
STAFF MEMORANDUM

TO: COMMISSIONERS AND ADVISORS
FROM: JOSEPH REZAC AND AMANDA REISS
RE: EL23-019 - In the Matter of the filing by Otter Tail Power Company regarding its 2024-2026 Energy Efficiency Partnership Triennial Plan
DATE: November 3, 2023

OVERVIEW

On August 1, 2023, Otter Tail Power Company (Otter Tail or Company) filed its proposed Energy Efficiency Plan (EEP) for the years 2024 through 2026. The Company's proposal updates and extends its most recent EEP approved in Docket EL20-022.

Otter Tail's proposed plan is comprised of 10 projects, including 4 residential direct impact projects, 5 commercial direct impact projects, and one indirect impact project. All the proposed programs are a continuation of the existing programs that have been implemented. Otter Tail estimates 7.9 million kWh in annual savings at an approximate cost of \$650,000 per year. The Company states that approximately 73 percent of the proposed budget is expected to be customer incentives. The Company proposes to launch the new EEP effective January 1, 2024.

Staff provides the following analysis and recommendation to the Commission regarding the proposed 2024-2026 EEP.

ANALYSIS

2024-2026 PROJECT PORTFOLIO

A. DIRECT IMPACT PROJECTS

Residential

Residential Air Conditioning Control

Otter Tail Proposes to continue its Residential Air Conditioning Control project (known as **CoolSavings**). The Company's **CoolSavings** rider provides customers who enroll an \$8.25 monthly bill credit from June through September in return for allowing Otter Tail to cycle air conditioning systems on and off every 15 minutes during peak-demand periods. The Air Conditioning Control project also includes heat pump systems served through Otter Tail's dual fuel and deferred load rates, where customers receive a discounted price for energy.

Home Lighting

Otter Tail's proposes to continue its existing Home Lighting program with only a couple minor revisions. The project consists of LED lighting sold by participating retailers located in Otter Tail's service territory. Price discounts will be provided at the point of purchase. The proposed incentive for LED lamps ranges from \$1.50 - \$2.00 dependent upon wattage. In addition, the Company will continue providing incentives through requested rebates for hard-wired retrofits and new construction applications. These rebates have been recategorized from past years. Rebate amounts for this program have slightly changed from past years and can be found on Attachment 1 to Staff's DR 1-3.

Smart Thermostats

Otter Tail proposes to continue offering a \$100 incentive for Tier II smart thermostat installations and a \$150 incentive for Tier III smart thermostat installations. Tier II smart thermostats provide users with the ability to set points and schedule using a smart phone, tablet, or computer. Tier III thermostats offer additional energy savings features including coaching, HVAC diagnostics, comparative information, and geofencing. Both Tiers have demand response capabilities and customer engagement features. A new offering to this program is a Tier III line voltage thermostats. These new thermostats can handle larger electrical load that are often required by baseboard heating systems that do not have a low voltage side of communications. Otter Tail states that while it does not currently propose any company-initiated control projects, incentivizing these smart thermostats will pave the way for supporting additional project services in the future.

Residential Heat Pumps

The Residential Heat Pump project provides rebates to customers for replacing standard efficiency electric systems with higher efficiency heat pump systems or for purchasing higher efficiency systems for new installations. New for this proposed plan are rebates for qualifying Energy Star Air Conditioners, additional rebate for quality installation, and a tune up measure.

The quality installation measure will provide customers with an incentive to select contractors who have attained certifications beyond basic licensing that improves service technician knowledge and expertise, ensuring that equipment is being installed in accordance with manufacture recommendations and best practices in the industry. An example of an accepted certifications includes Heating, Ventilation, and Air Conditioning (HVAC) certifications test by North American Technician Excellence (NATE). The Company plans on working with contractors who do not meet requirements to help locate resources and assist with getting them certified.

The maintenance tune-up measure targets customers with existing air conditioner or heat pump equipment, that is not end of life, to schedule a tune-up of their equipment. The tune-up will include condenser coil cleaning, air filter change, and refrigerant charge measurement. An air flow measurement and correction will be included if not previously done by the homeowner/contractor at the time of equipment installation.

The new tune-up rebate allows for more participation options for existing customers who might not need new equipment. Otter Tail plans to only allow one tune-up rebate per a customer per a location, every 10 years.

Commercial/Industrial

In the Commercial/Industrial sector, Otter Tail proposes to continue its DrivePower, Custom Efficiency Projects, Direct Install, Commercial Heat Pumps, and Commercial Lighting projects. Each of these are discussed individually below.

