

OTTER TAIL POWER COMPANY

Docket No: EL25-021

Response to: SD Public Utilities Commission

Analyst: Pat Steffensen

Date Received: May 27, 2025

Date Due: June 10, 2025

Date of Response: May 30, 2025

Responding Witness: Cristina Zuniga, Supervisor, DSM Administration - 218-739-8240

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Data Request:

Provide additional information regarding the 2024 Custom Energy Efficiency Program. Outline what type of measures and equipment were installed and how the corresponding energy and demand savings were derived.

Attachments: 0

Response:

The Custom Energy Efficiency Program included one project in 2024. The project included the installation of four rooftop cooling units on a nursing home facility. The project consisted of three 20-ton units and one 5-ton unit and produced annual energy savings of 12,521 kWh and 20.43 kW in summer peak demand savings.<sup>1</sup> These savings numbers were derived by a third-party engineering firm utilizing the Minnesota Technical Reference Manual version 4.0 guidelines.

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<sup>1</sup> Not including line-loss.

## Measure Description

This measure includes installation of electric DX packaged, split, and condensing units, and PTACs in replacement and new construction applications. This measure analyzes the cooling savings potential of the installation of higher efficiency air-conditioning equipment. This measure is applicable to DX cooling only, DX cooling and electric heat, and DX cooling and gas heat units. The incremental cost is associated with base equipment cost and does not include any installation costs.

## Algorithms

***For packaged, split units less than or equal to 5.4 tons, and PTAC units:***

Unit kWh Savings per Year = Size x (12/SEER\_base - 12/SEER\_EE) x EFLH\_cool

***For packages and split units greater than 5.4 tons:***

Unit kWh Savings per Year = Size x (12/IEER\_base - 12/IEER\_EE) x EFLH\_cool

Unit Peak kW Savings = Size x (12/EER\_base - 12/EER\_EE) x CF

### 3 units less than 5.4 tons

QTY	1
Tonnage	5
Existing unit EER	7.9
Existing unit SEER	9
Proposed unit EER	11
Proposed unit SEER	13
EFLHcool	663
CF	0.9
Inc cost (\$/ton)	165
<b>kW Savings</b>	<b>1.95</b>
<b>kWh Savings</b>	<b>1,360.00</b>

### 1 unit greater than 5.4 tons

QTY	3
Tonnage	20
Existing unit EER	9.8
Existing unit IEER	11.4
Proposed unit EER	13.6
Proposed unit IEER	15.54
EFLHcool	663
CF	0.9
Inc cost (\$/ton)	125
<b>kW Savings</b>	<b>18.48</b>
<b>kWh Savings</b>	<b>11,161.18</b>