,100	117%	30,742	30,500	101%	4,186,721	3,322,502	126%	3,694.55	2,994.15	123%
Residential Heat Pumps	\$722,199	\$275,000	263%	288	102	282%	3,611,077	1,639,537	220%	311.20	165.44	188%
Home Insulation	\$23,476	\$45,000	52%	16	40	40%	76,306	165,584	46%	2.57	8.76	29%
Home Transformer	\$25,040	\$87,000	29%	37	100	37%	172,666	540,788	32%	31.94	100.10	32%
School Kit Program	\$110,086	\$130,000	85%	1,556	1,000	156%	1,806,407	1,154,443	156%	148.96	96.00	155%
Smart Thermostats	\$105,643	\$50,000	211%	234	140	167%	351,415	312,221	113%	10.70	1.55	691%
Water Heater Store & Save	\$20,855	\$35,000	60%	15,660	16,165	97%	567,556	585,858	97%	11,462.37	8,839.20	130%
Advertising & Education	\$275,049	\$175,000	157%	11,461	10,000	115%	0	0	0%	0.00	0.00	0%
Implementation & Training	\$52,759	\$40,000	132%	3	175	2%	0	0	0%	0.00	0.00	0%
Budget Modification Request	\$0	\$500,000	0%									
<b>Total - Residential</b>	\$2,491,064	\$2,181,100	114%	259,158	173,251	150%	18,612,358	12,138,261	153%	18,676.32	16,204.15	115%
<b>Low-Income</b>												
House Therapy	\$154,246	\$150,000	103%	83	130	64%	470,642	230,355	204%	57.76	24.45	236%
<b>Total - Low-Income</b>	\$154,246	\$150,000	103%	83	130	64%	470,642	230,355	204%	57.76	24.45	236%
<b>Commercial</b>												
Adjustable Speed Drives	\$443,184	\$390,000	114%	152	164	93%	7,382,209	5,563,485	133%	925.48	516.30	179%
Commercial Cool Savings	\$5,226	\$32,000	16%	302	546	55%	32,500	58,960	55%	1,687.86	3,061.99	55%
Commercial Direct Install	\$44,766	\$41,000	109%	208	154	135%	445,087	505,708	88%	56.04	71.51	78%
Compressed Air Efficiency	\$20,370	\$140,000	15%	2	23	9%	42,787	1,026,919	4%	7.55	147.20	5%
Custom Efficiency Grants	\$395,369	\$339,000	117%	24	37	65%	4,302,172	2,389,608	180%	802.53	517.75	155%
Commercial Heat Pumps	\$821,014	\$205,000	400%	281	84	335%	4,376,181	1,125,092	389%	485.53	128.96	377%
Commercial & Industrial Focused Efficiency	\$483,466	\$220,000	220%	7	1	700%	3,606,813	1,614,600	223%	592.97	382.77	155%
Lighting Retrofit	\$2,440,369	\$1,086,000	225%	1,015	560	181%	22,660,448	6,538,110	347%	3,296.39	1,142.16	289%
Lighting - New Construction	\$154,419	\$211,000	73%	314	241	130%	2,695,101	3,625,635	74%	407.20	559.95	73%
Motors	\$146,408	\$137,000	107%	199	215	93%	1,136,203	761,519	149%	234.55	92.79	253%
Recommissioning/Retrocommissioning	\$129,329	\$188,000	69%	7	4	175%	663,206	2,174,328	31%	277.71	75.35	369%
Refrigeration	\$126,148	\$130,000	97%	78	86	91%	918,420	1,243,764	74%	122.63	178.85	69%
Advertising & Education	\$121,031	\$67,000	181%	339	100	339%	0	0	0%	0.00	0.00	0%
Compressed Air Audits	\$4,263	\$20,000	21%	1	4	25%	0	0	0%	0.00	0.00	0%
Integrated Building Design Plus	\$236,932	\$234,000	101%	1	6	17%	0	0	0%	0.00	0.00	0%
Financing	\$11,173	\$50,000	22%	2	5	40%	0	0	0%	0.00	0.00	0%
Implementation & Training	\$60,158	\$60,000	100%	319	250	128%	0	0	0%	0.00	0.00	0%
Budget Modification Request	\$0	\$1,500,000	0%									
<b>Total - Commercial</b>	\$5,643,625	\$5,050,000	112%	3,251	2,480	131%	48,261,127	26,627,727	181%	8,896.46	6,875.59	129%
<b>Other Projects</b>												
Company-Owned Street & Area Lighting	\$724,726	\$846,327	86%	5,511	3,892	142%	3,305,486	2,355,868	140%	0.00	0.00	0%
Publicly-Owned Property Solar	\$141,188	\$229,720	61%	0	16	0%	0	224,250	0%	0.00	96.64	0%
<b>Total - Other</b>	\$865,913	\$1,076,047	80%	5,511	3,908	141%	3,305,486	2,580,118	128%	0.00	96.64	0%

**Table 5**  
**2020 CIP Program Status Report / CIP Tracker Recap**  
**Financial Incentive Project – 2020 Conservation Improvement Programs**  
**Otter Tail Power Company**

[illegible]

**Table 6**  
**2020 CIP PROGRAM STATUS REPORT / CIP TRACKER RECAP - COST PER KW / KWH**  
**Financial Incentive Project – 2020 Conservation Improvement Programs**  
**Otter Tail Power Company**

	2020 Expenditures		2020 Energy Savings - kWh		Cost per kWh		2020 Coincident Demand Savings - kW		Cost per kW	
	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
<b>Residential</b>										
Residential Air Conditioning Control	\$58,658	\$87,000	88,537	145,101	\$0.66	\$0.60	2,111.23	3,460.06	\$28	\$25
Appliance Recycling	\$147,254	\$65,000	366,546	241,851	\$0.40	\$0.27	53.15	34.05	\$2,771	\$1,909
Energy Star Lighting	\$555,380	\$360,000	7,160,979	3,939,958	\$0.08	\$0.09	783.97	477.29	\$708	\$754
Electronically Commutated Motors	\$41,427	\$30,000	224,150	90,418	\$0.18	\$0.33	65.66	27.55	\$631	\$1,089
Energy Feedback Program	\$353,237	\$302,100	4,186,721	3,322,502	\$0.08	\$0.09	3,694.55	2,994.15	\$96	\$101
Residential Heat Pumps	\$722,199	\$275,000	3,611,077	1,639,537	\$0.20	\$0.17	311.20	165.44	\$2,321	\$1,662
Home Insulation	\$23,476	\$45,000	76,306	165,584	\$0.31	\$0.27	2.57	8.76	\$9,131	\$5,136
Home Transformer	\$25,040	\$87,000	172,666	540,788	\$0.15	\$0.16	31.94	100.10	\$784	\$869
School Kit Program	\$110,086	\$130,000	1,806,407	1,154,443	\$0.06	\$0.11	148.96	96.00	\$739	\$1,354
Smart Thermostats	\$105,643	\$50,000	351,415	312,221	\$0.30	\$0.16	10.70	1.55	\$9,870	\$32,258
Water Heater Store & Save	\$20,855	\$35,000	567,556	585,858	\$0.04	\$0.06	11,462.37	8,839.20	\$2	\$4
Budget Modificaion Request		\$500,000								
<b>Total - Residential</b>	\$2,163,256	\$1,966,100	18,612,358	12,138,261	\$0.12	\$0.16	18,676.32	16,204.15	\$116	\$121
<b>Low-Income</b>										
House Therapy	\$154,246	\$150,000	470,642	230,355	\$0.33	\$0.65	57.76	30.49	\$2,670	\$4,920
<b>Total - Low-Income</b>	\$154,246	\$150,000	470,642	230,355	\$0.33	\$0.65	57.76	30.49	\$2,670	\$4,920
<b>Commercial</b>										
Adjustable Speed Drives	\$443,184	\$390,000	7,382,209	5,563,485	\$0.06	\$0.07	925.48	516.30	\$479	\$755
Commercial Cool Savings	\$5,226	\$32,000	32,500	58,960	\$0.16	\$0.54	1,687.86	3,061.99	\$3	\$10
Commercial Direct Install	\$44,766	\$41,000	445,087	505,708	\$0.10	\$0.08	56.04	71.51	\$799	\$573
Compressed Air Efficiency	\$20,370	\$140,000	42,787	1,026,919	\$0.48	\$0.14	7.55	147.20	\$2,697	\$951
Custom Efficiency Grants	\$395,369	\$339,000	4,302,172	2,389,608	\$0.09	\$0.14	802.53	517.75	\$493	\$655
Commercial Heat Pumps	\$821,014	\$205,000	4,376,181	1,125,092	\$0.19	\$0.18	485.53	128.96	\$1,691	\$1,590
Commercial & Industrial Focused Efficiency	\$483,466	\$220,000	3,606,813	1,614,600	\$0.13	\$0.14	592.97	382.77	\$815	\$575
Lighting Retrofit	\$2,440,369	\$1,086,000	22,660,448	6,538,110	\$0.11	\$0.17	3,296.39	1,142.16	\$740	\$951
Lighting - New Construction	\$154,419	\$211,000	2,695,101	3,625,635	\$0.06	\$0.06	407.20	559.95	\$379	\$377
Motors	\$146,408	\$137,000	1,136,203	761,519	\$0.13	\$0.18	234.55	92.79	\$624	\$1,476
Recommissioning/Retrocommissioning	\$129,329	\$188,000	663,206	2,174,328	\$0.20	\$0.09	277.71	75.35	\$466	\$2,495
Refrigeration	\$126,148	\$130,000	918,420	1,243,764	\$0.14	\$0.10	122.63	178.85	\$1,029	\$727
Budget Modificaion Request		\$1,500,000								
<b>Total - Commercial</b>	\$5,210,068	\$4,619,000	48,261,127	26,627,727	\$0.11	\$0.17	8,896.46	6,875.59	\$586	\$672
<b>Other Projects</b>										
Company-Owned Street & Area Lighting	\$724,726	\$846,327	3,305,486	2,355,868	\$0.22	\$0.36	0.00	0.00	\$0	\$0
Publicly-Owned Property Solar	\$141,188	\$229,720	0	224,250	\$0.00	\$1.02	0.00	0.00	\$0	\$0
<b>Total - Other</b>	\$865,913	\$1,076,047	3,305,486	2,580,118	\$0.26	\$0.42	0.00	0.00	\$0	\$0
<b>Total - Direct Impact</b>	\$8,393,483	\$7,811,147	70,649,612	41,576,461	\$0.12	\$0.19	27,630.54	23,110.23	\$304	\$338
<b>Miscellaneous/Inactive Projects</b>										
Town Energy Challenge - Inactive	\$200	\$0	0	0	\$0.00	\$0.00	0.00	0.00	\$0	\$0
Company CIP Projects	\$0	\$0	0	0	\$0.00	\$0.00	0.00	0.00	\$0	\$0
Accounting Adjustments	(\$7,759)	\$0	0	0	\$0.00	\$0.00	0.00	0.00	\$0	\$0
<b>Total - Miscellaneous</b>	(\$7,559)	\$0	0	0	\$0.00	\$0.00	0.00	0.00	\$0	\$0
<b>Total - Indirect Impact</b>	\$1,257,756	\$1,256,000	0	0	\$0.00	\$0.00	0.00	0.00	\$0	\$0
<b>Total - 2020 CIP Project Costs</b>	\$9,643,680	\$9,067,147	70,649,612	41,576,461	\$0.14	\$0.22	27,630.54	23,110.23	\$349	\$392

## **Appendix B- Other Evaluations**

- **Bill Analyzer Evaluation Program Year 2020**
- **HER OTP Summary Report 2020 Final**





123 E. 4th St, Cincinnati Ohio 45202

## Final Memorandum

**To: Otter Tail Power Company**

**From: Ken Skinner, Integral Analytics**

**Date: March 1, 2021**

**RE: Impact Evaluation Results for the Bill Analyzer Program (Program Year 2020)**

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This memo presents the final results from the billing analysis of Otter Tail Power Company's (OTP) Bill Analyzer energy efficiency program. This analysis relied upon a statistical analysis of actual customer billed electricity consumption before and after participation in the program to estimate the impact of the program. Table 1 presents the results of this billing analysis.

**Table 1: Average Annual kWh Savings:**

Participation Level	Savings (kWh/year)
Overall	225

For this impact evaluation, data are available both across households (i.e., cross-sectional) and over time (i.e., time-series). With this type of data, known as "panel" data, it becomes possible to control, simultaneously, for differences across households as well as differences across periods in time through the use of a "fixed-effects" panel model specification. The fixed-effect refers to the model specification aspect that differences across homes that do not vary over the estimation period (such as square footage, heating system, etc.) can be explained, in large part, by customer-specific intercept terms that capture the net change in consumption due to the program, controlling for other factors that do change with time (e.g., the weather).

Because the consumption data in the panel model includes months before and after the installation of measures through the program, the period of program participation (or the participation window) may be defined specifically for each customer. This feature of the panel model allows for the pre-installation

months of consumption to effectively act as controls for post-participation months. In addition, this model specification, unlike annual pre/post-participation models such as annual change models, does not require a full year of post-participation data. Per OTP's request in this analysis a control group was used to explicitly control for any bias that might not have been captured in a fixed effect model with only participants.

We know the exact month of participation in the program for each participant, and are able to construct customer specific models that measure the change in usage consumption immediately before and after the date of program participation, controlling for weather and customer characteristics.

The fixed effects model can be viewed as a type of differencing model in which all characteristics of the home, which (1) are independent of time and (2) determine the level of energy consumption, are captured within the customer-specific constant terms. In other words, differences in customer characteristics that cause variation in the level of energy consumption, such as building size and structure, are captured by constant terms representing each unique household.

Algebraically, the fixed-effect panel data model is described as follows:

$$y_{it} = \alpha_i + \beta x_{it} + \varepsilon_{it},$$

where:

$y_{it}$  = energy consumption for home  $i$  during month  $t$

$\alpha_i$  = constant term for site  $i$

$\beta$  = vector of coefficients

$x$  = vector of variables that represent factors causing changes in energy consumption for home  $i$  during month  $t$  (i.e., weather and participation) including a binary variable which tracks months of participation. This binary variable is defined as being 1 for all months since inception of program participation. It is defined as being 0 for all the control group members and for treatment group participants in any month before participation

$\varepsilon$  = error term for home  $i$  during month  $t$ .

With this specification, the only information necessary for estimation is those factors that vary month to month for each customer, and that will affect energy use, which effectively are weather conditions and program participation. Other non-measurable factors can be captured through the use of monthly indicator variables (e.g., to capture the effect of potentially seasonal energy loads).

The effect of the program was estimated by including a variable which is equal to one for all months after the customer first logged into the Bill Analyzer website. For those control group members this variable is set to zero in all months. Thus the coefficient on this variable is the savings associated with any general interaction with the website. Finally, in order to account for differences in billing days, billing data was standardized according to calendar months.

## Data

The statistical model used to determine the impact of Bill Analyzer incorporates monthly billing data from Jan. 1, 2015 to December 2020 from participants in Minnesota, a control group of non-participating OTP residential customers also in Minnesota, weather data (average monthly temperate) for the same period, and other OTP program participation. Table 2 presents the number of households in the participant and non-participant group included in the model.

**Table 2: Sample used for estimation.**

	Participants	Non-participants
Original Sample size	1,479	641
Eliminated due to excessive, missing or zero reads or extremely small reads in most months	123	10
Estimation Sample	1,356	631
Total Sample Size	1,987 homes	

The numbers of 2020 participants that used the online tools are presented in Table 3. Since a customer can log in multiple times and use different combinations of the Bill Analyzer each time, the total within and across the different events will be greater than the number of individual users.

**Table 3: Bill Analyzer event used.**

Event	Frequency
Website Login	1280
Add Action to My Plan	1562
Click Insight	214
Complete Action	3500
Edit Savings Goal	272
Finish Short Profile	264
Remove Action	317
Set Savings Goal	212
View Action Detail	109

Finally, table 4 presents the average annual kWh usage for both the participants and non-participants for 2015 to 2020.

**Table 4: Average annual electricity usage (kWh), by year and group.**

Year	Participants	Non-participants
2015	14,682	11,831
2016	12,797	11,166
2017	14,397	10,687
2018	12,667	11,496
2019	12,811	11,676
2020	12,552	11,557

## Estimation

The estimated model is presented in Table 5.<sup>1</sup>

**Table 5: Estimated Overall Savings – dependent variable is monthly kWh usage, using usage from Jan. 2015 through Dec. 2020 (savings are negative).**

Independent Variable	Coefficient (kWh/month)	t-value
Participant Bill Analyzer website	-18.75	-2.65
Sample Size	53,186 obs	
R-Squared	60%	

These estimated models show that the Bill Analyzer program does induce energy conservation by participants, with a statistically significant average annual savings of 225 kWh / year.

## Conclusion

Based on the estimated results and their statistical significance, the most appropriate savings estimate for the Bill Analyzer program is the overall estimate of 225 kWh / year per participant based on the sample of 1,479 participating accounts.

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<sup>1</sup> The models include weather terms, monthly indicator terms and other OTP program participation in addition to the variables presented in these tables. These variables were not included in order make interpretation clearer. The full models are included in the Appendix.

APPENDIX:

Estimated Overall Model

Dependent Variable: kwh

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1503	15914857065	10588727	51.33	<.0001
Error	51682	10661019685	206281		
Corrected Total	53185	26575876750			