DrivePower

With the Drive Power project, Otter Tail offers incentives to commercial customers for efficient motor and variable frequency drive installations. The Company proposes to continue offering a prescriptive rebate for VFDs and motors as part of a combined *DrivePower* project. Otter Tail proposes to continue the structure for energy efficient motor incentives with the amount dependent on motor horsepower for motors rated from one to 500 horsepower. Otter Tail proposes to decrease the incentives associated with HVAC or Seasonal Fan AS 15 hp, HVAC or Seasonal Pump ASD 15 hp, Process or Year-round Fan AS 25 hp, and Process or Year-round Fan ASD 30 hp due to increased market saturation and decreased participation.

Custom Energy Efficiency Project

The Custom Energy Efficiency Project is designed to cover energy-saving equipment installations and process changes that are not served by the Company's other prescriptive rebate projects. No changes are proposed for this project.

Direct Install

For participating small to mid-sized commercial customers, Otter Tail proposes to continue it provide free installation of low-cost energy efficiency measures through its new Direct Install project. Measures to be installed include: Cold-beverage vending machine controllers, faucet aerators, pre-rinse spray valves, domestic water heater pipe insulation, and reduced water heater temperature set-points in businesses with electric water heating, LED spot lamps, A-lamps, T8 lamp replacements, and exit sign retrofit kits.

Commercial Heat Pumps

The Commercial Heat Pumps program is similar to the Residential Heat Pumps program., Otter Tail proposes a couple new measures including a quality installation rebate, pre heating domestic hot water, and an air to water heat pump. Rebates for the measures included in the program can be found in Attachment 1 to Staff's DR 1-3. Staff has no objections to the inclusion of the new measures in the upcoming plan.

Commercial Lighting Project

The Commercial Lighting Project includes the previously approved existing lighting retrofit project and new construction lighting. The Company currently offers incentives for efficient LED lighting as part of the Custom Efficiency project. Otter Tail states that providing the incentives through a prescriptive rebate is a more efficient process for both customers and Otter Tail. As a result, the proposed incentive will vary from customer to customer based on individual customer circumstances. Proposed incentives for each measure are included in Attachment 1 to Staff's DR 1-3.

B. ADVERTISING & EDUCATION AND DEVELOPMENT & PLANNING

In addition to direct impact projects, Otter Tail's EEP also includes advertising and education as well as development and planning.

Advertising and Education

Otter Tail states the primary purpose of its Advertising and Education project is educational outreach targeting residential customers, commercial customers, and school-age children across economic groups from within its customer base. The Advertising and Education project includes presenting educational assemblies to students and teachers, providing informational literature, and providing web-based educational information about energy use and energy conservation options. The Company's proposed 2024-2026 EEP also includes the addition of energy assessments for small to midsize businesses.

Educational Assemblies

Otter Tail plans to introduce an engaging classroom program to a maximum of four schools annually. This program aims to explain the scientific principles underlying the efficiency of heat pump technologies. The primary audience for this program comprises eighth-grade students, though schools have the flexibility to include students from adjacent grade levels. The interactive presentation delves into the mechanical and physical concepts related to heat pumps and their efficiency. Additionally, teachers will receive supplementary educational materials. Schools will have the opportunity to register for the presentation on a first-come, first-served basis. To ensure a broader reach and provide more students with this opportunity, eligible schools will follow a three-year rotation system.

General Informational Literature

Otter Tail develops bill inserts and educational materials to support the projects and technologies offered in the EEP.

Internet Based Resources

The online tools and resources developed as part of this project will guide customers to visit www.otpc.com, where they can access a wide range of conservation tips and materials. Furthermore, by the end of 2023, Otter Tail will retire its existing online Energy Feedback tool and the Aclara Home Energy Analyzer platform and introduce a new customer engagement portal called "My Account" as an online energy feedback tool. Through this portal, the company will collaborate with customers to offer energy consumption information through interactive charts and heat maps, which incorporate weather data, energy usage, and billing expenses. Customers will have the ability to interact with this data, enabling them to track the effects of adding new equipment, removing existing equipment, and making lifestyle changes. This detailed information will assist customers in adjusting their usage patterns and reducing their monthly bills.

The Advertising and Education program will, in part, support the integration of energy conservation messaging, offering additional steps that customers can take to achieve their energy savings objectives. Customers who utilize the home profile and energy savings plans within the portal will be considered program participants.

