

OTTER TAIL POWER COMPANY

Docket No: EL24-017

Response to: SD Public Utilities Commission

Analyst: Joseph Rezac

Date Received: May 23, 2024

Date Due: June 06, 2024

Date of Response: June 04, 2024

Responding Witness: Jason A. Grenier, Manager Retail Energy Solutions - (218) 739-8639

Data Request:

In looking at the TRC from 2022 to 2023 we see a sharp decrease from 2.92 to 0.78 despite participation and demand/energy savings appearing strong. Did something change when it comes to the costs side of the measure? Is the cost change only appearing in the commercial heat pump vs the residential heat pump? And if so, why is that?

Attachments: 0

Response:

The decrease in the Commercial Heat Pump TRC is driven by the participant costs. Twenty-five out of thirty-seven heat pumps were geothermal heat pumps which have a significantly higher incremental cost to the participant. The residential program does not have the same issue, only three out of the 50 heat pumps in 2023 were geothermal heat pumps. 2022 participation in the Residential or Commercial programs did not include a single geothermal heat pump.

The incremental cost used for geothermal heat pumps (\$22,300) was filed and approved years ago in the 2021-2023 Triennial Plan filed in 2020. In our 2024-2026 Triennial Plan, filed last summer, we reevaluated the participant costs of various technologies including geothermal heat pumps. The current 2024 incremental cost for a geothermal heat pump is \$14,508. Utilizing this value with 2023 results, the TRC is 1.14.

The Company views this year's program results as an anomaly. The 25 geothermal heat pumps are associated with a single school district and does not directly reflect future program participation. Understanding this irregularity in participation along with updated inputs approved in the 2024-2026 Triennial Plan, we believe the program will see increased TRC results in upcoming years.

Below are the 2023 results compared to the 2022 results, to illustrate that the participant costs are what is really driving the decrease in net benefits which results in the lower TRC Score. Also included below are the Commercial Heat Pump Program results utilizing the 2024 incremental cost of \$14,508.

Table 1: 2023 Incremental Participant Costs

	Participants	Incremental Cost	Total Participant Cost
2023 Commercial Participation			
SD Comm Cold Climate Heat Pump Ducted	7	\$ 3,440	\$ 24,080
SD Comm Cold Climate Heat Pump Ductless	5	\$ 3,440	\$ 17,200
SD Comm Geothermal Heat Pump	25	\$ 22,300	\$ 557,500
Total	37		\$ 598,780

Table 2: 2023 TRC Results

TRC Test	
Avoided Electric Production	\$367,421.40
Avoided Electric Production Adders	\$0.00
Avoided Electric Capacity	\$68,917.36
Avoided Electric T&D	\$48,004.18
Avoided Electric Ancillary	\$0.00
Avoided Gas Production	\$0.00
Avoided Gas Capacity	\$0.00
Total	\$484,342.93
Administration Costs	\$1,919.98
Implementation / Participation Costs	\$19,168.10
Other / Miscellaneous Costs	\$0.00
Incentives	\$0.00
Total	\$21,088.08
Reduced Arrears	\$0.00
Participant or Unit Costs (Net)	\$598,780.00
Participant or Unit Tax Credits (Net)	\$0.00
Environmental Benefits	\$0.00
Other Benefits	\$0.00
Total	\$0.00
Test Results	0.78

Table 3: 2022 Incremental Participant Costs

2022 Commercial Participation	Participants	Incremental Cost	Total Participant Cost
SD Comm Cold Climate Heat Pump Ducted	22	\$ 3,440.00	\$ 75,680.00
SD Comm Cold Climate Heat Pump Ductless	11	\$ 3,440.00	\$ 37,840.00
Total	33		\$ 113,520

Table 4: 2022 TRC Results

TRC Test	
Avoided Electric Production	\$279,880.82
Avoided Electric Production Adders	\$0.00
Avoided Electric Capacity	\$54,250.46
Avoided Electric T&D	\$12,333.97
Avoided Electric Ancillary	\$0.00
Avoided Gas Production	\$0.00
Avoided Gas Capacity	\$0.00
Total	\$346,465.26
Administration Costs	\$190.00
Implementation / Participation Costs	\$5,073.68
Other / Miscellaneous Costs	\$0.00
Incentives	\$0.00
Total	\$5,263.68
Reduced Arrears	\$0.00
Participant or Unit Costs (Net)	\$113,520.00
Participant or Unit Tax Credits (Net)	\$0.00
Environmental Benefits	\$0.00
Other Benefits	\$0.00
Total	\$0.00
Test Results	2.92

Table 5: 2023 TRC Results with 2024 Participant Costs

TRC Test	Value
Avoided Electric Production	\$367,421.40
Avoided Electric Production Adders	\$0.00
Avoided Electric Capacity	\$68,917.36
Avoided Electric T&D	\$48,004.18
Avoided Electric Ancillary	\$0.00
Avoided Gas Production	\$0.00
Avoided Gas Capacity	\$0.00
Total	\$484,342.93
Administration Costs	\$1,919.98
Implementation / Participation Costs	\$19,168.10
Other / Miscellaneous Costs	\$0.00
Incentives	\$0.00
Total	\$21,088.08
Reduced Arrears	\$0.00
Participant or Unit Costs (Net)	\$403,980.00
Participant or Unit Tax Credits (Net)	\$0.00
Environmental Benefits	\$0.00
Other Benefits	\$0.00
Total	\$0.00
Test Results	1.14
DIM Test	