

Geothermal system is really cool by Beth Dolan

Tampa – You pick up the oddest things in the strangest places. Like the fact that the temperature of the earth in Central Florida, 3 feet below the surface, is a constant 72 degrees F. Now, maybe I heard that years ago, but if I did I sure had forgotten it. But during a tour of the Brittany model on the Street of Dreams in Avila a few weeks ago, Custom Craft Homes' Ernest Lashlee touted the house's geothermal heating and cooling system. He said it is successful, in part, because a portion of the system is buried into the ground. Lashlee touted the comfort as well as the energy efficiency of the system. The day was warm, and inside the air was delightful.

Comfort and efficiency

"There's nothing that even comes close to the efficiency and comfort of the system," says Jay Egg, president of Egg Systems Inc. of Oldsmar, which distributes and installs geothermal systems. Unlike those in standard heating and cooling systems, the compressors for the geothermal units are inside the house. The closed system of pipes that transport recirculated water to cool or heat a home are buried in the yard or on the bottom of a body of water, such as the Intracoastal Waterway or Tampa Bay. "When the temperature is 90 degrees outside and other heat pumps are struggling, or on days when regular pumps (turn) on and off, the geothermal systems provide constant comfort," says Egg. "It's a happy medium ... low enough to help cool and high enough for heating." The inside location of the compressor promotes longevity of the system, reduces outside noise and eliminates maintenance, except for monthly filter changes, Egg says. He's quick to add that the unit still requires refrigerant to operate. "Without that," he says, "the system is not efficient enough to properly heat or cool. It actually works because the recirculating water inside the system pulls heat from the ground to heat the house and returns heat to the ground from inside the house to cool it." Egg's systems have dehumidifiers that aid in drying houses while keeping the temperature within the constant. "They alleviate that cold and clammy feeling you get when you run standard systems, trying to remove the humidity," he says. The geothermal heating and cooling systems, Egg says, have received government backing. "The Environmental Protection Agency and the Department of Energy endorse it as the cleanest and most energy efficient technology available in the world today for air conditioning and heating."

Saving energy and money

According to a 1993 EPA report, "By aggressively promoting these technologies wherever they are cost effective, utilities could save 28 billion kilowatt-hours of electricity and offset the need for 113 typically sized (300 megawatts) electric power plants in the year 2000. They could also reduce annual gas demand by over 825 million therms." And utility companies aren't the only ones that save when geothermal heating and cooling are used. "Any house is a candidate," Egg says, "and any house that has

one installed will see an immediate return on its investment by lower heating and cooling bills.” Homeowners, he says, will generally see a return on the installation cost in under five years. “Tampa Electric Co. also offers \$350 rebate for anyone in their service area who replaces an existing pump with a geothermal heat pump,” he adds. Egg notes that installation of the system takes about a week and that it needn’t disrupt an already perfectly landscaped yard. “Some homeowners don’t mind having their yards ripped up to install the ‘slinky’ type of system, but for a little bit more, you can have a vertical system installed, which will look like a few rows of sprinkler pipe have been installed.” Homeowners who live on the water can use the systems, too. “We have no problems with Swiftmud or the Army Corp of Engineers,” he says, “since we have EPA endorsements, and there’s no consequence to any waterway to have piping on its bottom.” Want to see one in action? You can see geothermal systems in operation at the Brittany model at the Street of Dreams in Avila through Nov. 27 or in Largo at the Architectural Design Center, 8751 Ulmerton Road; (813) 535-0541.