R-Square	Coeff Var	Root MSE	kwh Mean
0.598846	48.412044	54.18189	38.1588

Parameter	Estimate	Standard Error	t Value	Pr >  t
hdd*monthid 201412	0.9691817	0.7960295	1.22	0.2234
hdd*monthid 20151	0.9332532	0.0531563	17.56	<.0001
hdd*monthid 201510	-0.0037415	0.0970781	-0.04	0.9693
hdd*monthid 201511	0.3355014	0.0744226	4.51	<.0001
hdd*monthid 201512	1.1275858	0.0716687	15.73	<.0001
hdd*monthid 20152	0.4520427	0.1005505	4.50	<.0001
hdd*monthid 20153	0.4106492	0.1118495	3.67	0.0002
hdd*monthid 20154	0.2502916	0.0872329	2.87	0.0041
hdd*monthid 20155	-0.0428217	0.1143771	-0.37	0.7081
hdd*monthid 20156	0.2053491	0.4112114	0.50	0.6175
hdd*monthid 20157	1.2766270	1.8308789	0.70	0.4856
hdd*monthid 20158	0.4182829	0.8499122	0.49	0.6226
hdd*monthid 20159	0.0918967	0.2931085	0.31	0.7539
hdd*monthid 20161	0.8770852	0.0485482	18.07	<.0001
hdd*monthid 201610	0.1145083	0.0626120	1.83	0.0674
hdd*monthid 201611	0.5418720	0.1401560	3.87	0.0001
hdd*monthid 201612	1.0414744	0.0488611	21.32	<.0001
hdd*monthid 20162	0.5032146	0.1365498	3.69	0.0002
hdd*monthid 20163	0.3626212	0.0940045	3.86	0.0001
hdd*monthid 20164	0.2016116	0.0573557	3.52	0.0004
hdd*monthid 20165	-0.0270147	0.1343514	-0.20	0.8406
hdd*monthid 20166	-0.2544931	0.4441305	-0.57	0.5666
hdd*monthid 20167	1.4051547	1.4299265	0.98	0.3258
hdd*monthid 20168	0.0612125	0.8174134	0.07	0.9403
hdd*monthid 20169	-0.1671913	0.2042015	-0.82	0.4129
hdd*monthid 20171	0.8492916	0.0455769	18.63	<.0001
hdd*monthid 201710	0.1662884	0.0542064	3.07	0.0022
hdd*monthid 201711	0.3644576	0.0614573	5.93	<.0001
hdd*monthid 201712	1.1389396	0.0668773	17.03	<.0001
hdd*monthid 20172	0.2871120	0.1375846	2.09	0.0369
hdd*monthid 20173	0.3298493	0.1166402	2.83	0.0047
hdd*monthid 20174	0.1582709	0.0518585	3.05	0.0023
hdd*monthid 20175	-0.0124135	0.1018632	-0.12	0.9030
hdd*monthid 20176	0.0668297	0.3296339	0.20	0.8393
hdd*monthid 20177	0.4276581	0.6661737	0.64	0.5209
hdd*monthid 20178	0.3647759	0.4990131	0.73	0.4648
hdd*monthid 20179	-0.0973213	0.1909189	-0.51	0.6102
hdd*monthid 20181	0.9327598	0.0453028	20.59	<.0001
hdd*monthid 201810	0.2681648	0.0355705	7.54	<.0001
hdd*monthid 201811	0.3600742	0.1420544	2.53	0.0113
hdd*monthid 201812	1.1773703	0.0927618	12.69	<.0001
hdd*monthid 20182	0.0992984	0.1231088	0.81	0.4199
hdd*monthid 20183	0.3022528	0.0796810	3.79	0.0001
hdd*monthid 20184	0.2737111	0.0366053	7.48	<.0001
hdd*monthid 20185	0.1627000	0.1664728	0.98	0.3284

hdd*monthid 20186	1.4417008	0.8609170	1.67	0.0940
hdd*monthid 20187	4.6633684	1.6205255	2.88	0.0040
hdd*monthid 20188	1.1445185	0.6173714	1.85	0.0638
hdd*monthid 20189	0.0692341	0.1231364	0.56	0.5739
hdd*monthid 20191	0.7957187	0.0453175	17.56	<.0001
hdd*monthid 201910	0.2530064	0.0430717	5.87	<.0001
hdd*monthid 201911	0.5158320	0.1402823	3.68	0.0002
hdd*monthid 201912	0.9808833	0.0487447	20.12	<.0001
hdd*monthid 20192	-0.0142020	0.1223498	-0.12	0.9076
hdd*monthid 20193	0.0466091	0.0920979	0.51	0.6128
hdd*monthid 20194	0.2285505	0.0402077	5.68	<.0001
hdd*monthid 20195	0.1370659	0.0903923	1.52	0.1294
hdd*monthid 20196	0.1321839	0.3617397	0.37	0.7148
hdd*monthid 20197	1.9115797	1.5845049	1.21	0.2277
hdd*monthid 20198	0.4623269	0.4769901	0.97	0.3324
hdd*monthid 20199	-0.0605192	0.1578929	-0.38	0.7015
hdd*monthid 20201	0.7706201	0.0281077	27.42	<.0001
hdd*monthid 202010	0.2746329	0.0364768	7.53	<.0001
hdd*monthid 202011	0.3660085	0.0318315	11.50	<.0001
hdd*monthid 202012	0.9698131	0.0496542	19.53	<.0001
hdd*monthid 20202	0.3869112	0.0235330	16.44	<.0001
hdd*monthid 20203	0.3976971	0.0290964	13.67	<.0001
hdd*monthid 20204	0.2870966	0.0357212	8.04	<.0001
hdd*monthid 20205	0.2512879	0.0909133	2.76	0.0057
hdd*monthid 20206	-0.1327635	0.3713812	-0.36	0.7207
hdd*monthid 20207	1.8341059	1.6502969	1.11	0.2664
hdd*monthid 20208	0.5057006	0.3652805	1.38	0.1662
hdd*monthid 20209	0.0843242	0.1030882	0.82	0.4134
cdd1*monthid 201510	4.0806610	2.3657049	1.72	0.0845
cdd1*monthid 201511	-24.1314815	56.7859118	-0.42	0.6709
cdd1*monthid 20152	-15.7801279	146.5377465	-0.11	0.9142
cdd1*monthid 20153	19.2365668	125.5320677	0.15	0.8782
cdd1*monthid 20154	-27.4940799	57.6967164	-0.48	0.6337
cdd1*monthid 20155	2.1183805	1.9213784	1.10	0.2702
cdd1*monthid 20156	0.4226317	0.4702938	0.90	0.3688
cdd1*monthid 20157	1.2288406	0.2646997	4.64	<.0001
cdd1*monthid 20158	1.0391855	0.3416184	3.04	0.0024
cdd1*monthid 20159	0.2423155	0.5781323	0.42	0.6751
cdd1*monthid 201610	7.0845766	6.8540710	1.03	0.3013
cdd1*monthid 20163	-4.1969135	84.8882527	-0.05	0.9606
cdd1*monthid 20164	-2.8440744	8.7412619	-0.33	0.7449
cdd1*monthid 20165	0.9311917	0.9023959	1.03	0.3021
cdd1*monthid 20166	1.0021364	0.2561282	3.91	<.0001
cdd1*monthid 20167	1.2537647	0.1766420	7.10	<.0001
cdd1*monthid 20168	1.4219945	0.2336502	6.09	<.0001
cdd1*monthid 20169	1.0696180	0.8053511	1.33	0.1841
cdd1*monthid 201710	5.1342221	3.1926294	1.61	0.1078
cdd1*monthid 201711	-3.3360185	62.9392741	-0.05	0.9577
cdd1*monthid 20172	67.3132129	157.9073861	0.43	0.6699
cdd1*monthid 20173	25.9472622	122.6768096	0.21	0.8325
cdd1*monthid 20174	0.7599141	10.8907784	0.07	0.9444
cdd1*monthid 20175	1.4793655	0.8345513	1.77	0.0763
cdd1*monthid 20176	0.6829771	0.3365431	2.03	0.0424
cdd1*monthid 20177	1.2721826	0.1946870	6.53	<.0001
cdd1*monthid 20178	1.1926097	0.4038129	2.95	0.0031
cdd1*monthid 20179	0.4738607	0.7010554	0.68	0.4991
cdd1*monthid 201810	0.2888258	2.4065925	0.12	0.9045
cdd1*monthid 201811	6.8062198	165.0377761	0.04	0.9671
cdd1*monthid 20183	92.3037265	100.5129498	0.92	0.3585
cdd1*monthid 20184	0.9180482	4.2747516	0.21	0.8300
cdd1*monthid 20185	0.4094817	0.4444761	0.92	0.3569
cdd1*monthid 20186	0.6635184	0.1600988	4.14	<.0001

cdd1*monthid 20187	1.1324127	0.1361921	8.31 <.0001
cdd1*monthid 20188	0.9309623	0.1938065	4.80 <.0001
cdd1*monthid 20189	0.6240120	0.4709393	1.33 0.1852
cdd1*monthid 201910	0.3881687	1.8788280	0.21 0.8363
cdd1*monthid 20194	9.4226265	12.8144227	0.74 0.4622
cdd1*monthid 20195	0.7466299	0.9598222	0.78 0.4366
cdd1*monthid 20196	0.5889251	0.2861091	2.06 0.0396
cdd1*monthid 20197	1.1513131	0.1357235	8.48 <.0001
cdd1*monthid 20198	1.0586996	0.3077222	3.44 0.0006
cdd1*monthid 20199	1.0165128	0.7227134	1.41 0.1596
cdd1*monthid 202010	0.1593243	2.4027819	0.07 0.9471
cdd1*monthid 202011	-35.7608769	19.2816889	-1.85 0.0637
cdd1*monthid 20202	-44.6357421	23.3779576	-1.91 0.0562
cdd1*monthid 20203	-38.2041340	22.3977037	-1.71 0.0881
cdd1*monthid 20204	5.0723478	8.5714309	0.59 0.5540
cdd1*monthid 20205	0.3788354	0.5492655	0.69 0.4904
cdd1*monthid 20206	1.3734608	0.1420189	9.67 <.0001
cdd1*monthid 20207	1.6710752	0.1122561	14.89 <.0001
cdd1*monthid 20208	1.6919211	0.1604453	10.55 <.0001
cdd1*monthid 20209	1.1496558	0.4547401	2.53 0.0115
BA_Part_2020_update	-18.7459116	28.6840879	-2.65 0.0134
opowerpart	-85.9451029	89.4368392	-0.96 0.3366
Otherprogrampart*		.	.

\*not enough sample to estimate otherprogram participation from BA participants & control

**Otter Tail Home Energy Reports Program:  
2020 Results Report**

**Section 1: Program Overview**

In June 2011, Otter Tail Power Company (Otter Tail) and Opower launched the Home Energy Reports pilot, a behavioral program designed to boost customer engagement and reduce residential energy consumption. Initially, 30,000 households were selected for the program, and the vast majority received a series of personalized Home Energy Reports designed to motivate and educate recipients to take actions to improve the energy efficiency of their homes.

- Annually in 2012, 2013, and 2014, additional residential customers in Otter Tail’s Minnesota service territory were added to the program as a refill to offset attrition (primarily from utility account turnover) and return the program to its original size. At the onset of the program a control group was put in place, and in August 2015, the control group was discontinued, and program design was expanded to reach as many eligible customers as possible.
  - Refill groups were measured utilizing the Modeled Savings Protocol approved by the Minnesota Department of Energy Resources (MN DER, formerly Office of Energy Security) in 2010. This method is discussed in more detail in Section 2.
  - An update to the Modeled Savings Protocol was submitted for approval to the MN DER with a request to apply the revised methodology to all waves of the program in 2016. The revised methodology is described in more detail in Section 2.
- In January 2017, the program size was reduced to 28,000 households. An additional 4,000 households were added to the program in August 2020, and 1,000 previously treated households from the June 2011 wave were re-added at the same time to ensure the program maintained at least the 28,000-household goal and to provide a level of over selection to plan for near term attrition.

**Figure 1: 2020 Report Recipients by Wave (households receiving at least 1 report in 2020)**

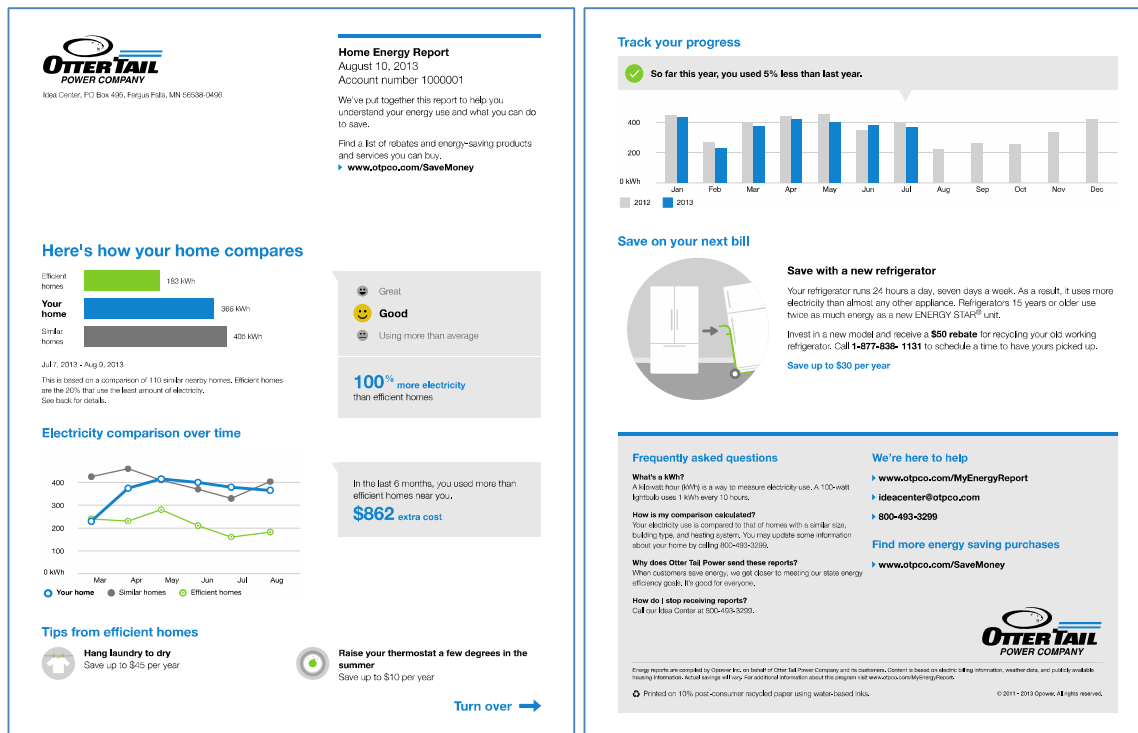
<b>Waves</b>	<b>Recipients</b>
June 2011 Wave	<b>11,252</b>
October 2012 Wave	<b>1412</b>
July 2013 Wave	<b>1091</b>
July 2014 Wave	<b>925</b>
August 2015 Wave	<b>3773</b>
July 2016 Wave	<b>1333</b>
October 2018 Wave	<b>2805</b>
September 2019 Wave	<b>2749</b>
August 2020 Wave	<b>3923</b>
<b>2020 Total</b>	<b>29,263</b>



Home Energy Reports, pictured in Figure 1, contain various personalized components designed to motivate and educate customers on energy efficiency actions. Report components include:

- Comparisons of recent energy use to a group of comparable ‘similar homes’; this section includes both normative and injunctive messages designed to motivate action.
- Comparison of recent energy use to historical energy use, tracking household improvement over time.
- Targeted energy efficiency advice; specific tips are selected based on the home’s energy use pattern, housing characteristics, and household demographics.
- Dynamic modules to promote programs and include seasonal information.
- An informative Frequently Asked Questions section.

**Figure 1: Example of Otter Tail Home Energy Report (Front & Back)**



Cumulatively, 14 customers chose to opt out of the program in 2020, which corresponds to an opt-out rate of 0.05 percent for the year. The 2020 opt-out rate compares favorably to opt-out rates of between 1 and 3 percent at other Minnesota utilities and is lower than the Opower overall average. In the same timeframe, 2,534 participants closed their electric accounts with Otter Tail, effectively removing them from the program. Depending on when these events occurred, these customers may have received fewer than four reports in 2020 but are included as participants.

Figure 2: 2020 Account Closures & Opt-Outs by Wave

Month	Account Closures	Opt-Outs
June 2011 Wave	605	4
October 2012 Wave	102	2
July 2013 Wave	80	0
July 2014 Wave	76	1
August 2015 Wave	268	2
July 2016 Wave	138	1
October 2018 Wave	337	1
September 2019 Wave	537	3
August 2020 Wave	391	0
<b>2020 Total</b>	<b>2,534</b>	<b>14</b>

## Section 2: Savings Calculation Methodology

This section describes the criteria used to define the population eligible to receive Home Energy Reports, the methodology originally used to assign homes to treatment and control groups, the methodology for assigning homes to certain customer segments, and the measurement and verification techniques used to derive program savings.

Opower integrates data from a variety of sources to ensure the Home Energy Reports are personalized, accurate, and meaningful for all recipients. These data integration efforts also allow for detailed analysis of energy savings results that enable the optimization of feature design and targeting of specific energy efficiency messages. The data used for the various analyses presented herein were collected from three primary sources:

1. *Consumption data:* Otter Tail provides Opower with weekly updates of monthly consumption data for all households in the program, including historical consumption information.
2. *Parcel data:* Opower received, to the extent available from a third-party vendor, data about household parcels, including home size, age and value, heating and cooling type, as well as pool and hot tub data. These data elements are static with the exception of square footage, heating and cooling type, and pool and hot tub data, which may be updated at the customer's request.
3. *Demographic data:* Opower received, to the extent available from a third-party vendor, demographic data about participants, including household income, number of occupants, age of occupant(s), and an owner/renter indicator. These fields were used to recommend customized energy efficiency tips to

customers by using relevant demographic targeting. Household size may be updated at the customer's request.

The primary measure of success for the Home Energy Reports program is the difference between the average energy consumption of homes in the treatment group and homes in the control group. Because of the statistical homogeneity of these two groups, any difference in their respective energy consumption from June 2011 (program start) to August 2015 (end of randomized controlled trial (RCT)) can be attributed to the Home Energy Reports.

The analysis of the Home Energy Reports program relies upon a fixed-effects regression model. The rationale for using a regression model to interpret the results of the 2011 wave are threefold: 1) the model eliminates variability due to other factors and allows for tighter error bars around the estimate of report impact; 2) in order to isolate the impact of the Home Energy Reports on energy use, it is appropriate to control for slight differences in the housing and demographic characteristics present in the treatment and control population; and 3) the model makes the search for population segments with better or worse than average impact much more manageable. This statistical methodology is standard procedure for the analysis of controlled experiments and is a well-accepted practice within the energy efficiency program measurement and verification community. This was the statistical methodology used to measure results for the initial wave of 30,000 households up until the expansion to territory-wide deployment in August 2015.

### *2.1 Modeled Savings Methodology*

Without the benefit of a control group, the Modeled Savings Methodology was applied to measure the impact of the Home Energy Reports program in the 2012 through 2020 waves. This approach was approved by the MN DER in October 2010. This protocol aimed to leverage Opower expertise from ongoing programs in Minnesota with treatment and control populations, thus offering better safeguards to control for weather and other conditions specific to the state. With the Otter Tail program, savings associated with Otter Tail's 2012 through 2020 waves have been modeled using RCT-measured results from Otter Tail's own 2011 wave.

### *2.2 RCT Disbanded*

As of August 2015, the control group associated with the 2011 pilot wave was converted to recipient status and began receiving reports as participants in the program. Measuring savings for the 2011 wave via a RCT became no longer possible. Therefore, Opower began reporting all savings for the program under the Modeled Savings Protocol. The Modeled Savings Protocol states that:

"Larger utilities in Minnesota (greater than 15,000 customers) could also have the option of deploying the Opower platform to the entire service territory. Should this case arise, Opower proposes that this protocol also be extended to larger utilities that have a minimum of two years

of experimental data from a program administered by Opower. In this case, the model should be based only on results for that particular client, not a sampling of clients across the state.”

Otter Tail’s Opower program had over four years of measured savings, meeting the approved threshold. Therefore, consistent with the recommendations of the Modeled Savings Protocol, Opower is able to rely on Otter Tail’s own results to inform the model for calculating savings going forward.

### 2.3 Update to the *Modeled Savings Methodology*

In 2016, updates were made to the Modeled Savings Methodology to improve the accuracy of the reporting. These changes include:

- Establishing the relationship between the monthly savings rate and the cumulative number of print reports received per person in the wave up to that month.
- Applying the forecasted savings rate in a given month to the usage of the modeled wave.
- Adapting the algorithm to apply to rolling enrollment waves.

This methodology for measuring savings in territory-wide deployments, described in more detail below, has also been used successfully at Rochester Public Utilities in Minnesota and Fort Collins Utilities in Colorado.

Otter Tail received approval from the MN DER on October 7, 2016, to apply a revised Modeled Savings Methodology to calculate energy savings.

#### 2.2.1 *Regression Model & Modeled Savings Methodology*

The regression model of program results includes regressors for heating and cooling degree days, baseline usage, home square footage, age of the home, and a treatment variable interacted with an indicator of whether the billing period is pre-treatment or post-treatment. Opower then scores the model based on the coefficients for treatment times post-deployment, baseline usage, home square footage, and age of the home.

Output is a function that describes energy savings as a function of observable household or customer characteristics. The final form of the model is determined based on the statistical significance of the candidate variables. A simplified equation using square footage and age of the customer’s home, the number of occupants, the baseline usage in the pre-treatment period, and an indicator of whether the customer owns or rents their home is given below:

$$\text{Savings} = b_0 + b_1(\text{sqft}) + b_2(\text{age}) + b_3(\text{\# of occupants}) + b_4(\text{baseline usage}) + b_5(\text{owner})$$

Model output is the result of a similar equation, depending on the statistically significant variables.

The average of the ‘scored’ savings is the predicted per household savings for each customer in the utility. Multiplying this score by the number of customers yields the total savings over the time period in question.

Opower recognizes that because this methodology does not employ experimental design, it may be prudent to adjust the savings percentage accordingly. The resolved solution is to cap the savings calculated through this protocol at the maximum measured savings across the experimentally designed programs in Minnesota.

### Section 3: Program Energy Savings

The Home Energy Reports program demonstrated a clear and significant reduction in residential energy consumption. Gross total savings for the program in 2020 amounted to 11,497 MWh. Over the course of 2020, participants saved at a rate of 2.70 percent. A month-by-month breakdown of savings by deployment wave is shown below in Figure 3.