On-site Energy Assessments

Small Commercial Customers who take part in the program will be provided with a complimentary energy evaluation, followed by a report outlining the discovered findings and suggestions. This concise, two-page report will outline the top three to four most cost-effective opportunities for enhancing energy efficiency, tailored to the specific needs of each participant's business. These reports will offer in-depth insights into estimated savings, associated costs, and the expected payback periods for the recommended efficiency measures.

Development and Planning

This portion of Otter Tail's EEP involves analyzing new trends and technologies, conducting EEP-related strategic planning, and EEP-related regulatory coordination and compliance.

2024-2026 BUDGET

Otter Tail proposes an annual budget of \$650,000 each year through 2026. Below is a summary table of the companies proposed budget by year and program.

Table 1. Proposed EEP Budget			
	EEP Budgets		
Program	2024	2025	2026
<i>Residential</i>			
Air Conditioning Control	\$8,250	\$8,250	\$8,250
Home Lighting	\$25,750	\$25,750	\$25,750
Residential Heat Pumps	\$153,000	\$153,000	\$153,000
Smart Thermostats	\$8,000	\$8,000	\$8,000
Total Residential	\$195,000	\$195,000	\$195,000
<i>Commercial</i>			
Drive Power	\$80,000	\$80,000	\$80,000
Custom Efficiency Grants	\$59,000	\$59,000	\$59,000
Commercial Direct Install	\$13,000	\$13,000	\$13,000
Commercial Heat Pumps	\$132,000	\$132,000	\$132,000
Commercial Lighting	\$115,000	\$115,000	\$115,000
Total Commercial	\$399,000	\$399,000	\$399,000
Advertising and Education	\$41,000	\$41,000	\$41,000
EEP Development	\$15,000	\$15,000	\$15,000
Total All Programs	\$650,000	\$650,000	\$650,000

Staff has no concerns regarding Otter Tail’s proposed budget for the 2024-2026 EEP and it appears to be consistent with previous years budgets.

2024-2026 BENEFIT/COST TESTS

Staff reviewed the Company’s cost effectiveness test results associated with the proposed 2024-2026 EEP. The test primarily relied upon for Staff’s review is the Total Resource Cost (TRC) test. Table 2 below provided Otter Tail’s forecasted TRC scores for the 2024-2026 EEP. As shown, Otter Tail expects all programs to be cost effective, with TRC scores greater than 1.0.

Table 2. Total Resource Cost Test			
Program	2024	2025	2026
<i>Residential</i>			
Air Conditioning Control	8.95	9.33	9.75
Home Lighting	1.14	1.13	1.14
Residential Heat Pumps	1.37	1.37	1.37
Smart Thermostats	1.74	1.73	1.75
Total Residential	1.48	1.48	1.49
<i>Commercial</i>			
Drive Power	2.23	2.22	2.23
Custom Efficiency Grants	1.20	1.20	1.20
Commercial Direct Install	1.92	1.90	1.91
Commercial Heat Pumps	1.21	1.20	1.21
Commercial Lighting	2.81	2.80	2.81
Total Commercial	2.06	2.05	2.06
Total All Direct Impact Programs	1.89	1.88	1.89

2024-2026 EEP FINANCIAL INCENTIVE

Otter Tail proposes to continue the fixed percentage incentive of 30 percent of actual EEP expenses, capped at 30 percent of the proposed budget. The cap for the 2024-2026 EEP as proposed is \$195,000 for 2024-2026. Staff has no concerns with continuing the current financial incentive.

2024-2026 EEP MEASURE REBATES/INCENTIVE AMOUNT

During the most recent Triennial Plan Approval in Docket EL20-022, the Commission ordered that all changes in rebate amounts be approved by the Commission. Rebates and incentives amount for the measures included in the EEP can be found on Attachment 1 of DR 1-3. Staff has no objections with the proposed incentives being offered by Otter Tail for this upcoming EEP.

SUMMARY AND RECOMMENDATION

Otter proposes implementing and launching these updated projects on January 1, 2024. Otter Tail will file a review of the plans performance every year by May 1st the following year. At that time, the Commission and Staff will have an opportunity to review the plans performance to ensure South Dakota customers are benefiting from the program.

Staff recommends the Commission approve Otter Tail's proposed 2024-2026 EEP as well as the proposed changes to the measure incentives, subject to the conditions that the fixed percentage incentive shall be calculated as 30 percent of actual expenses, with a cap set at 30 percent of the approved budget and actual spending shall not exceed 10 percent above the approved budget, unless approved by the Commission.