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**STAFF MEMORANDUM**

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**TO:** COMMISSIONERS AND ADVISORS  
**FROM:** JOSEPH REZAC AND LOGAN SCHAEFBAUER  
**RE:** EL24-017 - In the Matter of Otter Tail Power Company’s 2023 South Dakota Energy Efficiency Plan Status Report and 2024 Annual Filing to Update the Energy Efficiency Adjustment Rider  
**DATE:** June 13, 2024

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**OVERVIEW**

With this filing, Otter Tail Power Company (Otter Tail) submitted its Energy Efficiency Plan (EEP) results for the 2023 calendar year. Further, Otter Tail requests approval of a \$157,500 financial incentive for 2023 and supports this request with its 2023 EEP status report and other supporting documentation and tables. Otter Tail also requests the Energy Efficiency Adjustment Factor be set at \$0.00134/kWh for July 2024 through June 2025.

**DISCUSSION**

2023 Budget vs. Actuals

Results for the 2023 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 84% percent of the approved budget and was 127% percent of the approved budget for the commercial programs. Notably, the residential heat pumps were over budget by \$5,864, the commercial heat pumps were over budget by \$79,663 and the Custom Energy Efficiency Projects were over budget by \$86,652. The overspend in those programs were offset with an underspending in other programs.

<b>Table 1. 2023 Residential Program Budget</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
AC Control	\$ 12,000	\$ 3,258	27%
Home Lighting	\$ 35,000	\$ 28,533	82%
Residential Heat Pumps	\$ 91,000	\$ 96,864	106%
Smart Thermostats	\$ 17,000	\$ 1,947	11%
<b>Total Residential</b>	<b>\$ 155,000</b>	<b>\$ 130,602</b>	<b>84%</b>

<b>Table 2. 2023 Commercial Program Budget</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
Direct Install	\$ 26,000	\$ 7,739	30%
Commercial Heat Pumps	\$ 45,000	\$ 124,663	277%
Commercial Lighting	\$ 110,000	\$ 94,189	86%
Custom Energy Efficiency Projects	\$ 42,000	\$ 128,652	306%
Drive Power	\$ 69,000	\$ 15,175	22%
<b>Total Commercial</b>	<b>\$ 292,000</b>	<b>\$ 370,418</b>	<b>127%</b>

Table 3 shows the results for the entire EEP. Overall, the EEP came in slightly over budget; it should be noted that actual expenses remained within the maximum spending cap set at 110% of the budget.<sup>1</sup> Otter Tail continues to put forth an overall cost-effective effort for program participants and its customers.

<b>Table 3. 2023 Total EEP Budget</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
Total Residential	\$ 155,000	\$ 130,602	84%
Total Commercial	\$ 292,000	\$ 370,418	127%
Advertising and Education	\$ 35,000	\$ 31,872	91%
EEP Development	\$ 15,000	\$ 14,788	99%
<b>Total EEP</b>	<b>\$ 525,000</b>	<b>\$ 547,680</b>	<b>104%</b>

### 2023 Energy Savings

Table 4 provides the energy savings Otter Tail's EEP produced in 2023. Overall, the EEP achieved energy savings of 6,646,955 kWh for the year. This was 142% of the energy savings planned to be achieved for the year. Driving the energy savings achieved in 2023 were the Residential Air Source Heat Pumps, Commercial Lighting, and Commercial Custom Energy Efficiency Projects.

<sup>1</sup> See Order Approving South Dakota Energy Efficiency Plan for 2021-2023: Docket EL20-022

<b>Table 4. 2023 EEP Energy Savings (kWh)</b>			
<b>Program</b>	<b>B</b>	<b>A</b>	<b>V</b>
Res - AC Control	9,006	8,286	92%
Res - Appliance Recycling	97,307	-	-
Res - Home Lighting	295,269	263,248	89%
Res - Heat Pumps	384,572	856,660	223%
Res - Smart Thermostats	48,020	10,711	22%
<b>Total Residential</b>	<b>834,174</b>	<b>1,138,905</b>	<b>137%</b>
Com - Direct Install	243,985	86,778	36%
Com - Heat Pumps	223,355	696,550	312%
Com - Lighting	1,159,616	1,593,921	137%
Com - Custom Energy Efficiency Projects	604,106	2,965,301	491%
Com - Drive Power	1,604,366	165,500	10%
<b>Total Commercial</b>	<b>3,835,428</b>	<b>5,508,050</b>	<b>144%</b>
Advertising and Education	-	-	-
EEP Development	-	-	-
<b>Total EEP</b>	<b>4,669,602</b>	<b>6,646,955</b>	<b>142%</b>

### 2023 Benefit/Cost Tests

Table 5 provides the results from the 2023 benefit-cost test results. All programs with the exception of the Commercial Heat Pump measure passed the Total Resource Cost (TRC) test during the year. The total TRC test for the EEP was 1.79. Staff inquired about the low TRC associated with the Commercial Heat Pumps measure and why it was much lower from the reported TRC of 2.92 recorded in 2022.

