# Consider Geothermal Heat Pumps

## Why they're better than a traditional HVAC or air source heat pump:

Geothermal heat pumps are similar to air source heat pumps, but instead of using fluctuating outside air temperature, they rely on the stable, even temperature of the earth to provide heating, air conditioning and, in most cases, hot water.

From minus 40 degrees in Montana, to 130 degrees in Death Valley; many parts of our country see wide temperature swings. It's not uncommon here in Georgia to see a 30 degree temperature change within the same day! Just a few feet below the earth's surface, however, the ground stays at a constant temperature. Although that temperature will vary somewhat depending on your location, at six feet underground, temperatures ranges from a constant 45 to 75 degrees based on your local climate.

Think about the air temperature inside a cave. The air temperature in a cave is always cooler; and typically a constant temperature. In winter months, that same constant cave temperature is warmer than the outside air above the cave. Essentially, this is what makes the geothermal heat pump system work so well. In the winter, the geothermal system moves heat from the earth into your house. In the summer, it will pull the heat from your home and discharge it into the ground via the loop field.

Approximately 70 percent of the energy used in a geothermal heat pump system is renewable energy from the ground. The constant ground temperature is what makes geothermal heat pumps one of the most efficient, comfortable, and quiet heating and cooling technologies available today. Although they can be more costly than a traditional heat pump to install up front; they can produce noticeably lower energy bills. According to the Environmental Protection Agency; a geothermal heat pump can save 30 to 40 percent off your energy bills. Geothermal heat pumps are now part of the EnergyStar® program. Because geothermal heat pumps are mechanically simple, and the entire geothermal unit is placed indoors; they also will typically have lower maintenance costs as compared to standard HVAC units or traditional heat pump systems.

Be sure to look into the return on investment before you install your next HVAC system. It's very likely that going with a geothermal heat pump could not only pay for itself in a matter of years; but then provide you with those continued energy savings dollars for decades to come.