

How Does GeoExchange Technology Work?

Geothermal heating and cooling systems (also known as GeoExchange systems) tap into the constant, moderate temperatures found just a few feet below the surface of the earth, to offer the finest in home comfort conditioning.

The efficiency of a GeoExchange system is based in the fact that it uses a small amount of energy to capture and move a large amount of energy. In a typical home, 70% of the total energy bill goes to heating, cooling and hot water.

As a result, the greatest opportunity to reduce your energy costs is to improve the efficiency of your heating, cooling and hot water system by utilizing this "down to earth" technology. And this energy source is renewable, clean and environmentally friendly.

GeoExchange systems capture this energy from the earth by using a series of pipe (an earth loop) buried in the ground.

During the heating mode, a special fluid circulates through the pipe where heat energy is transferred from the ground (the heat source) to the fluid and then to GeoExchange unit located in the home, providing warm comfort to the structure.

Inside the home, the heat can be

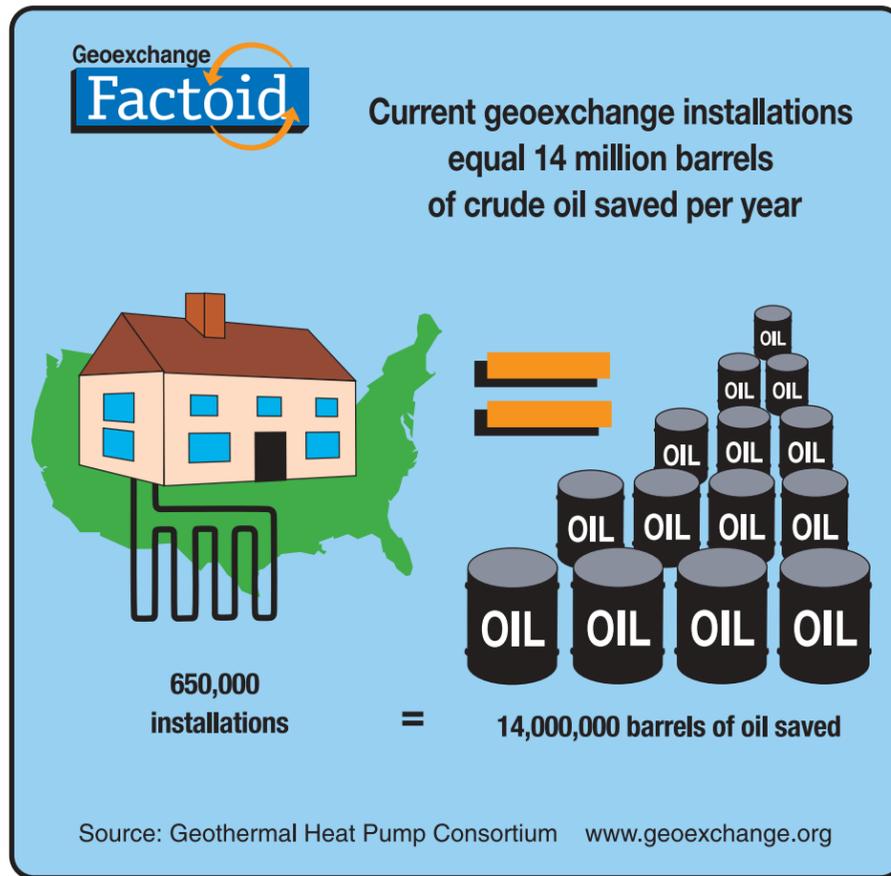
distributed through either a conventional duct system or a hydronic radiant heat system.

To provide air conditioning, the process reverses. Heat is removed from the home and transferred to the loop fluid. As the warm fluid travels

for the home. As a bonus, a GeoExchange unit can provide some or all of your hot water at higher efficiencies, offering additional energy savings.

Using a simple connection to your water heater, the GeoExchange unit will deliver hot water to your water heater during the heating and cooling modes. In fact, the heat removed from your home during cooling is deposited into your water heater providing you with virtually free hot water.

A GeoExchange system can easily be installed in most homes-new or old, large or small. With many sizes, configurations and options available, the system will be designed and installed to provide the homeowner with many years of reduced energy costs, enhanced comfort, safety and reliability-all from a technology that's "down to earth".

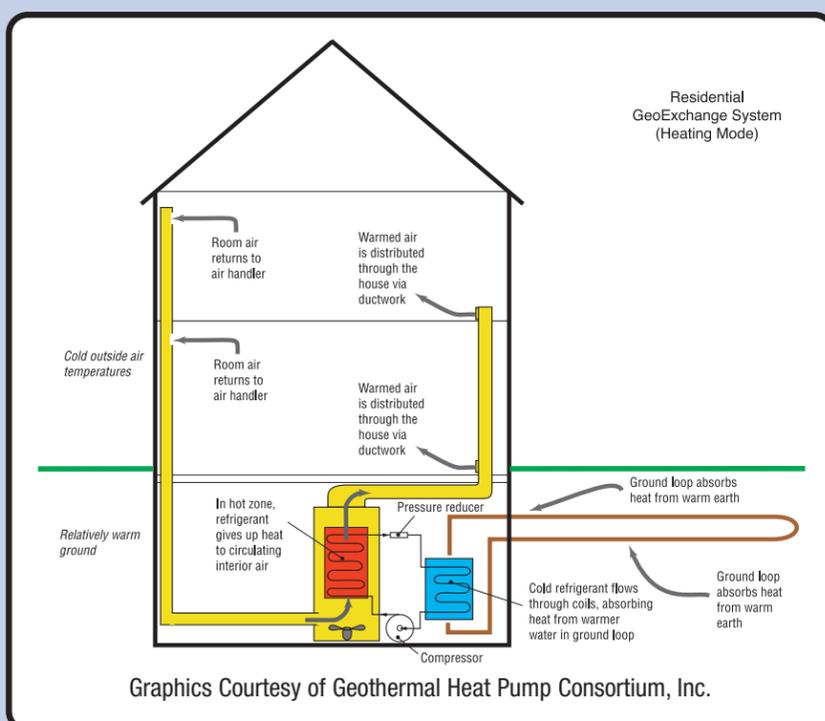


through, the pipe in the earth serves as a "heat sink" - a place to deposit the heat removed from the home.

In addition to earth loops, GeoExchange systems can also utilize a pond or lake or use well water as the heat source, or heat sink, to provide heating and cooling comfort

To learn more about whether GeoExchange is right for your existing or soon-to-be-built home or business, call the DMEA GeoExchange Hotline at (970) 249-4572 and ask to schedule an appointment with a DMEA Energy Use Supervisor.

Did You Know These Facts About GeoExchange Systems?



- Geothermal heat pumps are among the most efficient and comfortable heating and cooling technologies currently available
- Geothermal heat pumps take advantage of stable temperature conditions in the ground and the nearly limitless supply of renewable heating and cooling energy that is stored there.
- In addition to producing radically lower heating bills, geothermal heat pumps are quieter in your home than conventional systems and can include water heating capabilities.
- If just one household in 10 bought ENERGY STAR labeled heating and cooling equipment, the change would keep over 17 billion pounds of pollution out of our air this year.
- More than half your home's energy use goes to heating and cooling. By using ENERGY STAR products, those heating and cooling bills could be cut by as much as 40%.