**Figure 3: 2020 Monthly Electric Savings Impact Broken Down by Deployment Wave**

Month	2011 Wave Savings (MWh)	2012 Wave Savings (MWh)	2013 Wave Savings (MWh)	2014 Wave Savings (MWh)	2015 Wave Savings (MWh)	2016 Wave Savings (MWh)	2018 Wave Savings (MWh)	2019 Wave Savings (MWh)	2020 Wave Savings (MWh)
1-2020	637	93	72	54	179	68	121	51	-
2-2020	560	82	64	48	159	61	112	52	-
3-2020	523	77	61	45	149	57	105	50	-
4-2020	431	64	50	38	123	47	87	43	-
5-2020	378	56	43	32	110	41	78	40	-
6-2020	410	60	48	35	120	45	84	46	-
7-2020	458	66	54	40	134	50	95	52	-
8-2020	410	59	48	36	121	45	87	49	-
9-2020	329	47	38	29	97	35	69	38	-
10-2020	391	57	46	34	114	42	82	44	43
11-2020	456	67	52	40	132	49	98	52	49
12-2020	533	78	60	46	154	57	115	60	71
<b>Total</b>	<b>5516</b>	<b>806</b>	<b>636</b>	<b>477</b>	<b>1,592</b>	<b>597</b>	<b>1,133</b>	<b>577</b>	<b>163</b>

Opower Home Energy Report programs increase customer participation in other utility energy efficiency programs. The evidence for this comes from Opower’s RCTs. Treatment customers who receive reports participate in utility energy efficiency programs at higher rates than do control customers. The most recent Opower meta-analyses of the impact on program participation show a 15 percent lift across all utility energy efficiency programs. The increase in participation impacts savings for the reports program in the form of jointly

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## Utilities

attributable savings. Opower will remove these jointly attributable savings, to avoid the risk of 'double-counting'.

With a control group no longer available for program participation measurement, Opower has applied a value measured by Xcel Energy in its Minnesota program evaluation, entitled *Verification of Savings from Xcel Energy Minnesota's Print Energy Feedback Pilot Project* from March 2014, performed by the Center for Energy and Environment. The value is an average of the jointly attributable percentage savings from 2010-2012, which equates to 1.4 percent of program annual savings. Gross savings in 2020 will be reduced by 160.96 MWh to account for these jointly attributable savings. Net annual savings for the program in 2020 is therefore adjusted to 11,336 MWh, which is equal to an average of 387.38 kilowatt-hours in energy savings per participant household.

## **Appendix C- Project Information Sheets**

Electric Conservation Project Information Sheet  
Otter Tail Power Company

	Category: Status: Year:	Residential Air Conditioning Control							
		Existing							
		2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor		7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor		7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs									
Delivery		\$41,250.00	\$28,166.60	\$41,250.00	\$28,035.04	\$41,250.00	\$15,349.81	\$40,815.00	\$20,388.95
Administration		\$17,060.00	\$9,352.54	\$17,625.00	\$7,438.57	\$18,190.00	\$3,204.42	\$18,190.00	\$5,844.57
Evaluation, Measurement & Verification		\$3,000.00	\$219.62	\$3,000.00	\$676.33	\$3,000.00	\$735.20	\$3,000.00	\$550.44
Advertising & Promotion		\$20,000.00	\$18,813.05	\$20,000.00	\$9,748.54	\$20,000.00	\$12,162.56	\$20,000.00	\$31,873.63
Incentives		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other		\$3,690.00	\$0.00	\$4,125.00	\$0.00	\$4,560.00	\$0.00	\$4,995.00	\$0.00
Total Utility Costs		\$85,000.00	\$56,551.81	\$86,000.00	\$45,898.48	\$87,000.00	\$31,451.99	\$87,000.00	\$58,657.59
Total Participants		4,244	2,627	4,389	2,729	4,534	2,791	4,679	2,855
% of Spending by Customer Segments									
Residential		100%	100%	100%	100%	100%	100%	100%	100%
Commercial		0%	0%	0%	0%	0%	0%	0%	0%
Industrial		0%	0%	0%	0%	0%	0%	0%	0%
Farm		0%	0%	0%	0%	0%	0%	0%	0%
Other		0%	0%	0%	0%	0%	0%	0%	0%
Total % of Spending		100%	100%	100%	100%	100%	100%	100%	100%
Low-Income Participation*									
Participants % (% of Total Participants)		31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)		31%	31%	31%	31%	31%	31%	31%	31%
Renter Participation*									
Participants % (% of Total Participants)		21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)		21%	21%	21%	21%	21%	21%	21%	21%
Energy Savings									
Annual kWh Savings at Meter		126,447	75,684	126,447	78,622	130,625	80,409	134,802	82,253
Annual kWh Savings at Generator		136,907	81,944	136,907	85,126	141,430	87,060	145,953	89,056
Cost per Annual kWh Saved at Generator		\$0.6209	\$0.6901	\$0.6282	\$0.5392	\$0.6151	\$0.3613	\$0.5961	\$0.6587
Peak kW Savings at Meter		2,915.628	1,804.749	3,015.243	1,874.823	3,114.858	1,917.417	3,214.473	1,961.385
Peak kW Savings at Generator		3,156.808	1,954.037	3,264.663	2,029.908	3,372.518	2,076.025	3,480.374	2,123.630
Cost per Peak kW Saved at Generator		\$26.93	\$28.94	\$26.34	\$22.61	\$25.80	\$15.15	\$25.00	\$27.62
Utility Ratio									
Utility NPV		\$254,622	\$153,671	\$248,696	\$162,209	\$280,305	\$194,650	\$305,968	\$181,121
Ratepayer Ratio		3.50	3.22	3.41	3.74	3.67	5.40	3.76	3.44
Ratepayer NPV		\$242,591	\$144,966	\$236,413	\$152,428	\$267,109	\$184,247	\$288,376	\$170,053
Participant Ratio		inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV		\$12,587	\$9,107	\$12,850	\$10,233	\$13,806	\$10,884	\$18,404	\$11,579
Societal Ratio		4.02	3.74	3.91	4.56	4.24	7.22	4.54	4.10
Societal NPV		\$256,485	\$154,825	\$250,553	\$163,364	\$281,807	\$195,575	\$307,600	\$182,117

\* Percentage derived from 2010 Census data.



Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Appliance Recycling							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$33,500.00	\$47,825.95	\$33,500.00	\$49,347.06	\$33,500.00	\$59,105.41	\$33,500.00	\$50,126.56
Administration	\$4,000.00	\$10,790.51	\$4,000.00	\$11,996.13	\$4,000.00	\$6,788.35	\$4,000.00	\$4,591.07
Evaluation, Measurement & Verification	\$2,000.00	\$188.74	\$2,000.00	\$733.51	\$2,000.00	\$901.37	\$2,000.00	\$900.64
Advertising & Promotion	\$14,000.00	\$14,085.73	\$14,000.00	\$26,338.53	\$14,000.00	\$26,739.68	\$14,000.00	\$73,685.47
Incentives	\$11,500.00	\$19,400.00	\$11,500.00	\$19,800.00	\$11,500.00	\$22,350.00	\$11,500.00	\$17,950.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$65,000.00	\$92,290.93	\$65,000.00	\$108,215.23	\$65,000.00	\$115,884.81	\$65,000.00	\$147,253.74
Total Participants	230	388	230	396	230	447	230	359
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	200%	100%	200%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	224,685	373,197	224,685	381,612	224,685	429,153	224,685	340,530
Annual kWh Savings at Generator	243,271	404,068	243,271	413,179	243,271	464,652	243,271	368,699
Cost per Annual kWh Saved at Generator	\$0.2672	\$0.2284	\$0.2672	\$0.2619	\$0.2672	\$0.2494	\$0.2672	\$0.3994
Peak kW Savings at Meter	36.570	53.364	36.570	54.464	36.570	61.478	36.570	49.375
Peak kW Savings at Generator	39.595	57.778	39.595	58.969	39.595	66.564	39.595	53.459
Cost per Peak kW Saved at Generator	\$1,641.62	\$1,597.34	\$1,641.62	\$1,835.12	\$1,641.62	\$1,740.96	\$1,641.62	\$2,754.50
Utility Ratio	1.33	1.62	1.42	1.51	1.56	1.68	1.56	1.10
Utility NPV	\$21,292	\$57,119	\$27,169	\$54,801	\$36,105	\$78,529	\$36,105	\$14,877
Ratepayer Ratio	0.41	0.42	0.44	0.40	0.41	0.41	0.41	0.36
Ratepayer NPV	(\$126,088)	(\$209,329)	(\$118,897)	(\$241,023)	(\$147,981)	(\$285,046)	(\$147,981)	(\$285,158)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$199,707	\$348,740	\$197,955	\$385,328	\$240,293	\$474,222	\$240,293	\$390,850
Societal Ratio	2.35	2.88	2.45	2.53	2.53	2.79	2.53	1.66
Societal NPV	\$72,209	\$136,950	\$77,354	\$134,848	\$82,079	\$166,993	\$82,079	\$85,057

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Energy Star Lighting							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$95,000.00	\$67,100.07	\$103,000.00	\$74,820.48	\$108,000.00	\$77,583.73	\$108,000.00	\$84,342.38
Administration	\$8,000.00	\$25,507.33	\$7,000.00	\$26,448.48	\$9,000.00	\$14,502.48	\$9,000.00	\$6,498.83
Evaluation, Measurement & Verification	\$2,000.00	\$568.82	\$2,000.00	\$837.16	\$2,000.00	\$2,614.46	\$2,000.00	\$2,119.80
Advertising & Promotion	\$10,000.00	\$4,528.77	\$10,000.00	\$78,494.97	\$10,000.00	\$75,815.71	\$10,000.00	\$71,914.52
Incentives	\$285,000.00	\$238,578.21	\$273,000.00	\$484,835.20	\$231,000.00	\$402,113.11	\$231,000.00	\$391,015.27
Other	\$0.00	\$0.00	\$0.00	\$45.10	\$0.00	\$2,195.81	\$0.00	\$5,212.11
<b>Total Utility Costs</b>	<b>\$400,000.00</b>	<b>\$336,283.20</b>	<b>\$395,000.00</b>	<b>\$665,481.39</b>	<b>\$360,000.00</b>	<b>\$574,825.30</b>	<b>\$360,000.00</b>	<b>\$561,102.91</b>
Total Participants	100,000	129,587	105,000	176,552	110,000	197,752	110,000	195,661
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	3,493,933	4,386,741	3,493,933	6,001,199	3,660,310	6,573,077	3,660,310	6,652,712
Annual kWh Savings at Generator	3,782,950	4,749,611	3,782,950	6,497,617	3,963,091	7,116,801	3,963,091	7,203,023
Cost per Annual kWh Saved at Generator	\$0.1057	\$0.0708	\$0.1044	\$0.1024	\$0.0908	\$0.0808	\$0.0908	\$0.0779
Peak kW Savings at Meter	403.104	512.142	423.259	678.281	443.414	733.906	443.414	728.329
Peak kW Savings at Generator	436.449	554.506	458.271	734.388	480.094	794.615	480.094	788.577
Cost per Peak kW Saved at Generator	\$916.49	\$606.46	\$861.94	\$906.17	\$749.85	\$723.40	\$749.85	\$711.54
Utility Ratio	4.93	8.12	5.84	5.77	6.99	7.56	6.99	8.10
Utility NPV	\$1,570,109	\$2,394,722	\$1,911,802	\$3,173,714	\$2,157,093	\$3,773,111	\$2,157,093	\$3,942,999
Ratepayer Ratio	0.53	0.53	0.52	0.49	0.47	0.45	0.47	0.44
Ratepayer NPV	(\$1,736,127)	(\$2,470,129)	(\$2,157,880)	(\$3,963,349)	(\$2,886,819)	(\$5,405,748)	(\$2,886,819)	(\$5,640,912)
Participant Ratio	10.65	11.19	14.56	11.79	17.39	13.49	17.39	13.96
Participant NPV	\$4,824,720	\$6,572,104	\$5,695,007	\$9,789,445	\$7,213,425	\$12,820,308	\$7,213,425	\$13,373,086
Societal Ratio	5.50	5.88	6.75	5.58	6.93	5.65	6.93	5.81
Societal NPV	\$2,767,543	\$3,651,063	\$3,115,910	\$4,997,118	\$3,372,404	\$5,598,515	\$3,372,404	\$5,784,505

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Electroncially Commutated Motors							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$10,000.00	\$6,921.97	\$10,000.00	\$6,779.87	\$10,000.00	\$6,548.82	\$10,000.00	\$10,694.61
Administration	\$5,000.00	\$6,515.64	\$5,000.00	\$4,555.44	\$5,000.00	\$1,095.01	\$5,000.00	\$0.00
Evaluation, Measurement & Verification	\$1,000.00	\$188.74	\$1,000.00	\$601.29	\$1,000.00	\$2,024.62	\$1,000.00	\$1,159.75
Advertising & Promotion	\$2,000.00	\$2,462.30	\$2,000.00	\$2,002.76	\$2,000.00	\$113.83	\$2,000.00	\$973.06
Incentives	\$12,000.00	\$22,700.00	\$12,000.00	\$36,300.00	\$12,000.00	\$28,300.00	\$12,000.00	\$28,600.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$30,000.00	\$38,788.65	\$30,000.00	\$50,239.36	\$30,000.00	\$38,082.28	\$30,000.00	\$41,427.42
Total Participants	120	227	120	363	120	283	120	286
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	84,000	164,268	84,000	262,420	84,000	204,444	84,000	208,240
Annual kWh Savings at Generator	90,948	177,856	90,948	284,127	90,948	221,356	90,948	225,466
Cost per Annual kWh Saved at Generator	\$0.3299	\$0.2181	\$0.3299	\$0.1768	\$0.3299	\$0.1720	\$0.3299	\$0.1837
Peak kW Savings at Meter	25.596	44.434	25.596	77.428	25.596	60.364	25.596	61.004
Peak kW Savings at Generator	27.713	48.109	27.713	83.833	27.713	65.357	27.713	66.050
Cost per Peak kW Saved at Generator	\$1,082.51	\$806.26	\$1,082.51	\$599.28	\$1,082.51	\$582.68	\$1,082.51	\$627.21
Utility Ratio	2.98	4.59	3.11	6.19	3.24	6.61	3.24	6.37
Utility NPV	\$59,523	\$139,291	\$63,433	\$260,656	\$67,168	\$213,525	\$67,168	\$222,404
Ratepayer Ratio	0.71	0.70	0.74	0.74	0.66	0.63	0.66	0.62
Ratepayer NPV	(\$36,972)	(\$75,101)	(\$32,031)	(\$110,519)	(\$50,754)	(\$146,858)	(\$50,754)	(\$159,354)
Participant Ratio	5.90	6.39	5.83	6.88	7.49	8.84	7.49	9.25
Participant NPV	\$146,873	\$305,630	\$144,984	\$533,259	\$194,554	\$554,671	\$194,554	\$589,636
Societal Ratio	3.47	4.21	3.58	5.04	3.68	5.25	3.68	5.23
Societal NPV	\$118,678	\$234,083	\$123,738	\$422,964	\$128,621	\$342,384	\$128,621	\$356,468

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Energy Feedback							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$265,100.00	\$297,759.14	\$265,100.00	\$292,122.78	\$265,100.00	\$328,021.21	\$265,100.00	\$309,431.49
Administration	\$7,000.00	\$2,219.79	\$7,000.00	\$436.20	\$7,000.00	\$3,034.40	\$7,000.00	\$3,825.45
Evaluation, Measurement & Verification	\$18,000.00	\$1,972.29	\$18,000.00	\$4,000.96	\$18,000.00	\$4,037.20	\$18,000.00	\$3,175.47
Advertising & Promotion	\$12,000.00	\$2,483.18	\$12,000.00	\$2,243.99	\$12,000.00	\$43,532.45	\$12,000.00	\$30,460.85
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$400.00	\$0.00	\$6,344.00
<b>Total Utility Costs</b>	\$302,100.00	\$304,434.40	\$302,100.00	\$298,803.93	\$302,100.00	\$379,025.26	\$302,100.00	\$353,237.26
Total Participants	30,500	29,715	30,500	31,186	30,500	34,438	30,500	30,742
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	3,086,680	4,187,050	3,086,680	3,639,865	3,086,680	3,900,424	3,086,680	3,889,559
Annual kWh Savings at Generator	3,342,010	4,533,402	3,342,010	3,940,954	3,342,010	4,223,066	3,342,010	4,211,302
Cost per Annual kWh Saved at Generator	\$0.0904	\$0.0672	\$0.0904	\$0.0758	\$0.0904	\$0.0898	\$0.0904	\$0.0839
Peak kW Savings at Meter	2,949.633	3,895.683	2,781.633	3,573.805	2,781.633	3,862.525	2,781.633	3,432.325
Peak kW Savings at Generator	3,193.626	4,217.933	3,011.729	3,869.430	3,011.729	4,182.032	3,011.729	3,716.246
Cost per Peak kW Saved at Generator	\$94.59	\$72.18	\$100.31	\$77.22	\$100.31	\$90.63	\$100.31	\$95.05
Utility Ratio	2.19	2.84	2.26	2.82	2.47	2.61	2.47	2.67
Utility NPV	\$360,208	\$559,722	\$379,157	\$543,151	\$444,523	\$611,366	\$444,523	\$589,239
Ratepayer Ratio	0.52	0.53	0.56	0.55	0.60	0.56	0.60	0.53
Ratepayer NPV	(\$616,447)	(\$764,502)	(\$535,617)	(\$701,952)	(\$506,842)	(\$776,237)	(\$506,842)	(\$849,849)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$1,021,777	\$1,385,404	\$957,036	\$1,302,627	\$995,318	\$1,451,711	\$995,318	\$1,505,573
Societal Ratio	2.68	3.47	2.71	3.35	2.82	2.97	2.82	3.07
Societal NPV	\$508,970	\$751,177	\$515,114	\$703,474	\$550,976	\$745,884	\$550,976	\$730,541

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

	Residential Heat Pumps								
Category:	Existing								
Status:									
Year:	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual	
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs									
Delivery	\$82,000.00	\$48,626.65	\$82,000.00	\$93,157.52	\$82,000.00	\$89,118.51	\$82,000.00	\$112,994.53	
Administration	\$20,000.00	\$5,255.01	\$20,000.00	\$8,978.33	\$20,000.00	\$5,713.62	\$20,000.00	\$10,040.51	
Evaluation, Measurement & Verification	\$4,000.00	\$312.22	\$4,000.00	\$969.15	\$4,000.00	\$1,211.66	\$4,000.00	\$1,849.21	
Advertising & Promotion	\$16,000.00	\$7,050.71	\$16,000.00	\$48,086.19	\$16,000.00	\$25,072.56	\$16,000.00	\$31,890.23	
Incentives	\$153,000.00	\$216,132.00	\$153,000.00	\$188,557.00	\$153,000.00	\$241,450.00	\$153,000.00	\$565,425.00	
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total Utility Costs	\$275,000.00	\$277,376.59	\$275,000.00	\$339,748.19	\$275,000.00	\$362,566.34	\$275,000.00	\$722,199.48	
Total Participants	102	150	102	160	102	183	102	288	
% of Spending by Customer Segments									
Residential	100%	100%	100%	100%	100%	100%	100%	100%	
Commercial	0%	0%	0%	0%	0%	0%	0%	0%	
Industrial	0%	0%	0%	0%	0%	0%	0%	0%	
Farm	0%	0%	0%	0%	0%	0%	0%	0%	
Other	0%	0%	0%	0%	0%	0%	0%	0%	
Total % of Spending	100%	100%	100%	100%	100%	100%	100%	100%	
Low-Income Participation*									
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%	
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%	
Renter Participation*									
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%	
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%	
Energy Savings									
Annual kWh Savings at Meter	1,523,167	2,227,982	1,742,076	1,776,615	1,742,076	2,270,682	1,742,076	3,354,772	
Annual kWh Savings at Generator	1,649,163	2,412,280	1,886,180	1,923,576	1,886,180	2,458,512	1,886,180	3,632,278	
Cost per Annual kWh Saved at Generator	\$0.1668	\$0.1150	\$0.1458	\$0.1766	\$0.1458	\$0.1475	\$0.1458	\$0.1988	
Peak kW Savings at Meter	153.714	171.943	153.714	170.639	153.714	216.580	153.714	289.110	
Peak kW Savings at Generator	166.429	186.166	166.429	184.754	166.429	234.495	166.429	313.025	
Cost per Peak kW Saved at Generator	\$1,652.35	\$1,489.95	\$1,652.35	\$1,838.92	\$1,652.35	\$1,546.16	\$1,652.35	\$2,307.16	
Utility Ratio	3.76	5.40	3.92	3.60	4.08	4.77	4.08	3.29	
Utility NPV	\$757,982	\$1,220,748	\$802,454	\$882,310	\$845,680	\$1,366,640	\$845,680	\$1,651,087	
Ratepayer Ratio	0.47	0.51	0.50	0.46	0.44	0.44	0.44	0.38	
Ratepayer NPV	(\$1,159,234)	(\$1,431,390)	(\$1,094,499)	(\$1,413,727)	(\$1,454,427)	(\$2,215,389)	(\$1,454,427)	(\$3,854,997)	
Participant Ratio	5.31	4.74	5.25	4.26	6.59	5.53	6.59	5.35	
Participant NPV	\$2,667,508	\$3,360,582	\$2,632,103	\$2,821,508	\$3,458,116	\$4,835,123	\$3,458,116	\$7,535,845	
Societal Ratio	2.61	2.68	2.69	2.05	2.76	2.43	2.76	2.13	
Societal NPV	\$1,194,615	\$1,614,343	\$1,250,058	\$1,070,268	\$1,305,600	\$1,704,724	\$1,305,600	\$2,126,080	

