

# CASE STUDY: New 6,600 Sq. Ft. Bungalow

Clare and Bonnie Brubacher, Elmira, ON



## Situation

Clare and Bonnie Brubacher live in Elmira, a town in the 'Golden Horseshoe' area of southwestern Ontario. They built their house in 2006. Their house measures 6,600 sq. ft., including a main floor and loft, full basement, and three-car garage.

## Challenge

Natural gas was available, and in fact the Brubachers had the gas line brought in from the road for a barbecue and fireplace. But when it came to heating and cooling their house, "I was willing to try something new," Mr. Brubacher says, "and I just liked the whole concept. I was also hoping to save some money." A NextEnergy geothermal system fit the bill perfectly.

## Action

A local NextEnergy dealer was brought in to design and install the geothermal system. Six tons of NextEnergy geothermal equipment was utilized. A Tranquility27™ unit was installed in the basement to provide forced air heating and air conditioning to the 3,200 sq. ft. main floor and loft. Ductwork was also installed in those locations. A Genesis™ Water to Water unit was installed to provide in-floor heating to the 2,600 sq. ft. basement, 800 sq. ft. garage, and hot water for a swimming pool.

Space was tight in the Brubachers' half-acre yard. A horizontal loop consisting of 3,600 ft. of 3/4" polyethylene pipe was buried at a depth of five feet in three U-shaped trenches, one inside of another. The completed loop occupied 120 x 100 ft. in the yard. Ethanol was pumped through the loop to exchange heat between the geothermal units in the basement and the ground.

## Results

The NextEnergy geothermal system handles the complex demands of the installation very efficiently and at low cost. Had the Brubachers opted for gas, their estimated annual heating costs would have been about \$3,200. The geothermal system, on the other hand, should cost approximately \$1,300 a year to operate (including air conditioning), for a savings of 60% annually over the alternative gas furnace.

Mr. Brubacher made a point of mentioning the quality work the NextEnergy dealer performed on his house. He says the geothermal contractor was in regular communication with him and his wife to ensure their system would fulfill all the functions they required.

"I'm happy with the system so far," says Mr. Brubacher. Would he recommend it to others? "For sure."