

**TO:** COMMISSIONERS AND ADVISORS  
**FROM:** LORENA REICHERT AND AMANDA REISS (STAFF)  
**SUBJECT:** EL18-022 STAFF RECOMMENDATION  
**DATE:** JUNE 19, 2018

STAFF MEMORANDUM

**OVERVIEW**

With this filing, Otter Tail Power (OTP) submitted its Energy Efficiency Plan (EEP) results for the 2017 calendar year. Further, the company requests approval of a \$134,700 financial incentive for 2017 and supports this request with its 2017 EEP status report and other supporting documentation and tables. The company also requests the commission approve the updated Energy Efficiency Adjustment Factor of \$0.00155/kWh.

**DISCUSSION**

2017 Budget vs. Actuals

Results for the 2017 EEP budgets to actuals are provided in the tables below. Tables 1 and 2 show the results for the residential programs and commercial programs. Actual spending for the residential programs was 75 percent of the approved budget and was 114 percent of the approved budget for commercial programs. Notably, the commercial lighting program was \$90,741 over budget. The overspend in the commercial lighting program was partially offset with a \$18,523 underspend in the residential programs and an \$44,906 underspend in the remaining commercial programs.

<b>Table 1. 2017 Residential Program Budget</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
AC Control	\$ 14,000	\$ 9,326	67%
Air Source Heat Pumps	\$ 20,000	\$ 20,086	100%
Geothermal Heat Pumps	\$ 30,000	\$ 12,408	41%
Lighting	\$ 11,000	\$ 14,652	133%
<b>Total Residential</b>	<b>\$ 75,000</b>	<b>\$ 56,472</b>	<b>75%</b>

<b>Table 2. 2017 Commercial Program Budget</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
Air Source Heat Pumps	\$ 18,000	\$ 4,163	23%
Custom Efficiency Projects	\$ 40,000	\$ 60,171	150%
Drive Power	\$ 79,000	\$ 78,878	100%
Geothermal Heat Pumps	\$ 73,000	\$ 21,882	30%
Lighting	\$ 127,000	\$ 217,741	171%
<b>Total Commercial</b>	<b>\$ 337,000</b>	<b>\$ 382,835</b>	<b>114%</b>

Table 3 shows the results for the entire EEP. Overall, the EEP came in slightly over budget; however, it should be noted that actual expenses remained within the maximum spending cap set at 110% of budget.<sup>1</sup>

<b>Table 3. 2017 Total EEP Budget</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
Total Residential	\$ 75,000	\$ 56,472	75%
Total Commercial	\$ 337,000	\$ 382,835	114%
Advertising and Education	\$ 12,000	\$ 11,937	99%
EEP Development	\$ 25,000	\$ 12,114	48%
<b>Total EEP</b>	<b>\$ 449,000</b>	<b>\$ 463,358</b>	<b>103%</b>

### 2017 Energy Savings

Table 4 provides the energy savings OTP's EEP produced in 2017. Overall, the EEP achieved energy savings of 4,941,830 kWh for the year. This was 130% of the energy savings planned to be achieved for the year. Driving the energy savings achieved in 2017 were the Residential Lighting and Commercial Lighting programs and the Commercial Custom Efficiency Projects.

<b>Table 4. 2017 EEP Energy Savings (kWh)</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
Res - AC Control	18,328	19,537	107%
Res - Air Source Heat Pumps	298,204	310,718	104%
Res - Geothermal Heat Pumps	321,779	153,739	48%
Res - Lighting	33,209	130,948	394%
<b>Total Residential</b>	<b>671,520</b>	<b>614,942</b>	<b>92%</b>
Com - Air Source Heat Pumps	291,112	57,504	20%
Com - Custom Efficiency Projects	130,729	1,277,412	977%
Com - Drive Power	1,013,339	622,586	61%
Com - Geothermal Heat Pumps	730,265	249,507	34%
Com - Lighting	957,826	2,119,879	221%
<b>Total Commercial</b>	<b>3,123,271</b>	<b>4,326,888</b>	<b>139%</b>
Advertising and Education	-	-	-
EEP Development	-	-	-
<b>Total EEP</b>	<b>3,794,791</b>	<b>4,941,830</b>	<b>130%</b>

<sup>1</sup> See Order Approving South Dakota Energy Efficiency Plan for 2017-19: Docket EL16-020

## 2017 Benefit/Cost Tests

Table 5 provides the results from the 2017 benefit-cost test results. All programs passed the Total Resource Cost (TRC) test during the year. The total TRC test for the EEP was 3.62.