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

	Category: Status: Year:	Home Insulation							
		Existing							
		2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor		7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor		7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs									
Delivery		\$11,000.00	\$4,126.29	\$11,000.00	\$1,911.41	\$11,000.00	\$822.66	\$11,000.00	\$1,382.13
Administration		\$3,000.00	\$4,639.91	\$3,000.00	\$4,516.09	\$3,000.00	\$2,228.68	\$3,000.00	\$2,117.39
Evaluation, Measurement & Verification		\$1,500.00	\$125.08	\$1,500.00	\$664.44	\$1,500.00	\$631.46	\$1,500.00	\$688.31
Advertising & Promotion		\$10,000.00	\$9,440.49	\$10,000.00	\$15,406.33	\$10,000.00	\$6,074.17	\$10,000.00	\$13,324.97
Incentives		\$19,500.00	\$6,684.71	\$19,500.00	\$6,539.20	\$19,500.00	\$10,942.24	\$19,500.00	\$5,963.60
Other		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Utility Costs		\$45,000.00	\$25,016.48	\$45,000.00	\$29,037.47	\$45,000.00	\$20,699.21	\$45,000.00	\$23,476.40
Total Participants		40	20	40	19	40	32	40	16
% of Spending by Customer Segments									
Residential		100%	100%	100%	100%	100%	100%	100%	100%
Commercial		0%	0%	0%	0%	0%	0%	0%	0%
Industrial		0%	0%	0%	0%	0%	0%	0%	0%
Farm		0%	0%	0%	0%	0%	0%	0%	0%
Other		0%	0%	0%	0%	0%	0%	0%	0%
Total % of Spending		100%	100%	100%	100%	100%	100%	100%	100%
Low-Income Participation*									
Participants % (% of Total Participants)		31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)		31%	31%	31%	31%	31%	31%	31%	31%
Renter Participation*									
Participants % (% of Total Participants)		21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)		21%	21%	21%	21%	21%	21%	21%	21%
Energy Savings									
Annual kWh Savings at Meter		153,832	100,936	153,832	73,244	153,832	185,983	153,832	70,890
Annual kWh Savings at Generator		166,556	109,285	166,556	79,303	166,556	201,368	166,556	76,754
Cost per Annual kWh Saved at Generator		\$0.2702	\$0.2289	\$0.2702	\$0.3662	\$0.2702	\$0.1028	\$0.2702	\$0.3059
Peak kW Savings at Meter		8.140	3.193	8.140	1.983	8.140	5.239	8.140	2.388
Peak kW Savings at Generator		8.813	3.457	8.813	2.147	8.813	5.673	8.813	2.586
Cost per Peak kW Saved at Generator		\$5,105.90	\$7,237.25	\$5,105.90	\$13,525.10	\$5,105.90	\$3,648.88	\$5,105.90	\$9,078.13
Utility Ratio		1.94	2.33	2.02	1.49	2.09	5.52	2.09	1.95
Utility NPV		\$42,132	\$33,362	\$45,731	\$14,134	\$49,258	\$93,528	\$49,258	\$22,374
Ratepayer Ratio		0.39	0.37	0.41	0.33	0.36	0.33	0.36	0.30
Ratepayer NPV		(\$134,582)	(\$98,373)	(\$129,094)	(\$89,465)	(\$166,696)	(\$234,314)	(\$166,696)	(\$107,586)
Participant Ratio		4.29	5.82	4.24	4.74	5.45	9.39	5.45	7.63
Participant NPV		\$246,437	\$178,404	\$242,978	\$134,575	\$333,756	\$495,145	\$333,756	\$192,295
Societal Ratio		1.73	1.96	1.78	1.36	1.83	3.03	1.83	1.79
Societal NPV		\$73,615	\$53,028	\$78,561	\$20,999	\$83,600	\$139,525	\$83,600	\$36,622

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Home Transformer							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$64,200.00	\$4,539.57	\$64,200.00	\$4,476.94	\$64,200.00	\$5,698.09	\$64,200.00	\$4,427.06
Administration	\$5,000.00	\$10,028.58	\$5,000.00	\$10,632.82	\$5,000.00	\$3,712.81	\$5,000.00	\$4,219.91
Evaluation, Measurement & Verification	\$2,000.00	\$127.30	\$2,000.00	\$235.87	\$2,000.00	\$581.80	\$2,000.00	\$343.63
Advertising & Promotion	\$5,000.00	\$2,427.21	\$5,000.00	\$1,756.66	\$5,000.00	\$956.42	\$5,000.00	\$811.75
Incentives	\$10,800.00	\$36,819.42	\$10,800.00	\$30,077.22	\$10,800.00	\$27,704.65	\$10,800.00	\$15,238.11
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$87,000.00	\$53,942.08	\$87,000.00	\$47,179.51	\$87,000.00	\$38,653.77	\$87,000.00	\$25,040.46
Total Participants	100	88	100	67	100	52	100	37
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	502,405	409,502	502,405	315,839	502,405	257,766	502,405	160,410
Annual kWh Savings at Generator	543,964	443,376	543,964	341,965	543,964	279,089	543,964	173,680
Cost per Annual kWh Saved at Generator	\$0.1599	\$0.1217	\$0.1599	\$0.1380	\$0.1599	\$0.1385	\$0.1599	\$0.1442
Peak kW Savings at Meter	92.991	75.278	92.991	58.066	92.991	47.873	92.991	29.669
Peak kW Savings at Generator	100.683	81.505	100.683	62.869	100.683	51.833	100.683	32.123
Cost per Peak kW Saved at Generator	\$864.10	\$661.83	\$864.10	\$750.44	\$864.10	\$745.73	\$864.10	\$779.53
Utility Ratio	4.39	8.71	4.59	7.84	4.78	8.14	4.78	7.96
Utility NPV	\$295,178	\$415,626	\$312,252	\$322,895	\$328,640	\$275,917	\$328,640	\$174,339
Ratepayer Ratio	0.63	0.88	0.67	0.82	0.59	0.71	0.59	0.70
Ratepayer NPV	(\$223,210)	(\$64,783)	(\$200,721)	(\$79,847)	(\$293,301)	(\$127,478)	(\$293,301)	(\$86,816)
Participant Ratio	96.64	inf.	95.57	inf.	121.59	inf.	121.59	inf.
Participant NPV	\$851,186	\$734,814	\$841,660	\$615,448	\$1,073,218	\$672,213	\$1,073,218	\$432,138
Societal Ratio	8.27	13.49	8.52	12.10	8.76	44.04	8.76	31.11
Societal NPV	\$618,357	\$673,646	\$639,541	\$523,577	\$660,045	\$471,222	\$660,045	\$295,115

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	School Kits							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$46,000.00	\$22,843.78	\$46,000.00	\$23,753.94	\$46,000.00	\$23,385.50	\$46,000.00	\$25,561.50
Administration	\$10,000.00	\$11,157.34	\$10,000.00	\$12,465.37	\$10,000.00	\$4,532.93	\$10,000.00	\$3,795.49
Evaluation, Measurement & Verification	\$2,000.00	\$377.47	\$2,000.00	\$620.14	\$2,000.00	\$971.06	\$2,000.00	\$487.72
Advertising & Promotion	\$4,000.00	\$0.00	\$4,000.00	\$0.00	\$4,000.00	\$0.00	\$4,000.00	\$0.00
Incentives	\$68,000.00	\$70,911.23	\$68,000.00	\$70,770.44	\$68,000.00	\$69,784.91	\$68,000.00	\$80,241.22
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$130,000.00	\$105,289.82	\$130,000.00	\$107,609.89	\$130,000.00	\$98,674.40	\$130,000.00	\$110,085.93
Total Participants	1,000	1,511	1,000	1,508	1,000	1,487	1,000	1,556
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	1,072,503	1,629,659	1,072,503	1,626,423	1,072,503	1,603,774	1,072,503	1,678,193
Annual kWh Savings at Generator	1,161,221	1,764,464	1,161,221	1,760,961	1,161,221	1,736,438	1,161,221	1,817,012
Cost per Annual kWh Saved at Generator	\$0.1120	\$0.0597	\$0.1120	\$0.0611	\$0.1120	\$0.0568	\$0.1120	\$0.0606
Peak kW Savings at Meter	89.186	134.388	89.186	134.122	89.186	132.254	89.186	138.391
Peak kW Savings at Generator	96.564	145.505	96.564	145.216	96.564	143.194	96.564	149.838
Cost per Peak kW Saved at Generator	\$1,346.26	\$723.62	\$1,346.26	\$741.03	\$1,346.26	\$689.10	\$1,346.26	\$734.70
Utility Ratio	3.40	15.70	3.58	15.68	3.75	17.17	3.75	16.28
Utility NPV	\$311,705	\$1,548,279	\$334,765	\$1,579,562	\$356,982	\$1,595,608	\$356,982	\$1,682,322
Ratepayer Ratio	0.47	1.13	0.50	1.07	0.47	0.97	0.47	0.95
Ratepayer NPV	(\$500,484)	\$195,776	(\$469,744)	\$114,874	(\$553,303)	(\$45,518)	(\$553,303)	(\$103,647)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$1,197,583	\$1,800,893	\$1,186,210	\$1,949,264	\$1,360,360	\$2,293,364	\$1,360,360	\$2,500,070
Societal Ratio	11.46	20.15	11.81	19.99	12.14	74.31	12.14	75.93
Societal NPV	\$648,373	\$2,016,343	\$670,441	\$2,043,552	\$690,490	\$2,117,873	\$690,490	\$2,236,276

\* Percentage derived from 2010 Census data.



Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Smart Thermostats							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$10,000.00	\$9,057.24	\$10,000.00	\$7,870.63	\$10,000.00	\$4,728.96	\$10,000.00	\$8,375.78
Administration	\$13,000.00	\$2,936.69	\$13,000.00	\$4,008.84	\$13,000.00	\$1,385.09	\$13,000.00	\$4,393.15
Evaluation, Measurement & Verification	\$1,500.00	\$125.70	\$1,500.00	\$579.55	\$1,500.00	\$966.29	\$1,500.00	\$545.84
Advertising & Promotion	\$10,500.00	\$9,772.64	\$10,500.00	\$8,837.93	\$10,500.00	\$76,862.57	\$10,500.00	\$72,168.75
Incentives	\$15,000.00	\$6,375.50	\$15,000.00	\$11,535.29	\$15,000.00	\$16,083.08	\$15,000.00	\$20,159.41
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$50,000.00	\$28,267.77	\$50,000.00	\$32,832.24	\$50,000.00	\$100,025.99	\$50,000.00	\$105,642.93
Total Participants	140	50	140	124	140	184	140	234
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	290,060	131,876	290,060	204,407	290,060	256,036	290,060	326,472
Annual kWh Savings at Generator	314,054	142,785	314,054	221,315	314,054	277,215	314,054	353,478
Cost per Annual kWh Saved at Generator	\$0.1592	\$0.1980	\$0.1592	\$0.1484	\$0.1592	\$0.3608	\$0.1592	\$0.2989
Peak kW Savings at Meter	1.440	2.090	1.440	4.501	1.440	8.211	1.440	9.944
Peak kW Savings at Generator	1.559	2.263	1.559	4.873	1.559	8.890	1.559	10.766
Cost per Peak kW Saved at Generator	\$32,069.44	\$12,490.01	\$32,069.44	\$6,737.26	\$32,069.44	\$11,251.25	\$32,069.44	\$9,812.48
Utility Ratio	1.72	1.53	1.80	2.19	1.88	0.98	1.88	1.21
Utility NPV	\$36,081	\$14,856	\$40,214	\$39,016	\$44,147	(\$1,995)	\$44,147	\$22,330
Ratepayer Ratio	0.31	1.53	0.33	0.32	0.32	0.27	0.32	0.28
Ratepayer NPV	(\$187,407)	\$14,856	(\$181,144)	(\$149,250)	(\$202,924)	(\$266,463)	(\$202,924)	(\$328,317)
Participant Ratio	18.36	0.79	18.19	12.55	20.43	11.00	20.43	11.69
Participant NPV	\$298,642	(\$1,735)	\$295,625	\$234,420	\$334,255	\$328,307	\$334,255	\$436,806
Societal Ratio	2.67	2.21	2.72	2.58	2.78	1.22	2.78	1.46
Societal NPV	\$87,201	\$36,230	\$90,026	\$65,588	\$92,770	\$25,496	\$92,770	\$57,669

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

	Water Heater Store & Save								
Category: Status: Year:	Existing								
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual	
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs									
Delivery	\$10,000.00	\$9,675.23	\$10,000.00	\$2,754.55	\$10,000.00	\$4,276.45	\$10,000.00		\$3,069.09
Administration	\$5,000.00	\$0.00	\$5,000.00	\$0.00	\$5,000.00	\$0.00	\$5,000.00		\$0.00
Evaluation, Measurement & Verification	\$5,000.00	\$191.02	\$5,000.00	\$0.00	\$5,000.00	\$66.52	\$5,000.00		\$207.82
Advertising & Promotion	\$15,000.00	\$13,401.00	\$15,000.00	\$16,353.26	\$15,000.00	\$13,638.30	\$15,000.00		\$17,577.62
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00
Total Utility Costs	\$35,000.00	\$23,267.25	\$35,000.00	\$19,107.81	\$35,000.00	\$17,981.27	\$35,000.00		\$20,854.53
Total Participants	16,165	16,056	16,165	16,002	16,165	16,074	16,165		15,660
% of Spending by Customer Segments									
Residential	94%	94%	94%	94%	94%	94%	94%		94%
Commercial	6%	6%	6%	6%	6%	6%	6%		6%
Industrial	0%	0%	0%	0%	0%	0%	0%		0%
Farm	0%	0%	0%	0%	0%	0%	0%		0%
Other	0%	0%	0%	0%	0%	0%	0%		0%
Total % of Spending	100%	100%	100%	100%	100%	100%	100%		100%
Low-Income Participation*									
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%		31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%		31%
Renter Participation*									
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%		21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%		21%
Energy Savings									
Annual kWh Savings at Meter	544,276	540,606	544,276	538,787	544,276	541,212	544,276		527,272
Annual kWh Savings at Generator	589,298	585,324	589,298	583,356	589,298	585,980	589,298		570,888
Cost per Annual kWh Saved at Generator	\$0.0594	\$0.0398	\$0.0594	\$0.0328	\$0.0594	\$0.0307	\$0.0594		\$0.0365
Peak kW Savings at Meter	8,211.820	10,918.080	8,211.820	10,881.360	8,211.820	10,930.320	8,211.820		10,648.800
Peak kW Savings at Generator	8,891.100	11,821.221	8,891.100	11,781.464	8,891.100	11,834.474	8,891.100		11,529.667
Cost per Peak kW Saved at Generator	\$3.94	\$1.97	\$3.94	\$1.62	\$3.94	\$1.52	\$3.94		\$1.81
Utility Ratio	27.50	54.75	26.22	63.33	27.88	71.82	27.88		62.54
Utility NPV	\$927,499	\$1,250,552	\$882,849	\$1,190,903	\$940,776	\$1,273,482	\$940,776		\$1,283,480
Ratepayer Ratio	10.76	15.87	10.34	15.02	10.73	15.72	10.73		15.19
Ratepayer NPV	\$873,036	\$1,193,560	\$829,081	\$1,129,468	\$884,858	\$1,209,302	\$884,858		\$1,218,452
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.		inf.
Participant NPV	\$56,980	\$59,625	\$56,252	\$64,273	\$58,502	\$67,145	\$58,502		\$68,032
Societal Ratio	27.74	55.10	26.45	63.74	28.06	72.17	28.06		62.85
Societal NPV	\$935,795	\$1,258,792	\$890,840	\$1,198,814	\$947,033	\$1,279,703	\$947,033		\$1,289,865

