

Geothermal Case Study

Name	Joe
Address	Franklinville
Sq Footage	2,700
Loop Field	Horizontal
2023 Savings	\$3,084.37
Payback Period	6.3 years



Reason for Considering Geo:

Energy efficiency, environment, aversion to gas, and wanted to remove oil since vent was under kitchen window and they were dependent on oil deliveries.

Previous Heating Source Data:

Type: Heating Oil

Annual Usage: 675 gallons

Cost (@ \$5.19/gallon): \$3,503.25

2023 Geothermal Heating Data:

Type: Electric

Annual Usage: 2,618 kWh

Cost (@ \$0.16/kWh): \$418.88

System Details & Savings Calculation:

System Cost (pre-incentives): **\$41,500**

System Cost (post-incentives): **\$19,438.50**

Savings: \$3,503.25 - \$418.88 = **\$3,084.37**

Payback Period: **\$19,438.50/\$3,084.37** = 6.3 years

Notes:

If Joe had stayed on heating oil, his cost to heat his home this year would've been around \$3,500 (675 gallons of heating oil). With his geothermal system, he was able to heat his home for an electric cost of approximately \$418.88 (2,618 kWh). If heating oil **does not** increase in price, he would recoup his investment in less than 6 years. Considering that the price of heating oil will likely rise faster than the price of electricity, his payback period is potentially even **less** than 6 years. Joe has hydronic heating (baseboard radiators) and therefore no air conditioning.