

HIGHLIGHTS:

Type of Building: Bungalow.

Size of Building:

1,800 square feet with full 1,800 square foot finished basement.

Property Size: 4 acres.

Total Geothermal Capacity Required: 4 nominal tonnes.

GeoSmart Equipment: GeoSmart Premium G with desuperheater.

Ductwork: Upgraded ductwork in mechanical room.

Loop Type: Horizontal ¾" closed loop.

Geothermal Specialist: Advanced Geo-Thermal Systems Inc.

GEOSMART E N E R G Y Given the rural location of Peter's Durksen's 25-year-old, 1,800 square foot bungalow, he didn't have access to natural gas and was tired of paying the rising costs for fuel oil to power his forced air oil-fired furnace and hot water tank.

Keen to find a cost-effective alternative for heating and cooling his country home, a visit to a local trade show and in-depth research on the internet convinced him that geothermal technology would provide him with the economic solution he was looking for.

It was that decision that led him to Jason Grieb, President, Advanced Geo-Thermal Systems Inc. in West Montrose, Ontario.

"Sixteen months ago, I was paying \$1.17 a litre for fuel oil," says Peter. "That economic reality convinced me it was time for a change."

The solution? A Premium G forced air unit equipped with a desuperheater. Jason and his team completely removed everything in Peter's basement mechanical room, including the oil-fired furnace and hot water tank and the hydronic water coil in the ductwork, replacing it with the more compact, aesthetically-pleasing and cost-effective four-tonne geothermal unit. The oil hot water tank was replaced with a 60-gallon electric hot water tank.

The beauty of the desuperheater is its ability to preheat domestic water before it reaches

the hot water tank so that less energy is needed to generate hot water, thereby reducing hot water costs. When the Premium G heat pump is in cooling mode, waste heat is recovered providing Peter and his wife, Erna, with access to free hot water.

"The desuperheater should reduce Peter's hot water costs by about 60 percent," notes Jason.

The geothermal unit was installed using a horizontal closed loop system on Peter's four acre property. Jason and his team used

Peter and Erna Durksen outside their 25-year-old bungalow.



Durksen Family



600 feet of GeoSmart Energy's PE100 $\frac{3}{4}$ " high density geothermal green pipe buried in two trenches, five feet wide, six feet deep and 300 feet long.

Interested in the technology, Peter was a hands-on homeowner throughout the entire process, observing installation of the loop system and geothermal unit every step of the way. "I'm very pleased with the work that Jason and his crew did," says Peter. "They always treated me personably, like I was their most important customer, and I liked that."

Once the installation was complete, one thing that Peter and his wife noticed right away was the uniformity of the temperature throughout their home. They were impressed that the temperature was just as warm at the far ends of their bungalow as it was in the main living area of the home, a far cry from their previous experience heating and cooling with oil.

The other significant difference they experienced was a noticeable reduction in dust. Each Premium G features an electrostatic air filter that effectively eliminates 95 percent of common household pollutants. "It's been doing a really great job of cleaning the air," notes Peter.

While his hydro costs have increased with installation of the geothermal unit, Peter has completely eliminated fuel oil costs, generating a 37 percent savings in the unit's first year of operation.

He and his wife continue to use the wood stove in their basement only because they like the comfort it provides in the winter months, particularly when Erna is sewing down there.

"What's amazing though is that we only went through two cords of wood this past winter, instead of the usual four!"

Happy with the economic solution to his heating and cooling woes, Peter was so pleased

with the outcome that he invited Advanced Geo-Thermal Inc. to place a portable sign on his property promoting the geothermal installation.

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GEOSMARTENERGY.COM 866.310.6690

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Another successful Geothermal Specialist install by:

Advanced Geo-Thermal Systems Inc.

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Jason Grieb and Del Brubacher of Advanced Geo-Thermal Systems.

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