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Residential Advertising and Education							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$160,000.00	\$66,172.27	\$160,000.00	\$65,343.89	\$160,000.00	\$67,420.72	\$160,000.00	\$90,854.50
Administration	\$6,000.00	\$2,776.77	\$6,000.00	\$2,821.84	\$6,000.00	\$2,651.16	\$6,000.00	\$4,538.88
Evaluation, Measurement & Verification	\$4,000.00	\$0.00	\$4,000.00	\$33.28	\$4,000.00	\$57.84	\$4,000.00	\$320.71
Advertising & Promotion	\$0.00	\$120,369.12	\$0.00	\$83,600.41	\$0.00	\$164,395.08	\$0.00	\$179,335.05
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$5,000.00	\$0.00	\$5,000.00	\$0.00	\$5,000.00	\$0.00	\$5,000.00	\$0.00
<b>Total Utility Costs</b>	\$175,000.00	\$189,318.16	\$175,000.00	\$151,799.42	\$175,000.00	\$234,524.80	\$175,000.00	\$275,049.14
Total Participants	10,000	18,629	10,000	14,591	10,000	22,351	10,000	11,461
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kWh Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$175,000)	(\$189,318)	(\$175,000)	(\$151,799)	(\$175,000)	(\$234,525)	(\$175,000)	(\$275,049)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$175,000)	(\$189,318)	(\$175,000)	(\$151,799)	(\$175,000)	(\$234,525)	(\$175,000)	(\$275,049)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$175,000)	(\$189,318)	(\$175,000)	(\$151,799)	(\$175,000)	(\$234,525)	(\$175,000)	(\$275,049)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Residential Implementation and Training							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$37,600.00	\$24,849.65	\$37,600.00	\$32,523.55	\$37,600.00	\$28,809.23	\$37,600.00	\$48,897.74
Administration	\$1,200.00	\$2,172.45	\$1,200.00	\$2,304.68	\$1,200.00	\$2,892.03	\$1,200.00	\$0.00
Evaluation, Measurement & Verification	\$1,200.00	\$2,045.99	\$1,200.00	\$8,739.70	\$1,200.00	\$3,213.18	\$1,200.00	\$2,577.63
Advertising & Promotion	\$0.00	\$623.98	\$0.00	\$1,102.80	\$0.00	\$564.45	\$0.00	\$612.88
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$4,409.18	\$0.00	\$0.00	\$0.00	\$670.69
<b>Total Utility Costs</b>	\$40,000.00	\$29,692.08	\$40,000.00	\$49,079.92	\$40,000.00	\$35,478.89	\$40,000.00	\$52,758.94
Total Participants	175	36	175	38	175	3	175	3
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	31%	31%	31%	31%	31%	31%	31%	31%
Budget % (% of Total Utility Costs)	31%	31%	31%	31%	31%	31%	31%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	21%	21%	21%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	21%	21%	21%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kWh Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$40,000)	(\$29,692)	(\$40,000)	(\$49,080)	(\$40,000)	(\$35,479)	(\$40,000)	(\$52,759)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$40,000)	(\$29,692)	(\$40,000)	(\$49,080)	(\$40,000)	(\$35,479)	(\$40,000)	(\$52,759)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$40,000)	(\$29,692)	(\$40,000)	(\$49,080)	(\$40,000)	(\$35,479)	(\$40,000)	(\$52,759)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Low-Income House Therapy							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$12,657.33	\$0.00	\$11,616.60	\$0.00	\$14,408.26	\$0.00	\$19,190.26
Administration	\$16,510.00	\$14,096.67	\$16,510.00	\$14,080.70	\$16,510.00	\$8,846.33	\$16,510.00	\$6,162.31
Evaluation, Measurement & Verification	\$1,500.00	\$377.45	\$1,500.00	\$1,151.13	\$1,500.00	\$1,924.08	\$1,500.00	\$1,434.30
Advertising & Promotion	\$1,500.00	\$1,709.45	\$1,500.00	\$359.00	\$1,500.00	\$4,258.74	\$1,500.00	\$2,476.41
Incentives	\$130,490.00	\$132,314.35	\$130,490.00	\$154,836.43	\$130,490.00	\$182,233.69	\$130,490.00	\$120,294.04
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,688.65
<b>Total Utility Costs</b>	\$150,000.00	\$161,155.25	\$150,000.00	\$182,043.86	\$150,000.00	\$211,671.10	\$150,000.00	\$154,245.97
Total Participants	130	122	130	164	130	189	130	83
<b>% of Spending by Customer Segments</b>								
Residential	100%	100%	100%	100%	100%	100%	100%	100%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)	100%	100%	100%	100%	100%	31%	100%	31%
Budget % (% of Total Utility Costs)	100%	100%	100%	100%	100%	31%	100%	31%
<b>Renter Participation*</b>								
Participants % (% of Total Participants)	21%	9%	21%	4%	21%	21%	21%	21%
Budget % (% of Total Utility Costs)	21%	9%	21%	4%	21%	21%	21%	21%
<b>Energy Savings</b>								
Annual kWh Savings at Meter	214,005	237,243	214,005	284,564	214,005	281,131	214,005	437,237
Annual kWh Savings at Generator	231,707	256,868	231,707	308,103	231,707	304,386	231,707	473,405
Cost per Annual kWh Saved at Generator	\$0.6474	\$0.6274	\$0.6474	\$0.5909	\$0.6474	\$0.6954	\$0.6474	\$0.3258
Peak kWh Savings at Meter	22,713	24,690	22,713	30,406	22,713	34,214	22,713	53,665
Peak kW Savings at Generator	24,591	26,732	24,591	32,921	24,591	37,044	24,591	58,104
Cost per Peak kW Saved at Generator	\$6,099.72	\$6,028.48	\$6,099.72	\$5,529.70	\$6,099.72	\$5,714.06	\$6,099.72	\$2,654.67
Utility Ratio	0.68	0.66	0.71	0.78	0.75	0.77	0.75	1.91
Utility NPV	(\$47,556)	(\$54,149)	(\$42,891)	(\$39,629)	(\$38,061)	(\$49,559)	(\$38,061)	\$139,983
Ratepayer Ratio	0.31	0.30	0.32	0.32	0.31	0.30	0.31	0.38
Ratepayer NPV	(\$230,022)	(\$245,346)	(\$223,441)	(\$302,580)	(\$247,869)	(\$375,577)	(\$247,869)	(\$475,588)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$400,970	\$391,408	\$397,973	\$512,367	\$451,991	\$641,165	\$451,991	\$1,015,786
Societal Ratio	8.89	5.70	9.14	7.93	9.40	8.29	9.40	13.07
Societal NPV	\$153,889	\$135,635	\$158,784	\$188,539	\$163,816	\$214,502	\$163,816	\$418,923

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Adjustable Speed Drives							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$45,000.00	\$24,584.67	\$45,200.00	\$18,946.94	\$45,200.00	\$19,745.40	\$45,200.00	\$14,927.04
Administration	\$7,500.00	\$5,505.27	\$7,500.00	\$6,715.00	\$7,500.00	\$5,100.40	\$7,500.00	\$5,151.83
Evaluation, Measurement & Verification	\$1,000.00	\$719.68	\$1,000.00	\$1,055.84	\$1,000.00	\$1,903.14	\$1,000.00	\$1,706.39
Advertising & Promotion	\$5,000.00	\$3,358.67	\$5,000.00	\$2,489.99	\$5,000.00	\$3,755.59	\$5,000.00	\$581.40
Incentives	\$319,000.00	\$242,784.08	\$329,800.00	\$295,825.69	\$329,800.00	\$335,088.52	\$329,800.00	\$420,817.27
Other	\$1,500.00	\$0.00	\$1,500.00	\$0.00	\$1,500.00	\$0.00	\$1,500.00	\$0.00
<b>Total Utility Costs</b>	\$379,000.00	\$276,952.37	\$390,000.00	\$325,033.46	\$390,000.00	\$365,593.05	\$390,000.00	\$443,183.93
Total Participants	152	122	164	239	164	131	164	152
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	30%	30%	30%	30%	30%	30%	30%	30%
Industrial	70%	70%	70%	70%	70%	70%	70%	70%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	5,168,603	4,325,213	5,168,603	4,316,602	5,168,603	4,629,664	5,168,603	6,858,239
Annual kWh Savings at Generator	5,596,149	4,682,993	5,596,149	4,673,670	5,596,149	5,012,629	5,596,149	7,425,552
Cost per Annual kWh Saved at Generator	\$0.0677	\$0.0591	\$0.0697	\$0.0695	\$0.0697	\$0.0729	\$0.0697	\$0.0597
Peak kW Savings at Meter	657.030	514.123	884.144	541.768	884.144	586.485	884.144	859.794
Peak kW Savings at Generator	711.380	556.652	957.280	586.583	957.280	634.998	957.280	930.916
Cost per Peak kW Saved at Generator	\$532.77	\$497.53	\$407.40	\$554.11	\$407.40	\$575.74	\$407.40	\$476.07
Utility Ratio	7.57	9.18	884.14	8.33	7.79	8.30	7.79	10.45
Utility NPV	\$2,490,418	\$2,264,862	\$2,624,764	\$2,381,257	\$2,649,572	\$2,669,049	\$2,649,572	\$4,188,214
Ratepayer Ratio	0.76	0.76	0.81	0.68	0.63	0.64	0.63	0.65
Ratepayer NPV	(\$886,886)	(\$814,695)	(\$717,691)	(\$1,280,747)	(\$1,785,460)	(\$1,684,231)	(\$1,785,460)	(\$2,484,504)
Participant Ratio	5.52	4.64	5.47	3.09	6.60	6.40	6.60	8.30
Participant NPV	\$3,154,176	\$2,718,068	\$3,117,716	\$2,791,834	\$4,216,370	\$4,125,929	\$4,216,370	\$6,510,365
Societal Ratio	6.53	5.29	6.73	3.17	5.96	6.02	5.96	7.93
Societal NPV	\$4,195,390	\$3,348,918	\$4,343,069	\$2,955,121	\$4,033,640	\$3,984,535	\$4,033,640	\$6,331,501

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Air Conditioning Control							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$14,350.00	\$5,026.83	\$14,435.00	\$3,278.71	\$14,520.00	\$4,689.88	\$14,520.00	\$1,799.05
Administration	\$9,650.00	\$1,898.03	\$10,565.00	\$536.33	\$11,480.00	\$853.33	\$11,480.00	\$1,154.60
Evaluation, Measurement & Verification	\$1,000.00	\$188.74	\$1,000.00	\$470.68	\$1,000.00	\$363.79	\$1,000.00	\$346.59
Advertising & Promotion	\$5,000.00	\$844.50	\$5,000.00	\$1,582.89	\$5,000.00	\$1,767.23	\$5,000.00	\$1,925.59
Incentives	\$0.00	\$5,785.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$30,000.00	\$13,743.10	\$31,000.00	\$5,868.61	\$32,000.00	\$7,674.23	\$32,000.00	\$5,225.83
Total Participants	512	271	529	277	546	310	546	302
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	100%	100%	100%	100%	100%	100%	100%	100%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	53,069	26,586	53,069	27,235	54,775	30,032	54,775	30,193
Annual kWh Savings at Generator	57,459	28,785	57,459	29,487	59,306	32,516	59,306	32,691
Cost per Annual kWh Saved at Generator	\$0.5221	\$0.4774	\$0.5395	\$0.1990	\$0.5396	\$0.2360	\$0.5396	\$0.1599
Peak kW Savings at Meter	2,667.520	1,380.717	2,756.090	1,414.402	2,844.660	1,559.682	2,844.660	1,568.064
Peak kW Savings at Generator	2,888.177	1,494.930	2,984.073	1,531.401	3,079.970	1,688.698	3,079.970	1,697.773
Cost per Peak kW Saved at Generator	\$10.39	\$9.19	\$10.39	\$3.83	\$10.39	\$4.54	\$10.39	\$3.08
Utility Ratio	10.58	11.95	11.75	31.85	12.08	27.61	12.21	41.22
Utility NPV	\$287,296	\$150,490	\$333,260	\$181,067	\$354,494	\$204,234	\$358,814	\$210,203
Ratepayer Ratio	6.34	4.64	7.08	6.26	7.16	6.02	4.66	6.34
Ratepayer NPV	\$267,231	\$128,846	\$312,794	\$157,085	\$332,524	\$176,731	\$306,868	\$181,446
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$20,992	\$28,430	\$21,412	\$25,090	\$22,984	\$28,774	\$54,346	\$30,085
Societal Ratio	10.60	20.69	11.78	31.92	12.10	27.66	12.23	41.29
Societal NPV	\$288,079	\$156,680	\$334,039	\$181,466	\$355,123	\$204,579	\$359,478	\$210,569

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Design Assistance							
	Discontinued							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$201,902.00	\$72,759.85						
Administration	\$7,500.00	\$7,900.57						
Evaluation, Measurement & Verification	\$500.00	\$619.12						
Advertising & Promotion	\$6,000.00	\$1,653.74						
Incentives	\$129,258.00	\$96,940.00						
Other	\$0.00	\$0.00						
<b>Total Utility Costs</b>	\$345,160.00	\$179,873.28						
Total Participants	6	4						
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%				0%		0%
Commercial	100%	100%				0%		0%
Industrial	0%	0%				0%		0%
Farm	0%	0%				0%		0%
Other	0%	0%				0%		0%
<b>Total % of Spending</b>	100%	100%				0%		0%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	1,316,742	779,078						
Annual kWh Savings at Generator	1,425,663	843,523						
Cost per Annual kWh Saved at Generator	\$0.2421	\$0.2132						
Peak kW Savings at Meter	360.701	196.456						
Peak kW Savings at Generator	390.538	212.707						
Cost per Peak kW Saved at Generator	\$883.81	\$845.64						
Utility Ratio	3.84	4.31						
Utility NPV	\$980,238	\$596,169						
Ratepayer Ratio	0.78	0.84						
Ratepayer NPV	(\$372,689)	(\$150,118)						
Participant Ratio	0.53	1.72						
Participant NPV	(\$1,391,020)	\$366,339						
Societal Ratio	0.79	2.27						
Societal NPV	(\$671,905)	\$754,018						

\* Percentage derived from 2010 Census data.



Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Direct Install							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$9,190.50	\$16,784.14	\$12,075.50	\$19,091.78	\$12,075.50	\$16,458.99	\$12,075.50	\$22,075.18
Administration	\$2,000.00	\$5,098.71	\$5,000.00	\$4,252.65	\$5,000.00	\$4,362.20	\$5,000.00	\$5,117.51
Evaluation, Measurement & Verification	\$1,500.00	\$0.00	\$1,500.00	\$877.47	\$1,500.00	\$1,460.23	\$1,500.00	\$1,041.31
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$2,000.00	\$0.00	\$2,750.00	\$0.00	\$0.00
Incentives	\$16,049.50	\$9,393.60	\$22,424.50	\$23,093.81	\$22,424.50	\$36,655.81	\$22,424.50	\$16,531.79
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$28,740.00	\$31,276.45	\$41,000.00	\$49,315.71	\$41,000.00	\$61,687.23	\$41,000.00	\$44,765.79
Total Participants	110	76	154	237	154	107	154	208
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	100%	100%	100%	100%	100%	100%	100%	100%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	335,929	232,908	469,814	688,201	469,814	413,373	469,814	413,496
Annual kWh Savings at Generator	363,717	252,174	508,677	745,128	508,677	447,568	508,677	447,700
Cost per Annual kWh Saved at Generator	\$0.0790	\$0.1240	\$0.0806	\$0.0662	\$0.0806	\$0.1378	\$0.0806	\$0.1000
Peak kW Savings at Meter	70.579	28.301	98.757	86.791	98.757	49.583	98.757	52.065
Peak kW Savings at Generator	76.417	30.643	106.926	93.970	106.926	53.684	106.926	56.371
Cost per Peak kW Saved at Generator	\$376.09	\$1,020.69	\$383.44	\$524.80	\$383.44	\$1,149.08	\$383.44	\$794.12
Utility Ratio	2.06	1.63	2.16	3.13	2.27	1.58	2.27	2.22
Utility NPV	\$30,538	\$19,637	\$47,501	\$105,016	\$52,122	\$35,960	\$52,122	\$54,780
Ratepayer Ratio	0.50	0.46	0.50	0.52	0.50	0.44	0.50	0.49
Ratepayer NPV	(\$59,017)	(\$59,744)	(\$89,043)	(\$143,433)	(\$92,361)	(\$123,753)	(\$92,361)	(\$103,211)
Participant Ratio	inf.	10.42	inf.	10.80	inf.	8.93	inf.	10.83
Participant NPV	\$109,742	\$83,572	\$165,277	\$259,130	\$173,583	\$180,922	\$173,583	\$165,034
Societal Ratio	6.38	2.36	6.33	4.25	6.48	2.74	6.48	2.91
Societal NPV	\$68,228	\$41,972	\$98,977	\$162,777	\$101,801	\$83,458	\$101,801	\$85,834

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Compressed Air Efficiency							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$21,500.00	\$14,446.98	\$21,600.00	\$6,880.75	\$21,600.00	\$8,179.62	\$21,600.00	\$10,408.94
Administration	\$5,000.00	\$3,616.81	\$5,000.00	\$2,592.27	\$5,000.00	\$1,881.76	\$5,000.00	\$733.50
Evaluation, Measurement & Verification	\$1,500.00	\$0.00	\$1,500.00	\$605.42	\$1,500.00	\$499.20	\$1,500.00	\$207.52
Advertising & Promotion	\$5,000.00	\$754.04	\$5,000.00	\$339.17	\$5,000.00	\$431.19	\$5,000.00	\$20.06
Incentives	\$106,900.00	\$42,750.00	\$106,900.00	\$18,000.00	\$106,900.00	\$48,300.00	\$106,900.00	\$9,000.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$139,900.00	\$61,567.83	\$140,000.00	\$28,417.61	\$140,000.00	\$59,291.77	\$140,000.00	\$20,370.02
Total Participants	23	10	23	3	23	12	23	2
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	50%	50%	50%	50%	50%	50%	50%	50%
Industrial	50%	50%	50%	50%	50%	50%	50%	50%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	954,031	186,415	954,031	72,974	954,031	411,465	954,031	39,750
Annual kWh Savings at Generator	1,032,948	201,835	1,032,948	79,011	1,032,948	445,501	1,032,948	43,038
Cost per Annual kWh Saved at Generator	\$0.1354	\$0.3050	\$0.1355	\$0.3597	\$0.1355	\$0.1331	\$0.1355	\$0.4733
Peak kW Savings at Meter	145.079	35.742	145.079	14.032	145.079	78.875	145.079	7.016
Peak kW Savings at Generator	157.080	38.698	157.080	15.193	157.080	85.399	157.080	7.596
Cost per Peak kW Saved at Generator	\$890.63	\$1,590.97	\$891.27	\$1,870.41	\$891.27	\$694.29	\$891.27	\$2,681.64
Utility Ratio	3.10	2.16	3.26	1.94	3.43	4.64	3.43	1.53
Utility NPV	\$293,378	\$71,298	\$317,064	\$26,601	\$339,527	\$215,646	\$339,527	\$10,700
Ratepayer Ratio	0.72	0.66	0.71	0.62	0.68	0.70	0.68	0.52
Ratepayer NPV	(\$167,258)	(\$69,243)	(\$182,663)	(\$33,354)	(\$225,147)	(\$118,609)	(\$225,147)	(\$28,561)
Participant Ratio	3.63	1.74	3.88	1.26	4.30	2.47	4.30	1.17
Participant NPV	\$426,518	\$80,534	\$467,414	\$16,525	\$535,361	\$236,698	\$535,361	\$7,276
Societal Ratio	3.31	1.64	3.42	1.15	3.53	2.34	3.53	0.88
Societal NPV	\$451,482	\$82,201	\$473,156	\$11,491	\$493,477	\$230,379	\$493,477	(\$6,315)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Custom Efficiency Projects								
	Existing								
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual	
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs									
Delivery	\$96,000.00	\$98,994.82	\$96,500.00	\$72,559.35	\$96,500.00	\$81,874.54	\$96,500.00	\$118,660.36	
Administration	\$2,500.00	\$3,428.77	\$2,500.00	\$5,537.01	\$2,500.00	\$10,091.80	\$2,500.00	\$7,592.65	
Evaluation, Measurement & Verification	\$12,000.00	\$8,302.71	\$12,000.00	\$8,143.54	\$12,000.00	\$7,018.58	\$12,000.00	\$5,115.86	
Advertising & Promotion	\$6,000.00	\$2,752.14	\$6,000.00	\$1,797.03	\$6,000.00	\$1,129.63	\$6,000.00	\$1,939.58	
Incentives	\$180,000.00	\$150,646.00	\$222,000.00	\$274,436.00	\$222,000.00	\$345,143.00	\$222,000.00	\$262,061.00	
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total Utility Costs	\$296,500.00	\$264,124.44	\$339,000.00	\$362,472.93	\$339,000.00	\$445,257.55	\$339,000.00	\$395,369.45	
Total Participants	30	44	37	81	37	41	37	24	
% of Spending by Customer Segments									
Residential	0%	0%	0%	0%	0%	0%	0%	0%	
Commercial	90%	90%	90%	90%	90%	90%	90%	90%	
Industrial	10%	10%	10%	10%	10%	10%	10%	10%	
Farm	0%	0%	0%	0%	0%	0%	0%	0%	
Other	0%	0%	0%	0%	0%	0%	0%	0%	
Total % of Spending	100%	100%	100%	100%	100%	100%	100%	100%	
Low-Income Participation*									
Participants % (% of Total Participants)									
Budget % (% of Total Utility Costs)									
Renter Participation*									
Participants % (% of Total Participants)									
Budget % (% of Total Utility Costs)									
Energy Savings									
Annual kWh Savings at Meter	1,800,000	2,056,128	1,800,000	3,329,805	2,220,000	2,366,579	2,220,000	3,996,816	
Annual kWh Savings at Generator	1,948,896	2,226,211	1,948,896	3,605,246	2,403,638	2,562,341	2,403,638	4,327,431	
Cost per Annual kWh Saved at Generator	\$0.1521	\$0.1186	\$0.1739	\$0.1005	\$0.1410	\$0.1738	\$0.1410	\$0.0914	
Peak kW Savings at Meter	274.962	1,205.957	339.119	717.881	339.119	955.268	339.119	745.569	
Peak kW Savings at Generator	297.706	1,305.713	367.171	777.264	367.171	1,034.288	367.171	807.242	
Cost per Peak kW Saved at Generator	\$995.95	\$202.28	\$923.28	\$466.34	\$923.28	\$430.50	\$923.28	\$489.78	
Utility Ratio	5.58	6.56	6.27	7.70	6.51	6.99	6.51	9.25	
Utility NPV	\$1,358,707	\$1,467,375	\$1,787,549	\$2,427,794	\$1,869,027	\$2,666,440	\$1,869,027	\$3,260,516	
Ratepayer Ratio	1.01	0.83	0.99	1.07	0.85	1.24	0.85	0.94	
Ratepayer NPV	\$8,587	(\$346,603)	(\$17,041)	\$173,045	(\$379,962)	\$599,882	(\$379,962)	(\$223,791)	
Participant Ratio	1.33	3.03	1.43	2.06	1.74	1.57	1.74	4.44	
Participant NPV	\$392,496	\$1,374,050	\$629,962	\$1,373,857	\$1,094,893	\$955,770	\$1,094,893	\$3,027,164	
Societal Ratio	2.20	3.34	2.31	3.27	2.37	2.77	2.37	6.12	
Societal NPV	\$1,582,378	\$1,842,852	\$2,084,247	\$3,123,840	\$2,187,652	\$3,171,299	\$2,187,652	\$5,184,535	