In Otter Tail's response to Staff DR 1-1, the company went into detail on the reasons why the TRC is lower than what was seen in last year's report. Staff was also curious if the TRC would continue to be below the 1.0 mark in the future. Based on Otter Tail's response and explanation provided in DR 1-1, Staff is not inclined to advocate for changes to the Commercial Heat pump program at this time. Otter Tail's 2024-2026 Triennial Plan was approved in EL23-019 and with that plan came updates to the costs, benefits, and other assumptions. The TRC to the Commercial Heat Pumps would be a much more satisfactory 1.14 if those updated costs were applied to the 2023 results. Staff would refer to Staff DR 1-1 for additional details provided by Otter Tail and how the costs and benefits were calculated for the Commercial Heat Pump Measure. Otter Tail believes this year's program results to be an anomaly.

<b>Table 5. 2023 Benefit Cost Tests</b>					
<b>Program</b>	<b>TRC</b>	<b>RIM</b>	<b>PART</b>	<b>UTIL</b>	<b>SOC</b>
Res - AC Control	4.88	3.87	inf.	4.88	4.88
Res - Appliance Recycling	-	-	-	-	-
Res - Home Lighting	1.62	0.56	4.02	5.56	2.17
Res - Heat Pumps	1.67	0.56	3.85	5.62	2.30
Res - Smart Thermostats	1.47	0.40	5.91	1.97	1.75
<b>Total Residential</b>	<b>1.68</b>	<b>0.57</b>	<b>3.89</b>	<b>5.54</b>	<b>2.29</b>
Com - Direct Install	4.41	0.82	inf.	6.42	3.45
Com - Heat Pumps	0.78	0.58	5.20	2.95	3.80
Com - Lighting	8.05	0.83	11.63	9.58	10.38
Com - Custom Energy Efficiency Projects	1.80	1.09	1.65	12.95	2.34
Com - Drive Power	2.66	0.82	3.65	6.42	3.45
<b>Total Commercial</b>	<b>1.87</b>	<b>0.93</b>	<b>2.05</b>	<b>8.52</b>	<b>2.44</b>
Advertising and Education	-	-	-	-	-
EEP Development	-	-	-	-	-
<b>Total EEP</b>	<b>1.79</b>	<b>0.82</b>	<b>2.42</b>	<b>7.08</b>	<b>2.36</b>

### 2023 Financial Incentive

Otter Tail is awarded a financial incentive in order to compensate Otter Tail 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 2023, 30% of the approved budget is \$157,500 and 30% of actual spending equaled \$164,304. Therefore, Otter Tail is requesting approval for the lesser amount of \$157,500.

### Energy Efficiency Adjustment Factor

Otter Tail requests the Energy Efficiency Adjustment Factor be lowered to \$0.00134/kWh for July 2024 through June 2025. Table 6 provides the estimated monthly bill impact for a typical customer's bill as a result of the proposed lower Energy Efficiency Adjustment Factor.

<b>Table 6. 2024-25 Estimated Monthly Bill Decrease from Current Rates</b>					
<b>Rate Class</b>	<b>Current EEA Factor</b>	<b>Calculated EEA Factor</b>	<b>Difference</b>	<b>Average kWh/Bill</b>	<b>Estimated Monthly Bill Impact</b>
Residential	0.00160	0.00134	-0.00026	927	(\$0.24)
Farm	0.00160	0.00134	-0.00026	1,730	(\$0.45)
General Service	0.00160	0.00134	-0.00026	2,604	(\$0.68)
Large General Service	0.00160	0.00134	-0.00026	274,707	(\$71.42)
Irrigation	0.00160	0.00134	-0.00026	2,036	(\$0.53)
Outdoor Lighting	0.00160	0.00134	-0.00026	79	(\$0.02)
Municipal Pumping	0.00160	0.00134	-0.00026	2,870	(\$0.75)
Water Heating Control	0.00160	0.00134	-0.00026	198	(\$0.05)
Interruptible Load	0.00160	0.00134	-0.00026	1,777	(\$0.46)
Deferred Load	0.00160	0.00134	-0.00026	2,159	(\$0.56)

1) Otter Tail proposes the rate be lowered to \$0.00134

## 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 2023 financial incentive of \$157,500;
- 2) Staff recommends the Commission approve the 2023 Energy Efficiency Plan Status Report; and
- 3) Staff recommends the Commission approve Otter Tails request for an Energy Efficiency Adjustment Factor of \$0.00134/kWh for July 2024 through June 2025.