



Ground Source Heat Pump

CASE STUDY

Holton Family
New Milford, CT

BACKGROUND

Whether it's lawn care, painting, appliance or plumbing repairs, or HVAC inefficiencies, making investments in one's home is never ending – and for the Holton family of New Milford, Connecticut, it's no different.

Elizabeth and James Holton purchased their two-story colonial home in 2019 to accommodate their growing family. The Holtons soon realized that while their home was of newer construction, built in 2002, it still suffered from heating and cooling issues. Typical of colonial-style homes, the second floor always seemed to be hotter or colder than the rest of the house.

James, who works in the energy efficiency industry, sought out a sustainable and efficient solution to resolve the issue.

After doing some research and crunching numbers, the budget-conscious couple realized that installing a ground source heat pump would cost about as much as their oil bills, solve their heating and cooling issues, and in the long run, save them money on their energy expenses.

The Holtons then searched for contractors that provided this service in their area, and found Dandelion Energy, an Eversource-approved contractor in the Energize ConnecticutSM Heat Pump Installer Network.

HIGHLIGHTS

- » Incentive: \$7,500
- » Square feet electrified: 2,148
- » Estimated CO₂ lifetime reduction: 528 metric tons
(equivalent to removing 17 gas-powered cars from the road)



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GOAL

The Holtons' primary goal was to maintain a consistent temperature throughout the entire house and reduce its heat-loss.

Their secondary, long-term goal is to realize energy and financial savings as a result of the ground source heat pump installation. Previously, the Holtons used around 150 gallons of oil and spent approximately \$300-\$400 per month during the winter months. James and Elizabeth, who is a teacher, anticipate paying off this investment in about 10-15 years, which will allow them to save for other life goals all while being environmentally-friendly.

OUTCOME

The Holtons' home is approximately 2,150 square feet and is situated near a river. During Dandelion Energy's home energy assessment and service, the company recommended a single loop system at a drill depth of 400 feet, along with a five ton AAON brand heat pump.

A typical ground source heat pump retrofit installation can take up to eight weeks. The Holtons began to transition from their oil heating system to the ground source heat pump on January 18 and the installation wrapped up just a few weeks later, by mid-February. The drilling required to install the ground source heat pump system only took two days.

Over the 25-year lifespan of a five ton Dandelion system in Litchfield County, Connecticut, the geothermal system will eliminate 528 tons of carbon that would have been emitted from an oil burning furnace. That's the equivalent to removing 17 gas-powered cars from the road.

The Holtons are now enjoying the benefits of their system, such as:

- The comfort of a house at an even temperature
- Consistent energy costs throughout the year – no longer having to worry about the unpredictability of oil prices
- An extremely efficient, low maintenance, eco-friendly system

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We love our ground source heat pump. Although the total cost of investment for this system is certainly high, the incentives from Eversource, as a Sponsor of Energize ConnecticutSM, help make it more affordable. We tell everyone we know to make the investment – you won't regret it!

- Elizabeth Holton

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The information in this case study is an accurate representation of this customer's experience at the time of publication. Results, including cost savings, from energy efficiency measures can vary based on each individual customer's situation.

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