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Heat Pump							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$63,000.00	\$95,308.23	\$125,000.00	\$71,614.84	\$63,000.00	\$83,761.66	\$63,000.00	\$110,248.13
Administration	\$13,000.00	\$10,299.82	\$13,000.00	\$6,902.09	\$13,000.00	\$5,370.17	\$13,000.00	\$9,796.47
Evaluation, Measurement & Verification	\$4,000.00	\$611.95	\$4,000.00	\$745.03	\$4,000.00	\$1,138.82	\$4,000.00	\$1,804.26
Advertising & Promotion	\$11,000.00	\$13,819.39	\$11,000.00	\$36,966.26	\$11,000.00	\$23,565.46	\$11,000.00	\$31,115.12
Incentives	\$114,000.00	\$494,300.00	\$552,000.00	\$785,005.00	\$114,000.00	\$371,775.00	\$114,000.00	\$668,050.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$205,000.00	\$614,339.39	\$705,000.00	\$901,233.22	\$205,000.00	\$485,611.12	\$205,000.00	\$821,013.98
Total Participants	84	294	157	123	84	172	84	281
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	90%	90%	90%	90%	90%	90%	90%	90%
Industrial	10%	10%	10%	10%	10%	10%	10%	10%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	1,192,968	4,302,601	4,140,586	6,306,175	1,045,236	2,848,954	1,045,236	4,065,571
Annual kWh Savings at Generator	1,291,651	4,658,512	4,483,094	6,827,820	1,131,698	3,084,619	1,131,698	4,401,874
Cost per Annual kWh Saved at Generator	\$0.1587	\$0.1319	\$0.1573	\$0.1320	\$0.1811	\$0.1574	\$0.1811	\$0.1865
Peak kW Savings at Meter	133.157	462.259	571.034	704.336	133.116	339.398	133.116	451.071
Peak kW Savings at Generator	144.171	500.497	618.270	762.598	144.127	367.473	144.127	488.384
Cost per Peak kW Saved at Generator	\$1,421.92	\$1,227.46	\$1,140.28	\$1,181.79	\$1,422.36	\$1,321.49	\$1,422.36	\$1,681.08
Utility Ratio	4.10	4.55	5.61	5.75	3.96	4.97	3.96	4.09
Utility NPV	\$635,397	\$2,183,658	\$3,249,267	\$4,282,260	\$606,653	\$1,926,267	\$606,653	\$2,533,055
Ratepayer Ratio	0.69	0.66	0.81	0.78	0.60	0.67	0.60	0.62
Ratepayer NPV	(\$379,627)	(\$1,445,982)	(\$911,338)	(\$1,491,244)	(\$551,696)	(\$1,163,971)	(\$551,696)	(\$2,043,131)
Participant Ratio	2.56	1.58	2.35	3.78	2.89	1.62	2.89	2.11
Participant NPV	\$717,218	\$1,582,869	\$2,818,225	\$5,017,685	\$867,165	\$1,374,263	\$867,165	\$2,874,416
Societal Ratio	2.55	1.58	2.98	4.14	2.39	1.57	2.39	1.87
Societal NPV	\$852,384	\$1,643,593	\$4,440,059	\$6,042,293	\$766,573	\$1,331,438	\$766,573	\$2,382,341

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial and Industrial Focused Efficiency							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$63,000.00	\$48,135.31	\$63,000.00	\$90,362.31	\$63,000.00	\$74,636.34	\$63,000.00	\$92,666.34
Administration	\$13,000.00	\$10,868.35	\$13,000.00	\$16,749.63	\$13,000.00	\$7,820.93	\$13,000.00	\$8,305.89
Evaluation, Measurement & Verification	\$2,000.00	\$2,330.95	\$2,000.00	\$2,479.21	\$2,000.00	\$2,639.28	\$2,000.00	\$1,848.77
Advertising & Promotion	\$2,000.00	\$553.91	\$2,000.00	\$0.00	\$2,000.00	\$62.10	\$2,000.00	\$355.31
Incentives	\$140,000.00	\$148,988.70	\$140,000.00	\$234,610.43	\$140,000.00	\$460,742.33	\$140,000.00	\$380,250.98
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$220,000.00	\$210,877.22	\$220,000.00	\$344,201.58	\$220,000.00	\$545,900.98	\$220,000.00	\$483,427.29
Total Participants	1	2	1	4	1	3	1	7
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	10%	10%	10%	10%	10%	10%	10%	10%
Industrial	90%	90%	90%	90%	90%	90%	90%	90%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	1,500,000	1,636,203	1,500,000	1,970,553	1,500,000	3,369,769	1,500,000	3,350,811
Annual kWh Savings at Generator	1,624,080	1,771,550	1,624,080	2,133,556	1,624,080	3,648,515	1,624,080	3,627,989
Cost per Annual kWh Saved at Generator	\$0.1355	\$0.1190	\$0.1355	\$0.1613	\$0.1355	\$0.1496	\$0.1355	\$0.1332
Peak kW Savings at Meter	363.250	271.702	355.604	277.215	355.604	546.560	355.604	550.887
Peak kW Savings at Generator	393.298	294.177	385.020	300.146	385.020	591.771	385.020	596.456
Cost per Peak kW Saved at Generator	\$559.37	\$716.84	\$571.40	\$1,146.78	\$571.40	\$922.49	\$571.40	\$810.50
Utility Ratio	4.63	4.08	4.62	4.84	4.85	2.10	4.85	2.61
Utility NPV	\$797,953	\$649,151	\$797,011	\$1,322,359	\$846,847	\$598,361	\$846,847	\$779,086
Ratepayer Ratio	0.86	0.80	0.88	0.76	0.83	0.54	0.83	0.68
Ratepayer NPV	(\$165,900)	(\$217,279)	(\$139,499)	(\$536,036)	(\$221,530)	(\$957,759)	(\$221,530)	(\$607,378)
Participant Ratio	2.70	2.91	2.63	3.75	2.96	0.49	2.96	0.86
Participant NPV	\$723,382	\$692,883	\$694,777	\$1,598,138	\$832,737	(\$2,151,569)	\$832,737	(\$288,066)
Societal Ratio	2.98	2.84	3.09	2.85	3.19	0.41	3.19	0.85
Societal NPV	\$1,000,401	\$782,755	\$1,055,128	\$1,275,363	\$1,106,621	(\$2,557,755)	\$1,106,621	(\$327,078)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

	Lighting							
Category: Status: Year:	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs								
Delivery	\$262,961.00	\$321,295.93	\$294,534.00	\$269,319.06	\$294,346.00	\$283,668.76	\$294,346.00	\$279,511.29
Administration	\$8,000.00	\$9,519.62	\$8,000.00	\$11,202.99	\$8,000.00	\$8,142.07	\$8,000.00	\$7,045.45
Evaluation, Measurement & Verification	\$2,500.00	\$1,442.85	\$2,500.00	\$869.88	\$2,500.00	\$7,267.88	\$2,500.00	\$13,918.84
Advertising & Promotion	\$8,000.00	\$5,100.65	\$8,000.00	\$3,514.30	\$8,000.00	\$4,223.60	\$8,000.00	\$1,233.55
Incentives	\$669,139.00	\$1,556,727.88	\$1,756,966.00	\$2,207,657.31	\$773,154.00	\$2,373,883.21	\$773,154.00	\$2,138,659.80
Other	\$0.00	\$0.00	\$0.00	\$54.95	\$0.00	\$2,621.52	\$0.00	\$0.00
Total Utility Costs	\$950,600.00	\$1,894,086.93	\$2,070,000.00	\$2,492,618.49	\$1,086,000.00	\$2,679,807.04	\$1,086,000.00	\$2,440,368.93
Total Participants	495	797	1,147	1,214	560	1,215	560	1,015
% of Spending by Customer Segments								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	70%	70%	70%	70%	70%	70%	70%	70%
Industrial	30%	30%	30%	30%	30%	30%	30%	30%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
Total % of Spending	100%	100%	100%	100%	100%	100%	100%	100%
Low-Income Participation*								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
Renter Participation*								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
Energy Savings								
Annual kWh Savings at Meter	5,362,212	15,661,895	12,400,926	22,267,643	6,074,052	24,144,114	6,074,052	21,052,070
Annual kWh Savings at Generator	5,805,773	16,957,443	13,426,728	24,109,618	6,576,496	26,141,310	6,576,496	22,793,493
Cost per Annual kWh Saved at Generator	\$0.1637	\$0.1117	\$0.1542	\$0.1034	\$0.1651	\$0.1025	\$0.1651	\$0.1071
Peak kW Savings at Meter	1,381.733	2,424.100	3,206.074	3,251.429	1,566.583	3,558.808	1,566.583	3,062.418
Peak kW Savings at Generator	1,496.030	2,624.621	3,471.280	3,520.387	1,696.170	3,853.192	1,696.170	3,315.741
Cost per Peak kW Saved at Generator	\$635.42	\$721.66	\$596.32	\$708.05	\$640.27	\$695.48	\$640.27	\$736.00
Utility Ratio	3.12	4.92	4.01	5.61	3.46	6.00	3.46	6.00
Utility NPV	\$2,011,672	\$7,425,329	\$6,231,037	\$11,491,241	\$2,671,836	\$13,405,941	\$2,671,836	\$12,197,531
Ratepayer Ratio	0.69	0.71	0.73	0.69	0.63	0.63	0.63	0.62
Ratepayer NPV	(\$1,300,343)	(\$3,893,820)	(\$3,120,559)	(\$6,292,923)	(\$2,168,547)	(\$9,464,209)	(\$2,168,547)	(\$8,842,044)
Participant Ratio	1.40	2.54	1.44	2.45	1.71	3.09	1.71	3.39
Participant NPV	\$1,190,427	\$8,114,414	\$3,520,106	\$12,334,107	\$2,415,222	\$17,785,955	\$2,415,222	\$17,020,085
Societal Ratio	1.44	2.63	1.55	2.50	1.54	2.83	1.54	3.04
Societal NPV	\$1,427,201	\$9,162,181	\$4,604,464	\$13,181,900	\$1,998,599	\$16,123,423	\$1,998,599	\$15,188,509

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Lighting New Construction							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$22,693.00	\$14,184.79	\$22,957.00	\$33,894.30	\$22,957.00	\$11,929.56	\$22,957.00	\$10,246.35
Administration	\$3,000.00	\$5,238.16	\$3,000.00	\$5,656.17	\$3,000.00	\$2,922.16	\$3,000.00	\$5,996.70
Evaluation, Measurement & Verification	\$1,000.00	\$407.31	\$1,000.00	\$1,329.29	\$1,000.00	\$1,695.43	\$1,000.00	\$1,634.36
Advertising & Promotion	\$6,000.00	\$2,550.73	\$6,000.00	\$1,600.95	\$6,000.00	\$1,754.19	\$6,000.00	\$1,330.94
Incentives	\$133,307.00	\$109,078.19	\$178,043.00	\$314,263.83	\$178,043.00	\$162,244.92	\$178,043.00	\$135,210.29
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$166,000.00	\$131,459.18	\$211,000.00	\$356,744.54	\$211,000.00	\$180,546.26	\$211,000.00	\$154,418.64
Total Participants	193	264	241	586	241	375	241	314
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	70%	70%	70%	70%	70%	70%	70%	70%
Industrial	30%	30%	30%	30%	30%	30%	30%	30%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	3,368,297	2,746,622	3,368,297	6,254,598	3,368,297	3,293,244	3,368,297	2,503,810
Annual kWh Savings at Generator	3,646,922	2,973,822	3,646,922	6,771,977	3,646,922	3,565,661	3,646,922	2,710,925
Cost per Annual kWh Saved at Generator	\$0.0455	\$0.0442	\$0.0579	\$0.0527	\$0.0579	\$0.0506	\$0.0579	\$0.0570
Peak kW Savings at Meter	383.959	373.836	840.067	818.689	840.067	469.798	840.067	378.301
Peak kW Savings at Generator	415.720	404.760	909.558	886.411	909.558	508.660	909.558	409.594
Cost per Peak kW Saved at Generator	\$399.31	\$324.78	\$231.98	\$402.46	\$231.98	\$354.95	\$231.98	\$377.00
Utility Ratio	8.80	11.42	10.31	10.90	10.75	12.21	10.75	11.61
Utility NPV	\$1,294,814	\$1,369,285	\$1,964,926	\$3,532,700	\$2,056,893	\$2,024,584	\$2,056,893	\$1,638,457
Ratepayer Ratio	0.76	0.73	0.78	0.73	0.70	0.65	0.70	0.66
Ratepayer NPV	(\$472,653)	(\$559,283)	(\$600,880)	(\$1,470,627)	(\$978,448)	(\$1,176,133)	(\$978,448)	(\$941,624)
Participant Ratio	5.53	4.91	6.89	5.69	8.08	5.91	8.08	5.37
Participant NPV	\$1,623,919	\$1,693,497	\$2,447,093	\$4,574,381	\$2,938,322	\$2,916,711	\$2,938,322	\$2,306,267
Societal Ratio	6.44	5.24	7.69	6.09	7.91	5.64	7.91	5.08
Societal NPV	\$2,126,706	\$1,930,497	\$2,999,839	\$5,178,363	\$3,099,133	\$2,841,116	\$3,099,133	\$2,234,979

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Midstream Commercial Kitchen Equipment							
	Discontinued							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$51,000.00	\$57,945.67		\$6,700.34				
Administration	\$5,000.00	\$3,926.88		\$275.59				
Evaluation, Measurement & Verification	\$1,000.00	\$63.64		\$209.62				
Advertising & Promotion	\$3,500.00	\$0.00		\$0.00				
Incentives	\$27,700.00	\$0.00		\$0.00				
Other	\$0.00	\$0.00		\$0.00				
<b>Total Utility Costs</b>	\$88,200.00	\$61,936.19		\$7,185.55				
Total Participants	100	0		0				
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%						
Commercial	100%	100%						
Industrial	0%	0%						
Farm	0%	0%						
Other	0%	0%						
<b>Total % of Spending</b>	100%	100%						
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	516,369	0						
Annual kWh Savings at Generator	559,083	0						
Cost per Annual kWh Saved at Generator	\$0.1578	\$0.0000						
Peak kW Savings at Meter	92.800	0.000						
Peak kW Savings at Generator	100.476	0.000						
Cost per Peak kW Saved at Generator	\$877.82	\$0.00						
Utility Ratio	3.66	0.00		0.00				
Utility NPV	\$234,242	(\$61,936)		(\$7,186)				
Ratepayer Ratio	0.75	0.00		0.00				
Ratepayer NPV	(\$109,648)	(\$61,936)		(\$7,186)				
Participant Ratio	4.00	inf.		inf.				
Participant NPV	\$290,678	\$0		\$0				
Societal Ratio	3.40	0.00		0.00				
Societal NPV	\$377,955	(\$61,936)		(\$7,186)				

\* Percentage derived from 2010 Census data.



Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Motors							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$28,175.00	\$25,132.42	\$28,080.00	\$28,975.42	\$28,080.00	\$15,588.76	\$28,080.00	\$17,520.81
Administration	\$5,000.00	\$6,224.85	\$5,000.00	\$4,442.53	\$5,000.00	\$2,739.03	\$5,000.00	\$4,252.91
Evaluation, Measurement & Verification	\$1,000.00	\$635.91	\$1,000.00	\$649.63	\$1,000.00	\$1,730.71	\$1,000.00	\$1,444.00
Advertising & Promotion	\$4,000.00	\$2,686.38	\$4,000.00	\$3,232.62	\$4,000.00	\$2,697.82	\$4,000.00	\$1,984.04
Incentives	\$94,825.00	\$70,820.00	\$98,920.00	\$241,985.00	\$98,920.00	\$82,430.00	\$98,920.00	\$121,206.17
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$133,000.00	\$105,499.56	\$137,000.00	\$279,285.20	\$137,000.00	\$105,186.32	\$137,000.00	\$146,407.93
Total Participants	205	139	215	397	215	174	215	199
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	30%	30%	30%	30%	30%	30%	30%	30%
Industrial	70%	70%	70%	70%	70%	70%	70%	70%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	707,468	378,669	707,468	1,217,693	707,468	668,070	707,468	1,055,558
Annual kWh Savings at Generator	765,990	409,993	765,990	1,318,420	765,990	723,332	765,990	1,142,874
Cost per Annual kWh Saved at Generator	\$0.1736	\$0.2573	\$0.1789	\$0.2118	\$0.1789	\$0.1454	\$0.1789	\$0.1281
Peak kWh Savings at Meter	131.882	56.492	135.606	231.708	135.606	108.046	135.606	217.903
Peak kW Savings at Generator	142.791	61.165	146.823	250.875	146.823	116.984	146.823	235.928
Cost per Peak kW Saved at Generator	\$931.43	\$1,724.84	\$933.09	\$1,113.25	\$933.09	\$899.15	\$933.09	\$620.56
Utility Ratio	2.85	2.31	3.20	3.27	3.34	4.61	3.34	6.08
Utility NPV	\$245,604	\$137,778	\$301,626	\$634,137	\$319,932	\$379,298	\$319,932	\$744,386
Ratepayer Ratio	0.63	0.63	0.66	0.68	0.60	0.64	0.60	0.68
Ratepayer NPV	(\$222,794)	(\$144,722)	(\$227,795)	(\$423,715)	(\$306,399)	(\$274,532)	(\$306,399)	(\$414,171)
Participant Ratio	1.76	2.96	1.92	4.09	2.22	5.46	2.22	8.51
Participant NPV	\$252,813	\$242,486	\$313,485	\$1,019,261	\$414,874	\$626,185	\$414,874	\$1,176,692
Societal Ratio	1.77	2.47	1.86	3.90	1.91	4.63	1.91	7.49
Societal NPV	\$285,259	\$232,531	\$323,602	\$1,063,540	\$343,317	\$591,735	\$343,317	\$1,180,121

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Recommissioning							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$95,600.00	\$65,899.26	\$95,600.00	\$68,261.15	\$95,600.00	\$73,796.75	\$95,600.00	\$78,946.50
Administration	\$1,900.00	\$7,875.39	\$1,900.00	\$6,100.82	\$1,900.00	\$5,043.46	\$1,900.00	\$4,888.03
Evaluation, Measurement & Verification	\$500.00	\$711.95	\$500.00	\$927.27	\$500.00	\$1,190.85	\$500.00	\$885.76
Advertising & Promotion	\$3,000.00	\$3,163.39	\$3,000.00	\$2,740.56	\$3,000.00	\$575.67	\$3,000.00	\$1,100.13
Incentives	\$87,000.00	\$81,362.00	\$87,000.00	\$157,647.00	\$87,000.00	\$40,250.00	\$87,000.00	\$43,508.53
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$188,000.00	\$159,011.99	\$188,000.00	\$235,676.80	\$188,000.00	\$120,856.73	\$188,000.00	\$129,328.95
Total Participants	4	5	4	9	4	3	4	7
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	10%	10%	10%	10%	10%	10%	10%	10%
Industrial	90%	90%	90%	90%	90%	90%	90%	90%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	2,020,000	701,628	2,020,000	3,048,181	2,020,000	1,151,971	2,020,000	616,133
Annual kWh Savings at Generator	2,187,094	759,667	2,187,094	3,300,326	2,187,094	1,247,262	2,187,094	667,099
Cost per Annual kWh Saved at Generator	\$0.0860	\$0.2093	\$0.0860	\$0.0714	\$0.0860	\$0.0969	\$0.0860	\$0.1939
Peak kW Savings at Meter	0.000	3.813	0.000	408.634	0.000	100.000	0.000	258.000
Peak kW Savings at Generator	0.000	4.128	0.000	442.436	0.000	108.272	0.000	279.342
Cost per Peak kW Saved at Generator	\$0.00	\$38,516.52	\$0.00	\$532.68	\$0.00	\$1,116.23	\$0.00	\$462.98
Utility Ratio	2.42	0.91	2.66	4.48	2.81	3.03	2.81	3.44
Utility NPV	\$267,533	(\$14,318)	\$311,336	\$819,085	\$339,878	\$245,308	\$339,878	\$315,824
Ratepayer Ratio	0.53	0.38	0.61	0.68	0.61	0.59	0.61	0.80
Ratepayer NPV	(\$408,953)	(\$238,161)	(\$313,268)	(\$493,966)	(\$334,967)	(\$252,334)	(\$334,967)	(\$111,435)
Participant Ratio	4.03	1.71	3.76	4.21	4.03	3.76	4.03	6.51
Participant NPV	\$597,739	\$130,540	\$543,461	\$1,167,786	\$596,023	\$411,580	\$596,023	\$415,211
Societal Ratio	2.36	0.85	2.41	3.26	2.46	2.16	2.46	3.44
Societal NPV	\$403,972	(\$40,541)	\$420,631	\$998,448	\$436,442	\$265,649	\$436,442	\$393,116