<b>Table 5. 2017 Benefit Cost Tests</b>					
<b>Program</b>	<b>TRC</b>	<b>RIM</b>	<b>PART</b>	<b>UTIL</b>	<b>SOC</b>
Res - Air Source Heat Pumps	1.49	0.58	4.38	8.47	2.39
Res - Geothermal Heat Pumps	1.26	0.78	2.65	9.25	1.99
Res - Lighting	4.43	0.50	23.17	4.02	6.59
Res - AC Control	5.41	4.66	-	5.41	5.41
<b>Total Residential</b>	<b>1.73</b>	<b>0.69</b>	<b>4.31</b>	<b>6.98</b>	<b>2.60</b>
Com - Custom Efficiency Projects	5.15	0.92	5.85	11.39	6.67
Com - Motors	2.00	0.78	2.85	4.37	2.98
Com - Lighting	10.82	0.87	17.80	5.84	16.17
Com - Air Source Heat Pumps	1.20	0.58	2.30	6.42	1.79
Com - Geothermal Heat Pumps	1.68	0.92	1.95	8.67	2.47
<b>Total Commercial</b>	<b>4.52</b>	<b>0.87</b>	<b>5.91</b>	<b>6.57</b>	<b>6.49</b>
Advertising and Education	-	-	-	-	-
EEP Development	-	-	-	-	-
<b>Total EEP</b>	<b>3.62</b>	<b>0.83</b>	<b>5.45</b>	<b>6.28</b>	<b>5.22</b>

## 2017 Financial Incentive

Otter Tail is awarded a financial incentive in order to compensate the company for lost revenues associated with energy savings derived from the EEP. The financial incentive is the lesser of: 1) 30% of the approved budget, or, 2) 30% of the actual spending. For 2017, 30% of the approved budget equaled \$134,700 and 30% of actual spending equaled \$139,007. Given this, OTP is requesting approval of \$134,700, which is the lesser amount.

## Energy Efficiency Adjustment Factor

Otter Tail requests that the Commission approve an increase to the Energy Efficiency Adjustment Factor from the current rate of \$0.00138/kWh to a new rate of \$0.00155/kWh. Table 6 provides the breakdown of the proposed rate. Table 7 provides the estimated monthly bill impact for a typical customer's utility bill from the Energy Efficiency Adjustment Factor.

<b>Description</b>	<b>Amount</b>	<b>Rate Impact</b>
Tracker Account Under Recovery <sup>1</sup>	\$ 55,977	\$ 0.00014
2017 Financial Incentive	\$ 134,700	\$ 0.00032
Remainder of 2018 EEP Budget <sup>2</sup>	\$ 108,448	\$ 0.00026
Forecasted 2019 EEP Expenses <sup>3</sup>	\$ 340,551	\$ 0.00082
Forecasted Carrying Costs	\$ 4,239	\$ 0.00001
<b>Total</b>	<b>\$ 643,915</b>	<b>\$ 0.00155</b>

1) Forecasted at end of June 30, 2018

2) 2018 budget was approved by the Commission in Docket EL16-020. The dollars reflected here are OTP's forecasted spending for the remainder of the 2018 budget.

3) 2019 budget was approved by the Commission in Docket EL16-020. The dollars reflected here are OTP's forecasted spending through June 30, 2019.

<b>Rate Class</b>	<b>2017 EEA Factor</b>	<b>Proposed EEA Factor</b>	<b>Difference</b>	<b>Average kWh/Bill</b>	<b>Estimated Monthly Bill Impact</b>
Residential	0.00138	0.00155	0.00017	927	\$0.16
Farm	0.00138	0.00155	0.00017	1730	\$0.29
General Service	0.00138	0.00155	0.00017	2604	\$0.44
Large General Service	0.00138	0.00155	0.00017	274707	\$46.70
Irrigation	0.00138	0.00155	0.00017	2036	\$0.35
Outdoor Lighting	0.00138	0.00155	0.00017	79	\$0.01
Municipal Pumping	0.00138	0.00155	0.00017	2870	\$0.49
Water Heating Control	0.00138	0.00155	0.00017	198	\$0.03
Interruptible Load	0.00138	0.00155	0.00017	1777	\$0.30
Deferred Load	0.00138	0.00155	0.00017	2159	\$0.37

## **STAFF RECOMMENDATION**

Staff makes the following recommendations:

- 1) Staff agrees with Otter Tail's calculation of the financial incentive and recommends that the commission approve a 2017 financial incentive of \$134,700;
- 2) Staff recommends the Commission approve the 2017 Energy Efficiency Plan Status Report; and
- 3) Staff recommends the Commission approve the proposed Energy Efficiency Adjustment Factor of \$0.00155/kWh with an effective date of July 1, 2018.