

## From Oil to Geothermal

Willington, CT



### Project Description

Prior to geothermal, this home had an oversized oil boiler for heat and hot water, using around 700 gallons of oil per year, two a/c units, and two air handlers, contributing to roughly 8,000 kWh of electricity use. Between rebates and tax credits, installing geothermal was roughly the same cost as replacing the previous system setup, and now, among other benefits, they no longer need to worry about watching the oil tank levels or yearly cleanings. Other benefits noted by the homeowner include experiencing a warmer house in the winter and cooler house in the summer; being able to watch TV in their finished basement, as there's no longer a loud oil boiler turning off and on; and cost-savings on utility expenses. As an added perk, the solar array that was installed prior to deciding to install geothermal covers about two-thirds of the energy usage with geothermal.

### Installation Details:




With a 600 sq. ft. finished basement in addition to the 2,400 sq. ft. home, this cape cod-style home is kept at 68°F in the winter and 75°F in the summer. Power usage with geothermal is expected to be 11,500 kWh. Prior to geothermal, electric usage was 8,000 kWh, as the heating system was powered by fossil fuel instead of electricity. This is a net increase of around \$1,000 per year, but that replaces the approximate \$2,000 oil bill. Had geothermal been installed before the solar array, the homeowner would have gone with a larger solar system to cover the electric load. The homeowner describes their insulation and tightness as above average.

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## PROJECT DETAILS

<b>Building Size:</b>	2,400 sq. ft.
<b>Loop Type:</b>	Vertical
<b>Geothermal Equipment:</b>	Hydron Module 4-ton YT (with two 300 ft. geothermal wells)
<b>Solar Equipment:</b>	21 roof mount panels. System size of 7.35 kW
<b>Contractor / Installer:</b>	Geothermal Installer – <b>King Energy</b> Solar Installer – <b>Earthlight Technologies</b>
<b>Savings:</b>	\$1,000 - \$1,500 per year when compared to their previous system, with the homeowner noting the possibility for more if oil prices continue to rise

-  CONSTRUCTION TYPE  
**Existing Home**
-  LOOP TYPE  
**Vertical**
-  APPLICATION TYPE  
**Forced Air System**
-  APPLICATION TYPE  
**Domestic Water Heating**

*“Overall, we’ve been very happy with our choice and would do it again without a doubt.”*

—Homeowner

