

Monroe's 'Green' contractors keeping busy

By John Sullivan

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Monroe — Skeptics who scowl at the possibility of solar energy panels or windmills popping up in their neighborhoods might be surprised to know that one of the hottest renewable energy-saving devices is already going into the ground around them.

Orders for geothermal heating and cooling systems are exploding in the local home renovation and construction market, despite the housing market slowdown, said two local contractors who are supplying the technology in Orange County.

Using a system of loops, compressors and coils, geothermal devices utilize the earth's natural 50-degree temperature to heat up or cool down homes.

"The minute you put this system in, you're not paying for oil or gas to heat or cool your home anymore," said Paul Auerbach, one of three partners in the Monroe-based venture known as Total Green.

Auerbach launched his firm with Monroe builder Joe Dierna and began to design Total Green's first Geothermal systems after years of research, marketing development and tens of thousands of dollars in startup, he said. The firm, which installs a Freon-based version of the technology, has approval from the New York State Energy and Research Development Authority to offer up to 10 percent rebates to its customers.

Cost of the systems range from \$25,000 for residential projects and up to \$300,000 for commercial projects. Retrofitting homes could cost more for improved insulation or sealing to maximize the system's benefits, Auerbach said.

The system also results in a \$50 increase in electric bills to run monthly. The cost would be recouped, however, in oil or gas bill savings within five years or less for new construction, and between five to seven years for a retrofit, based on current prices for those fuels.

Total Green is already backlogged with orders and is projecting \$1.8 million in sales for the year, all without a cent spent on advertising, Auerbach said. Local contracts include Gold's Gym in Harriman, which is building a new 20,000-square-foot facility on Route 17M, as well as an apple orchard in Ulster County, and numerous builders and homeowners in Orange and Sullivan counties, he said.

Most geothermal heat pump businesses have been in Westchester, Ulster and Dutchess counties until now. Demand for the product, however, has grown with higher energy prices and improvements in technology that have reduced geothermal heat pump prices by as much as 20 percent in three years, Auerbach said.

Gary Corts of Central Valley's Earth and Sun Energy Systems, the only other known Orange County contractor supplying geothermal systems, said he too is witnessing a "boom" in business. Corts offers a water-based version of the technology and is studying to gain NYSERDA certification to offer rebates to his customers, he said. "My opinion is that in the next five years, you won't see homes heated with fossil fuels anymore," he said. "My other opinion is, you'd have to be almost a blithering idiot not to do this."

How geothermal works

Geothermal heating and cooling systems work on the laws of thermodynamics. In the summer, it works very much like an air conditioner. Antifreeze in coils removes heat from inside the home, discharging it into the ground and leaving the inside of your home feeling cool. In winter, the system works backwards, sucking heat out of the ground. How can the ground temperature, which is about 55 degrees Fahrenheit year-round, be enough to heat the inside of a home during winter? Think of the ground less as being 55 degrees warm and more as containing units of energy.

A geothermal heat pump takes that energy, runs it through a compressor that boils a refrigerant to a super-hot temperature, which creates heat or hot water.

Source: Paul Auerbach of Total Green