

What You Should Know About Geothermal Technology

In a typical home, approximately 70% of the total energy bill comes from heating, cooling, and hot water. As homeowners continue to look for ways to save money on their energy bill, it is important that these homeowners not overlook the option of utilizing geothermal technology. Geothermal systems can generally be expected to save up to 60% in these areas.

HOW IT WORKS

Geothermal technology works by using the earth's temperature (substantially warmer than the air in the winter months and substantially cooler than



the air in the summer months) to help aid a homeowner in the heating or cooling of his/her home. Furthermore, the use of this energy is entirely pollution free, and provides homeowners with tremendous cost savings.

Geothermal systems use both an indoor heat pump and a buried earth loop, both of which capitalize on the earth's constant temperature to provide free energy to a home. In the winter, fluid circulates through the earth loop, absorbing the heat of the earth in the process, and then carries that heat energy back into the home. Conversely, in the summer months, the system reverses, and pulls the heat energy from the home, and deposits it in the cooler earth.

KEY ADVANTAGES

Geothermal technology undoubtedly saves people money in the long run. But even beyond the "payback" period, local experts assert that you can see a savings from "day one". Joe Skidmore from Dave Jones Plumbing & Heating says that the extra amount of money you'd pay each month, in the form of the additional cost of a home's mortgage, will be fully offset by the energy savings that you would experience each month. Because of that, Skidmore emphasizes, that "when financed, the cost to install a geothermal system over a traditional heating and cooling system, will offset and in most cases result in a positive cash flow from day one."

Another great advantage to using a geothermal system for your home's

heating and cooling needs is that it is significantly more efficient than other HVAC systems. Because geothermal systems do not burn fossil fuels to create heat, these systems provide between three and four times more energy for every one unit used to power the system. This design of geothermal technology also results in no combustion, flames, or fumes within the system, and therefore no chance of carbon-monoxide poisoning in homes.

In addition to the fiscal benefit of geothermal systems, both the U.S. Department of Energy and the EPA have asserted that these systems are among the most environmentally friendly methods for homeowners to heat and cool their homes. This is in large part because geothermal systems emit no carbon dioxide, carbon monoxide or other greenhouse gasses, which are considered to be major contributors to environmental air pollution.

WHAT TO LOOK FOR WHEN CONVERTING TO GEOTHERMAL

While geothermal technology is not new, advanced research is now allowing it to be more cost-effective and reliable than ever. However, homeowners should do their research when selecting an installing contractor, as a vast majority of instances where complaints arise are immediately traced back to poor installation techniques. Therefore, make sure to do a background check on a contractor and speak with past clients. If they are happy with their geothermal system's performance, it is a good indication that the installation was a success, and the cost to install the system was worth the effort. Armed with this knowledge, you will no doubt be more confident that you are making the best choice for both the environment, as well as your pocketbook.

Joe Skidmore of Dave Jones Plumbing & Heating, and David Belman of Don Belman Homes, Inc. shared their expertise for this article.

Photos courtesy of Pragmatic Construction, LLC