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Refrigeration							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$34,860.00	\$47,348.28	\$34,775.00	\$24,357.70	\$34,775.00	\$23,005.83	\$34,775.00	\$12,791.20
Administration	\$4,000.00	\$6,775.23	\$4,000.00	\$3,845.50	\$4,000.00	\$2,910.28	\$4,000.00	\$5,332.94
Evaluation, Measurement & Verification	\$1,000.00	\$252.38	\$1,000.00	\$468.14	\$1,000.00	\$1,300.50	\$1,000.00	\$744.93
Advertising & Promotion	\$5,000.00	\$2,887.27	\$5,000.00	\$2,858.22	\$5,000.00	\$1,430.62	\$5,000.00	\$1,068.51
Incentives	\$85,225.00	\$110,891.82	\$85,225.00	\$50,227.64	\$85,225.00	\$99,860.84	\$85,225.00	\$106,210.61
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$130,085.00	\$168,154.98	\$130,000.00	\$81,757.20	\$130,000.00	\$128,508.07	\$130,000.00	\$126,148.19
Total Participants	86	127	86	59	86	83	86	78
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	90%	90%	90%	90%	90%	90%	90%	90%
Industrial	10%	10%	10%	10%	10%	10%	10%	10%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	1,155,485	1,255,933	1,155,485	569,379	1,155,485	863,923	1,155,485	853,233
Annual kWh Savings at Generator	1,251,067	1,359,824	1,251,067	616,478	1,251,067	935,387	1,251,067	923,812
Cost per Annual kWh Saved at Generator	\$0.1040	\$0.1237	\$0.1039	\$0.1326	\$0.1039	\$0.1374	\$0.1039	\$0.1366
Peak kWh Savings at Meter	182.133	180.919	182.133	84.168	182.133	128.034	182.133	113.926
Peak kW Savings at Generator	197.199	195.885	197.199	91.130	197.199	138.625	197.199	123.350
Cost per Peak kW Saved at Generator	\$659.66	\$858.44	\$659.23	\$897.15	\$659.23	\$927.02	\$659.23	\$1,022.69
Utility Ratio	3.27	2.40	3.46	1.98	3.64	2.13	3.64	3.36
Utility NPV	\$294,659	\$235,090	\$319,997	\$79,950	\$342,978	\$144,688	\$342,978	\$297,145
Ratepayer Ratio	0.71	0.61	0.70	0.56	0.68	0.55	0.68	0.62
Ratepayer NPV	(\$175,274)	(\$259,541)	(\$189,972)	(\$126,881)	(\$224,451)	(\$219,060)	(\$224,451)	(\$255,896)
Participant Ratio	4.20	3.43	4.51	3.24	4.95	7.55	4.95	3.26
Participant NPV	\$439,589	\$452,221	\$481,474	\$187,265	\$541,589	\$427,271	\$541,589	\$476,105
Societal Ratio	3.40	2.52	3.52	2.06	3.63	4.62	3.63	2.58
Societal NPV	\$437,693	\$353,944	\$459,474	\$117,249	\$479,120	\$296,167	\$479,120	\$360,929

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Roof Top Unit Efficiency (Pilot)							
	Discontinued							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$26,325.00	\$31,193.68		\$9,439.65				
Administration	\$2,000.00	\$5,228.20		\$891.87				
Evaluation, Measurement & Verification	\$2,000.00	\$0.00		\$0.00				
Advertising & Promotion	\$1,000.00	\$0.00		\$0.00				
Incentives	\$20,560.00	\$0.00		\$0.00				
Other	\$0.00	\$0.00		\$0.00				
<b>Total Utility Costs</b>	\$51,885.00	\$36,421.88		\$10,331.52				
Total Participants	20	0		0				
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%		0%				
Commercial	90%	90%		0%				
Industrial	10%	10%		0%				
Farm	0%	0%		0%				
Other	0%	0%		0%				
<b>Total % of Spending</b>	100%	100%		0%				
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	489,540	0		0				
Annual kWh Savings at Generator	530,035	0		0				
Cost per Annual kWh Saved at Generator	\$0.0979	\$0.0000		\$0.0000				
Peak kW Savings at Meter	74.780	0.000		0.000				
Peak kW Savings at Generator	80.966	0.000		0.000				
Cost per Peak kW Saved at Generator	\$640.82	\$0.00		\$0.00				
Utility Ratio	2.19	0.00		0.00				
Utility NPV	\$61,942	(\$36,422)		(\$10,332)				
Ratepayer Ratio	0.52	0.00		0.00				
Ratepayer NPV	(\$105,110)	(\$36,422)		(\$10,332)				
Participant Ratio	0.90	inf.		inf.				
Participant NPV	(\$21,669)	\$0		\$0				
Societal Ratio	0.66	0.00		0.00				
Societal NPV	(\$84,164)	(\$36,422)		(\$10,332)				

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

	Commercial Advertising and Education								
Category: Status: Year:	Existing								
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual	
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
Utility Costs									
Delivery	\$22,500.00	\$23,219.71	\$64,500.00	\$75,400.95	\$64,500.00	\$57,111.62	\$64,500.00	\$112,651.87	
Administration	\$1,500.00	\$779.56	\$1,500.00	\$2,009.10	\$1,500.00	\$1,096.98	\$1,500.00	\$4,814.71	
Evaluation, Measurement & Verification	\$500.00	\$0.00	\$500.00	\$33.28	\$500.00	\$10.21	\$500.00	\$56.60	
Advertising & Promotion	\$500.00	\$615.45	\$500.00	\$0.00	\$500.00	\$0.00	\$500.00	\$3,507.91	
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total Utility Costs	\$25,000.00	\$24,614.72	\$67,000.00	\$77,443.33	\$67,000.00	\$58,218.81	\$67,000.00	\$121,031.09	
Total Participants	100	76	100	237	100	153	100	339	
% of Spending by Customer Segments									
Residential	0%	0%	0%	0%	0%	0%	0%	0%	
Commercial	100%	100%	100%	100%	100%	100%	100%	100%	
Industrial	0%	0%	0%	0%	0%	0%	0%	0%	
Farm	0%	0%	0%	0%	0%	0%	0%	0%	
Other	0%	0%	0%	0%	0%	0%	0%	0%	
Total % of Spending	100%	100%	100%	100%	100%	100%	100%	100%	
Low-Income Participation*									
Participants % (% of Total Participants)									
Budget % (% of Total Utility Costs)									
Renter Participation*									
Participants % (% of Total Participants)									
Budget % (% of Total Utility Costs)									
Energy Savings									
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0	
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0	
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Utility NPV	(\$25,000)	(\$24,615)	(\$67,000)	(\$77,443)	(\$67,000)	(\$58,219)	(\$67,000)	(\$121,031)	
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Ratepayer NPV	(\$25,000)	(\$24,615)	(\$67,000)	(\$77,443)	(\$67,000)	(\$58,219)	(\$67,000)	(\$121,031)	
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.	
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Societal NPV	(\$25,000)	(\$24,615)	(\$67,000)	(\$77,443)	(\$67,000)	(\$58,219)	(\$67,000)	(\$121,031)	

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Compressed Air Audits							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$3,000.00	\$187.24	\$3,000.00	\$35.63	\$3,000.00	\$12.15	\$3,000.00	\$13.22
Administration	\$500.00	\$96.50	\$500.00	\$61.86	\$500.00	\$157.50	\$500.00	\$613.57
Evaluation, Measurement & Verification	\$500.00	\$61.44	\$500.00	\$172.54	\$500.00	\$66.52	\$500.00	\$36.02
Advertising & Promotion	\$1,000.00	\$553.91	\$1,000.00	\$0.00	\$1,000.00	\$0.00	\$1,000.00	\$0.00
Incentives	\$0.00	\$4,940.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,600.00
Other	\$15,000.00	\$0.00	\$15,000.00	\$0.00	\$15,000.00	\$0.00	\$15,000.00	\$0.00
<b>Total Utility Costs</b>	\$20,000.00	\$5,839.09	\$20,000.00	\$270.03	\$20,000.00	\$236.17	\$20,000.00	\$4,262.81
Total Participants	4	1	4	0	4	0	4	1
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	10%	10%	10%	10%	10%	10%	10%	10%
Industrial	90%	90%	90%	90%	90%	90%	90%	90%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$20,000)	(\$5,839)	(\$20,000)	(\$270)	(\$20,000)	(\$236)	(\$20,000)	(\$4,263)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$20,000)	(\$5,839)	(\$20,000)	(\$270)	(\$20,000)	(\$236)	(\$20,000)	(\$4,263)
Participant Ratio	inf.	0.80	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	(\$1,235)	\$0	\$0	\$0	\$0	\$0	\$3,600
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$20,000)	(\$7,074)	(\$20,000)	(\$270)	(\$20,000)	(\$236)	(\$20,000)	(\$663)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Integrated Building Design Plus							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery			\$195,000.00	\$107,022.71	\$195,000.00	\$132,250.97	\$195,000.00	\$229,607.65
Administration			\$10,000.00	\$9,267.93	\$10,000.00	\$6,002.63	\$10,000.00	\$6,794.52
Evaluation, Measurement & Verification			\$1,000.00	\$411.22	\$1,000.00	\$595.32	\$1,000.00	\$415.69
Advertising & Promotion			\$6,000.00	\$1,814.33	\$6,000.00	\$883.34	\$6,000.00	\$114.38
Incentives			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other			\$22,000.00	\$0.00	\$22,000.00	\$0.00	\$22,000.00	\$0.00
<b>Total Utility Costs</b>			\$234,000.00	\$118,516.19	\$234,000.00	\$139,732.26	\$234,000.00	\$236,932.24
Total Participants			6	6	6	4	6	1
<b>% of Spending by Customer Segments</b>								
Residential			0%	0%	0%	0%	0%	0%
Commercial			0%	0%	0%	0%	0%	0%
Industrial			0%	0%	0%	0%	0%	0%
Farm			0%	0%	0%	0%	0%	0%
Other			0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>			0%	0%	0%	0%	0%	0%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter			0	0	0	0	0	0
Annual kWh Savings at Generator			0	0	0	0	0	0
Cost per Annual kWh Saved at Generator			\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter			0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator			0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio			0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV			(\$234,000)	(\$118,516)	(\$234,000)	(\$139,732)	(\$234,000)	(\$236,932)
Ratepayer Ratio			0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV			(\$234,000)	(\$118,516)	(\$234,000)	(\$139,732)	(\$234,000)	(\$236,932)
Participant Ratio			0.00	inf.	0.00	inf.	0.00	inf.
Participant NPV			(\$234,000)	\$0	(\$234,000)	\$0	(\$234,000)	\$0
Societal Ratio			0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV			(\$234,000)	(\$118,516)	(\$234,000)	(\$139,732)	(\$234,000)	(\$236,932)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Financing							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$28,500.00	\$1,497.06	\$28,500.00	\$1,581.88	\$28,500.00	\$2,655.20	\$28,500.00	\$5,318.61
Administration	\$3,500.00	\$6,222.76	\$3,500.00	\$2,847.81	\$3,500.00	\$244.33	\$3,500.00	\$0.00
Evaluation, Measurement & Verification	\$1,000.00	\$250.15	\$1,000.00	\$532.48	\$1,000.00	\$66.52	\$1,000.00	\$0.00
Advertising & Promotion	\$8,000.00	\$1,890.91	\$8,000.00	\$3,513.60	\$8,000.00	\$607.11	\$8,000.00	\$0.00
Incentives	\$0.00	\$5,475.43	\$0.00	\$7,936.54	\$0.00	\$5,436.40	\$0.00	\$5,808.39
Other	\$9,000.00	\$0.00	\$9,000.00	\$0.00	\$9,000.00	\$46.00	\$9,000.00	\$46.00
<b>Total Utility Costs</b>	\$50,000.00	\$15,336.31	\$50,000.00	\$16,412.31	\$50,000.00	\$9,055.56	\$50,000.00	\$11,173.00
Total Participants	5	0	5	0	5	0	5	2
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	90%	90%	90%	90%	90%	90%	90%	90%
Industrial	10%	10%	10%	10%	10%	10%	10%	10%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kWh Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$50,000)	(\$15,336)	(\$50,000)	(\$16,412)	(\$50,000)	(\$9,056)	(\$50,000)	(\$11,173)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$50,000)	(\$15,336)	(\$50,000)	(\$16,412)	(\$50,000)	(\$9,056)	(\$50,000)	(\$11,173)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$5,475	\$0	\$7,937	\$0	\$5,436	\$0	\$5,808
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$50,000)	(\$9,861)	(\$50,000)	(\$8,476)	(\$50,000)	(\$3,619)	(\$50,000)	(\$5,365)

\* Percentage derived from 2010 Census data.



Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Commercial Implementation and Training							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$54,000.00	\$31,077.83	\$54,000.00	\$41,456.94	\$54,000.00	\$32,984.84	\$54,000.00	\$55,755.69
Administration	\$2,000.00	\$2,716.95	\$2,000.00	\$2,937.72	\$2,000.00	\$3,311.20	\$2,000.00	\$0.00
Evaluation, Measurement & Verification	\$2,000.00	\$2,558.79	\$2,000.00	\$11,140.28	\$2,000.00	\$3,678.91	\$2,000.00	\$2,939.14
Advertising & Promotion	\$2,000.00	\$780.37	\$2,000.00	\$1,405.70	\$2,000.00	\$646.27	\$2,000.00	\$698.84
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$5,620.28	\$0.00	\$0.00	\$0.00	\$764.75
<b>Total Utility Costs</b>	\$60,000.00	\$37,133.93	\$60,000.00	\$62,560.92	\$60,000.00	\$40,621.22	\$60,000.00	\$60,158.42
Total Participants	250	507	250	537	250	442	250	319
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	90%	90%	90%	90%	90%	90%	90%	90%
Industrial	10%	10%	10%	10%	10%	10%	10%	10%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$60,000)	(\$37,134)	(\$60,000)	(\$62,561)	(\$60,000)	(\$40,621)	(\$60,000)	(\$60,158)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$60,000)	(\$37,134)	(\$60,000)	(\$62,561)	(\$60,000)	(\$40,621)	(\$60,000)	(\$60,158)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$60,000)	(\$37,134)	(\$60,000)	(\$62,561)	(\$60,000)	(\$40,621)	(\$60,000)	(\$60,158)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Company-Owned Street & Area Lighting							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$0.00	\$432,803.00	\$155,301.73	\$432,803.00	\$344,887.37	\$432,803.00	\$470,829.52
Administration	\$0.00	\$0.00	\$125,000.00	\$0.00	\$125,000.00	\$0.00	\$125,000.00	\$0.00
Evaluation, Measurement & Verification	\$0.00	\$0.00	\$3,000.00	\$2,940.93	\$3,000.00	\$2,977.51	\$3,000.00	\$2,959.22
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$5,532.39	\$0.00	\$5,525.51	\$0.00	\$407.23
Incentives	\$0.00	\$0.00	\$178,572.00	\$222,551.60	\$178,572.00	\$290,284.00	\$178,572.00	\$250,530.00
Other	\$0.00	\$0.00	\$36,108.00	\$0.00	\$71,620.00	\$0.00	\$106,952.00	\$0.00
<b>Total Utility Costs</b>	\$0.00	\$0.00	\$775,483.00	\$386,326.65	\$810,995.00	\$643,674.39	\$846,327.00	\$724,725.97
Total Participants	0	0	3,892	3,831	3,892	5,995	3,892	5,511
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	2,188,655	2,727,926	2,213,413	3,558,156	2,188,655	3,070,871
Annual kWh Savings at Generator	0	0	2,369,700	2,953,580	2,396,506	3,852,486	2,369,700	3,324,893
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.3272	\$0.1308	\$0.3384	\$0.1671	\$0.3571	\$0.2180
Peak kWh Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	inf.	inf.	1.17	2.88	1.16	2.34	1.15	1.84
Utility NPV	\$0	\$0	\$133,431	\$725,806	\$132,028	\$861,367	\$123,026	\$610,470
Ratepayer Ratio	inf.	inf.	0.31	1.91	0.27	1.56	0.26	1.32
Ratepayer NPV	\$0	\$0	(\$2,044,171)	\$528,898	(\$2,581,832)	\$541,282	(\$2,699,388)	\$323,170
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$2,456,763	\$428,557	\$3,017,796	\$625,157	\$3,131,366	\$551,103
Societal Ratio	inf.	inf.	2.99	13.38	2.90	8.30	2.82	5.48
Societal NPV	\$0	\$0	\$1,187,200	\$2,027,671	\$1,199,467	\$2,581,247	\$1,213,496	\$2,126,748

