

OTTER TAIL POWER COMPANY  
Docket No: EL20-016

Response to: South Dakota Public Utilities Commission  
Analyst: Staff  
Date Received: May 18, 2020  
Date Due: June 01, 2020  
Date of Response: June 01, 2020  
Responding Witness: Jason A. Grenier, Manager Market Planning - (218) 739-8639

---

Data Request:

Explain why Geothermal Heat Pumps (C) has continued to decrease to no participation in 2019. What is OTP doing to increase participation in 2020?

Attachments: 0

Response:

Otter Tail appreciates the concern from South Dakota Public Utilities Commission staff regarding participation in Otter Tails commercial Geothermal Heat Pumps program.

Otter Tail attributes the difference between actual and proposed results in participation and expenses to a few key observations made.

1. High capital requirements

Ground source heat pump systems have a higher upfront initial cost compared to competing systems. This results in installers having a difficult time being competitive from a payback standpoint for many customers.

2. Air Source Heat Pump performance

As stated in the residential comments air source heat pumps that operate at lower temperatures, some down to 0° F, provides commercial customers with a very efficient heating system that is competitive with ground source heat pump options. A lower initial cost is another major driving factor.

3. Timeline of Commercial construction

With Otter Tails other programs, it has been observed that commercial participation does come in a up and down fashion. This is often the result of larger projects taking time to design, budget

and implement. Past geothermal projects completed with customers have often taken in excess of over a year from first contact of potential projects.

#### 4. Rebate Amounts

Otter Tail has been offering identical rebates between air source and geothermal heat pump programs in the South Dakota service area. This could be affecting participation in the geothermal heat pump program and is something that is being continuously monitored and programs rebate amounts being reevaluated to continue to provide high incentives for energy efficiency.

Similar to its Geothermal Heat Pump residential program, Otter Tail is continuing to perform the items described in its response to SD-PUC-01.08. Otter Tail has also been working with a Minnesota company to add advanced equipment that will further reduce the area needed and overall cost of a geothermal heat pump loop field. These activities by Otter Tail will continue to provide information and support to customers that will result in the selection of the most efficient and cost-effective technologies available.