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Publicly-Owned Property Solar							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$8,000.00	\$4,186.29	\$4,000.00	\$5,989.99	\$8,000.00	\$7,343.06	\$8,000.00	\$12,366.20
Administration	\$3,000.00	\$5,528.64	\$3,000.00	\$3,003.68	\$3,000.00	\$2,220.87	\$3,000.00	\$3,821.30
Evaluation, Measurement & Verification	\$2,000.00	\$184.32	\$2,000.00	\$256.21	\$2,000.00	\$131.46	\$2,000.00	\$0.00
Advertising & Promotion	\$1,000.00	\$62.21	\$1,000.00	\$188.25	\$1,000.00	\$0.00	\$1,000.00	\$0.00
Incentives	\$215,625.00	\$0.00	\$103,125.00	\$220,247.18	\$215,625.00	\$172,912.50	\$215,625.00	\$125,000.00
Other	\$95.00	\$0.00	\$1,735.00	\$0.00	\$95.00	\$0.00	\$95.00	\$0.00
<b>Total Utility Costs</b>	\$229,720.00	\$9,961.46	\$114,860.00	\$229,685.31	\$229,720.00	\$182,607.89	\$229,720.00	\$141,187.50
Total Participants	16	0	16	2	16	2	16	0
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	100%	100%	100%	100%	100%	100%	100%	100%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	224,250	0	224,254	81,638	224,254	0	224,254	0
Annual kWh Savings at Generator	242,800	0	242,805	88,391	242,805	0	242,805	0
Cost per Annual kWh Saved at Generator	\$0.9461	\$0.0000	\$0.4731	\$2.5985	\$0.9461	\$0.0000	\$0.9461	\$0.0000
Peak kWh Savings at Meter	86.432	0.000	86.432	35.797	86.432	0.000	86.432	0.000
Peak kW Savings at Generator	93.582	0.000	93.582	38.758	93.582	0.000	93.582	0.000
Cost per Peak kW Saved at Generator	\$2,454.74	\$0.00	\$1,227.37	\$5,926.17	\$2,454.74	\$0.00	\$2,454.74	\$0.00
Utility Ratio	1.01	0.00	1.06	0.44	1.12	0.00	1.12	0.00
Utility NPV	\$1,169	(\$9,961)	\$14,304	(\$128,399)	\$26,878	(\$182,608)	\$26,878	(\$141,188)
Ratepayer Ratio	0.52	0.00	0.53	0.30	0.50	0.00	0.50	0.00
Ratepayer NPV	(\$212,293)	(\$9,961)	(\$217,034)	(\$232,183)	(\$261,429)	(\$182,608)	(\$261,429)	(\$141,188)
Participant Ratio	0.69	inf.	0.72	1.86	0.81	inf.	0.81	inf.
Participant NPV	(\$199,301)	\$0	(\$180,600)	\$152,491	(\$120,999)	\$172,913	(\$120,999)	\$125,000
Societal Ratio	0.62	0.00	0.64	1.04	0.67	0.00	0.67	0.00
Societal NPV	(\$247,937)	(\$9,961)	(\$231,696)	\$7,760	(\$216,104)	(\$9,695)	(\$216,104)	(\$16,188)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Planning - Regulatory Affairs							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$75,828.21	\$0.00	\$67,626.01	\$0.00	\$166,185.55	\$0.00	\$167,575.01
Administration	\$0.00	\$73,966.77	\$0.00	\$136,037.71	\$0.00	\$146,159.44	\$0.00	\$122,306.28
Evaluation, Measurement & Verification	\$0.00	\$32,174.54	\$0.00	\$17,873.87	\$0.00	\$22,740.12	\$0.00	\$23,323.79
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$300,000.00	\$250.00	\$300,000.00	\$0.00	\$300,000.00	\$0.00	\$300,000.00	\$0.00
<b>Total Utility Costs</b>	\$300,000.00	\$182,219.52	\$300,000.00	\$221,537.59	\$300,000.00	\$335,085.11	\$300,000.00	\$313,205.08
Total Participants	0	0	0	0	0	0	0	0
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$300,000)	(\$182,220)	(\$300,000)	(\$221,538)	(\$300,000)	(\$335,085)	(\$300,000)	(\$313,205)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$300,000)	(\$182,220)	(\$300,000)	(\$221,538)	(\$300,000)	(\$335,085)	(\$300,000)	(\$313,205)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$300,000)	(\$182,220)	(\$300,000)	(\$221,538)	(\$300,000)	(\$335,085)	(\$300,000)	(\$313,205)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Research and Development							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$80,753.69	\$0.00	\$155,175.59	\$0.00	\$123,720.93	\$0.00	\$49,030.76
Administration	\$0.00	\$40,091.73	\$0.00	\$14,390.55	\$0.00	\$5,342.88	\$0.00	\$1,488.07
Evaluation, Measurement & Verification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,321.88	\$0.00	\$695.25
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$180,000.00	\$0.00	\$180,000.00	\$1,500.00	\$180,000.00	\$0.00	\$180,000.00	\$1,400.00
<b>Total Utility Costs</b>	\$180,000.00	\$120,845.42	\$180,000.00	\$171,066.14	\$180,000.00	\$130,385.69	\$180,000.00	\$52,614.08
Total Participants	0	0	0	0	0	0	0	0
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kWh Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$180,000)	(\$120,845)	(\$180,000)	(\$171,066)	(\$180,000)	(\$130,386)	(\$180,000)	(\$52,614)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$180,000)	(\$120,845)	(\$180,000)	(\$171,066)	(\$180,000)	(\$130,386)	(\$180,000)	(\$52,614)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$180,000)	(\$120,845)	(\$180,000)	(\$171,066)	(\$180,000)	(\$130,386)	(\$180,000)	(\$52,614)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	NGEA - Regulatory Assessments							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Administration	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Evaluation, Measurement & Verification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$110,000.00	\$108,515.95	\$110,000.00	\$101,236.91	\$110,000.00	\$98,307.02	\$110,000.00	\$96,754.74
<b>Total Utility Costs</b>	\$110,000.00	\$108,515.95	\$110,000.00	\$101,236.91	\$110,000.00	\$98,307.02	\$110,000.00	\$96,754.74
Total Participants	0	0	0	0	0	0	0	0
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$110,000)	(\$108,516)	(\$110,000)	(\$101,237)	(\$110,000)	(\$98,307)	(\$110,000)	(\$96,755)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$110,000)	(\$108,516)	(\$110,000)	(\$101,237)	(\$110,000)	(\$98,307)	(\$110,000)	(\$96,755)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$110,000)	(\$108,516)	(\$110,000)	(\$101,237)	(\$110,000)	(\$98,307)	(\$110,000)	(\$96,755)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	PUC Assessments							
	Existing							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Administration	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Evaluation, Measurement & Verification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$20,000.00	\$5,618.09	\$20,000.00	\$22,070.97	\$20,000.00	\$29,139.83	\$20,000.00	\$33,816.92
<b>Total Utility Costs</b>	\$20,000.00	\$5,618.09	\$20,000.00	\$22,070.97	\$20,000.00	\$29,139.83	\$20,000.00	\$33,816.92
Total Participants	0	0	0	0	0	0	0	0
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility NPV	(\$20,000)	(\$5,618)	(\$20,000)	(\$22,071)	(\$20,000)	(\$29,140)	(\$20,000)	(\$33,817)
Ratepayer Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ratepayer NPV	(\$20,000)	(\$5,618)	(\$20,000)	(\$22,071)	(\$20,000)	(\$29,140)	(\$20,000)	(\$33,817)
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Societal NPV	(\$20,000)	(\$5,618)	(\$20,000)	(\$22,071)	(\$20,000)	(\$29,140)	(\$20,000)	(\$33,817)

\* Percentage derived from 2010 Census data.

Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Transmission & Distribution Cost Study							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery	\$0.00	\$13,373.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Administration	\$0.00	\$7,366.51	\$0.00	\$1,304.14	\$0.00	\$139.02	\$0.00	\$0.00
Evaluation, Measurement & Verification	\$0.00	\$11,326.83	\$0.00	\$956.55	\$0.00	\$3,732.50	\$0.00	\$0.00
Advertising & Promotion	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Incentives	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Utility Costs</b>	\$0.00	\$32,067.20	\$0.00	\$2,260.69	\$0.00	\$3,871.52	\$0.00	\$0.00
Total Participants	0	0	0	0	0	0	0	0
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter	0	0	0	0	0	0	0	0
Annual kWh Savings at Generator	0	0	0	0	0	0	0	0
Cost per Annual kWh Saved at Generator	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Peak kW Savings at Meter	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peak kW Savings at Generator	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Peak kW Saved at Generator	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Ratio	inf.	0.00	inf.	0.00	inf.	0.00	inf.	inf.
Utility NPV	\$0	(\$32,067)	\$0	(\$2,261)	\$0	(\$3,872)	\$0	\$0
Ratepayer Ratio	inf.	0.00	inf.	0.00	inf.	0.00	inf.	inf.
Ratepayer NPV	\$0	(\$32,067)	\$0	(\$2,261)	\$0	(\$3,872)	\$0	\$0
Participant Ratio	inf.	inf.	inf.	inf.	inf.	inf.	inf.	inf.
Participant NPV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Societal Ratio	inf.	0.00	inf.	0.00	inf.	0.00	inf.	inf.
Societal NPV	\$0	(\$32,067)	\$0	(\$2,261)	\$0	(\$3,872)	\$0	\$0

\* Percentage derived from 2010 Census data.



Electric Conservation Project Information Sheet  
Otter Tail Power Company

Category: Status: Year:	Town Energy Challenge & Accounting Adjustments							
	2017 Proposed	2017 Actual	2018 Proposed	2018 Actual	2019 Proposed	2019 Actual	2020 Proposed	2020 Actual
kWh Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
kW Line Loss Factor	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%	7.640%
<b>Utility Costs</b>								
Delivery		\$0.00		\$0.00		\$0.00		\$0.00
Administration		\$0.00		\$0.00		\$0.00		\$0.00
Evaluation, Measurement & Verification		\$0.00		\$0.00		\$0.00		\$0.00
Advertising & Promotion		\$0.00		\$0.00		\$0.00		\$0.00
Incentives		\$0.00		\$0.00		\$0.00		\$0.00
Other		\$15,670.86		\$11,156.22		\$320.49		(\$7,559.12)
<b>Total Utility Costs</b>		\$15,670.86		\$11,156.22		\$320.49		(\$7,559.12)
Total Participants								
<b>% of Spending by Customer Segments</b>								
Residential	0%	0%	0%	0%	0%	0%	0%	0%
Commercial	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	0%	0%	0%	0%	0%	0%
Farm	0%	0%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	100%	100%	100%	100%	100%
<b>Total % of Spending</b>	100%	100%	100%	100%	100%	100%	100%	100%
<b>Low-Income Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Renter Participation*</b>								
Participants % (% of Total Participants)								
Budget % (% of Total Utility Costs)								
<b>Energy Savings</b>								
Annual kWh Savings at Meter								
Annual kWh Savings at Generator								
Cost per Annual kWh Saved at Generator								
Peak kW Savings at Meter								
Peak kW Savings at Generator								
Cost per Peak kW Saved at Generator								
Utility Ratio		0.00		0.00		0.00		0.00
Utility NPV		(\$15,671)		(\$11,156)		(\$320)		\$7,559
Ratepayer Ratio		0.00		0.00		0.00		0.00
Ratepayer NPV		(\$15,671)		(\$11,156)		(\$320)		\$7,559
Participant Ratio		inf.		inf.		inf.		inf.
Participant NPV		\$0		\$0		\$0		\$0
Societal Ratio		0.00		0.00		0.00		0.00
Societal NPV		(\$15,671)		(\$11,156)		(\$320)		\$7,559

\* Percentage derived from 2010 Census data.

## **CERTIFICATE OF SERVICE**

**RE: In the Matter of Otter Tail Power Company's 2019 Demand Side Management Financial Incentive Project, Annual Filing to Update the Conservation Improvement Project Rider, and 2019 CIP Status Report  
Docket Nos. E017/M-21- , E017/M-21- , and E017/CIP-16-116.04**

I, Carly Haiby, hereby certify that I have this day served a copy of the following, or a summary thereof, on Will Seuffert and Sharon Ferguson by e-filing, and to all other persons on the attached service list by electronic service or by First Class mail.

**Otter Tail Power Company  
Initial Filing**

Dated this **1st** day of **April, 2021**

/s/ CARLY HAIBY

Carly Haiby  
Regulatory Filing Coordinator  
Otter Tail Power Company  
215 South Cascade Street  
Fergus Falls MN 56537  
(218) 739-8472

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	andrew.moratzka@stoel.com	Steel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List
Matthew	Olsen	molsen@otpc.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List
Larry L.	Schedin	Larry@LLSResources.com	LLS Resources, LLC	332 Minnesota St, Ste W1390 St. Paul, MN 55101	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List
Cary	Stephenson	cStephenson@otpc.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List
Stuart	Tommerdahl	stommerdahl@otpc.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	GEN_SL_Otter Tail Power Company_OTP 2021 CIP Rider and DSM Incentive Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Tom	Balster	tombalster@alliantenergy.com	Interstate Power & Light Company	PO Box 351 200 1st St SE Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Lisa	Beckner	lbeckner@mnpower.com	Minnesota Power	30 W Superior St  Duluth, MN 55802	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
William	Black	bblack@mmua.org	MMUA	Suite 200 3131 Fernbrook Lane North  Plymouth, MN 55447	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron	200 S 6th St Ste 4000  Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Charlie	Buck	charlie.buck@oracle.com	Oracle	760 Market St FL 4  San Francisco, CA 94102	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.	12700 West Dodge Road PO Box 2047 Omaha, NE 68103-2047	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Generic Notice	Commerce Attorneys	commerce.attorneys@agate.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400  St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_16- 116_E017.CIP-16-116
Brooke	Cooper	bcooper@allette.com	Minnesota Power	30 W Superior St  Duluth, MN 558022191	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174  Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Steve	Downer	sdowner@mmua.org	MMUA	3025 Harbor Ln N Ste 400  Plymouth, MN 554475142	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Charles	Drayton	charles.drayton@enbridge.com	Enbridge Energy Company, Inc.	7701 France Ave S Ste 600  Edina, MN 55435	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Jim	Erchul	jerchul@dbnhs.org	Daytons Bluff Neighborhood Housing Sv.	823 E 7th St  St. Paul, MN 55106	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
James C.	Erickson	jericksonkbc@gmail.com	Kelly Bay Consulting	17 Quechee St  Superior, WI 54880-4421	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Greg	Ernst	gaernst@q.com	G. A. Ernst & Associates, Inc.	2377 Union Lake Trl  Northfield, MN 55057	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Melissa S	Feine	melissa.feine@semcac.org	SEMCAC	PO Box 549 204 S Elm St Rushford, MN 55971	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Karolanne	Foley	Karolanne.foley@dairylandpower.com	Dairyland Power Cooperative	PO Box 817  La Crosse, WI 54602-0817	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Bruce	Gerhardson	bgerhardson@otpc.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Angela E.	Gordon	agordon@trccompanies.com	Lockheed Martin	1000 Clark Ave.  St. Louis, MO 63102	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Pat	Green	N/A	N Energy Dev	City Hall 401 E 21st St Hibbing, MN 55746	Paper Service	No	OFF_SL_16-116_E017.CIP-16-116

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jason	Grenier	jgrenier@otpc.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Tony	Hainault	anthony.hainault@co.hennepin.mn.us	Hennepin County DES	701 4th Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Tyler	Hamman	tylerh@bepc.com	Basin Electric Power Cooperative	1717 E Interstate Ave Bismarck, ND 58501	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Patty	Hanson	phanson@rpu.org	Rochester Public Utilities	4000 E River Rd NE Rochester, MN 55906	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Norm	Harold	N/A	NKS Consulting	5591 E 180th St Prior Lake, MN 55372	Paper Service	No	OFF_SL_16-116_E017.CIP-16-116
Jared	Hendricks	jared.hendricks@owatonnautilities.com	Owatonna Public Utilities	PO Box 800 208 S Walnut Ave Owatonna, MN 55060-2940	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Shane	Henriksen	shane.henriksen@enbridge.com	Enbridge Energy Company, Inc.	1409 Hammond Ave FL 2 Superior, WI 54880	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Holly	Hinman	holly.r.hinman@xcelenergy.com	Xcel Energy	414 Nicollet Mall, 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Dave	Johnson	dave.johnson@aeoa.org	Arrowhead Economic Opportunity Agency	702 3rd Ave S Virginia, MN 55792	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Deborah	Knoll	dknoll@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116

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Tina	Koecher	tkoecher@mnpower.com	Minnesota Power	30 W Superior St  Duluth, MN 558022093	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Kelly	Lady	kellyl@austinutilities.com	Austin Utilities	400 4th St NE  Austin, MN 55912	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Erica	Larson	erica.larson@centerpointenergy.com	CenterPoint Energy	505 Nicollet Avenue P.O. Box 59038 Minneapolis, Minnesota 55459-0038	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W  Farmington, MN 55024	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Martin	Lepak	Martin.Lepak@aeoa.org	Arrowhead Economic Opportunity	702 S 3rd Ave  Virginia, MN 55792	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd  Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Nick	Mark	nick.mark@centerpointenergy.com	CenterPoint Energy	505 Nicollet Mall  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E  St. Paul, MN 55106	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116
Scot	McClure	scotmcclure@alliantenergy.com	Interstate Power And Light Company	4902 N Biltmore Ln PO Box 77007 Madison, WI 537071007	Electronic Service	No	OFF_SL_16- 116_E017.CIP-16-116



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Brian	Meloy	brian.meloy@stinson.com	STINSON LLP	50 S 6th St Ste 2600  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
David	Moeller	dmoeller@allte.com	Minnesota Power	30 W Superior St  Duluth, MN 558022093	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment	212 3rd Ave N Ste 560  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351  Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
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Joyce	Peppin	joyce@mrea.org	Minnesota Rural Electric Association	11640 73rd Ave N  Maple Grove, MN 55369	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Lisa	Pickard	lseverson@minnkota.com	Minnkota Power Cooperative	5301 32nd Ave S  Grand Forks, ND 58201	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Kathleen A	Prestidge	Kathy.Prestidge@stoel.com	Stoel Rives LLP	33 S 6th St Ste 4200  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Dave	Reinke	dreinke@dakotaelectric.com	Dakota Electric Association	4300 220th St W  Farmington, MN 55024-9583	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_16-116_E017.CIP-16-116
Larry L.	Schedin	Larry@LLSResources.com	LLS Resources, LLC	332 Minnesota St, Ste W1390  St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Christopher	Schoenherr	cp.schoenherr@smmpa.org	SMMPA	500 First Ave SW  Rochester, MN 55902-3303	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350  Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-116_E017.CIP-16-116
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd  St. Paul, MN 55102	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Anna	Sommer	ASommer@energyfuturesgroup.com	Energy Futures Group	PO Box 692  Canton, NY 13617	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7  Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Stuart	Tommerdahl	stommerdahl@otpc.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP	80 S 8th St Ste 2200  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
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Sharon N.	Walsh	swalsh@shakopeeutilities.com	Shakopee Public Utilities	255 Sarazin St  Shakopee, MN 55379	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116
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Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company	200 First St SE  Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_16-116_E017.CIP-16-116

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.	12700 West Dodge Road PO Box 2047 Omaha, NE 68103-2047	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400  St. Paul, MN 55101	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174  Lake Elmo, MN 55042	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Steve	Downer	sdowner@mmua.org	MMUA	3025 Harbor Ln N Ste 400  Plymouth, MN 554475142	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Charles	Drayton	charles.drayton@enbridge.com	Enbridge Energy Company, Inc.	7701 France Ave S Ste 600  Edina, MN 55435	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Jim	Erchul	jerschul@dbnhs.org	Daytons Bluff Neighborhood Housing Sv.	823 E 7th St  St. Paul, MN 55106	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Greg	Ernst	gaernst@q.com	G. A. Ernst & Associates, Inc.	2377 Union Lake Trl  Northfield, MN 55057	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Melissa S	Feine	melissa.feine@semcac.org	SEMCAC	PO Box 549 204 S Elm St Rushford, MN 55971	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Karolanne	Foley	Karolanne.foley@dairylandpower.com	Dairyland Power Cooperative	PO Box 817  La Crosse, WI 54602-0817	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Rob	Friend	rfriend@mnchamber.com	Minnesota Chamber of Commerce - MN Waste Wise Foundation	400 Robert St N Ste 1500  Saint Paul, MN 55101	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
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Pat	Green	N/A	N Energy Dev	City Hall 401 E 21st St Hibbing, MN 55746	Paper Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Jason	Grenier	jgrenier@otpc.com	Otter Tail Power Company	215 South Cascade Street  Fergus Falls, MN 56537	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Tyler	Hamman	tylerh@bepc.com	Basin Electric Power Cooperative	1717 E Interstate Ave Bismarck, ND 58501	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Patty	Hanson	phanson@rpu.org	Rochester Public Utilities	4000 E River Rd NE Rochester, MN 55906	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Norm	Harold	N/A	NKS Consulting	5591 E 180th St Prior Lake, MN 55372	Paper Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Jared	Hendricks	jared.hendricks@owatonna utilities.com	Owatonna Public Utilities	PO Box 800 208 S Walnut Ave Owatonna, MN 55060-2940	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Dave	Johnson	dave.johnson@aeoa.org	Arrowhead Economic Opportunity Agency	702 3rd Ave S Virginia, MN 55792	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Deborah	Knoll	dknoll@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Tina	Koecher	tkoecher@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
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Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E  St. Paul, MN 55106	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Scot	McClure	scotmcclure@alliantenergy.com	Interstate Power And Light Company	4902 N Biltmore Ln PO Box 77007 Madison, WI 537071007	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
John	McWilliams	John.McWilliams@DairylandPower.com	Dairyland Power Cooperative	3200 East Ave SPO Box 817  La Crosse, WI 54601-7227	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
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David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St  Duluth, MN 558022093	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200  Minneapolis, MN 55402	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Joyce	Peppin	joyce@mrea.org	Minnesota Rural Electric Association	11640 73rd Ave N Maple Grove, MN 55369	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Lisa	Pickard	lseverson@minnkota.com	Minnkota Power Cooperative	5301 32nd Ave S Grand Forks, ND 58201	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Bill	Poppert	info@technologycos.com	Technology North	2433 Highwood Ave St. Paul, MN 55119	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Kathleen A	Prestidge	Kathy.Prestidge@stoel.com	Stoel Rives LLP	33 S 6th St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Dave	Reinke	dreinke@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024-9583	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Chris	Rustad	crustad@mnchamber.com	Minnesota Chamber of Commerce	400 Robert St N Ste 1500 Saint Paul, MN 55101	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
Anna	Sommer	ASommer@energyfuturesgroup.com	Energy Futures Group	PO Box 692 Canton, NY 13617	Electronic Service	No	SPL_SL__CIP SPECIAL SERVICE LIST
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