INCENTIVES

INCENTIVES SUPPORT THE GEOTHERMAL CHOICE

If you're still wondering if a geothermal heat pump is right for you, here are some additional considerations. In addition to being in the quiet comfort of an energy-efficient heating and cooling, a geothermal system can be a sound investment for your home. Linn County REC offers incentives for the installation of an ENERGY STAR® geothermal system. Special electric heating rates are also available to members. Visit our website for more details. A federal tax credit may also be available on a qualifying system.

Geothermal systems can provide:

- optimum performance.
- dependable service.
- high efficiency.
- lower utility costs.

ENERGY THAT WORKS AROUND THE CLOCK

Geothermal heat pumps are a reliable source for heating and cooling your home by using the constant temperature of the earth as the exchange medium instead of the outside air temperature. Whether it's subzero temperatures in January or triple digits in July, your geothermal heat pump is working with the stable, natural temperature provided just below your feet to help keep you comfortable.

FOR MORE INFORMATION VISIT

Linn County Rural Electric Cooperative
www.linncountyrec.com

U.S. Department of Energy (DOE)
Energy Efficiency and Renewable Energy
www.energysavers.gov

Iowa Geothermal Association
www.iowageothermal.org

Geothermal Exchange Organization
www.geoexchange.org

International Ground Source Heat Pump Association
www.igshpa.org

All programs subject to change at any time,

without prior notice.

Linn County Rural Electric Cooperative

www.linncountyrec.com
5695 REC Drive
P.O. BOX 69
Marion, IA 52302
(319) 377-1587

SAVINGS WITH **STAYING POWER**

GEOTHERMAL

CONSTANT 55 DEGREES

Linn County Rural Electric Cooperative

GEOTHERMAL ENERGY

UNLIMITED RESOURCES

The yard around your home contains a vast reservoir of thermal energy to heat and cool your home. With a geothermal heating and cooling system, your lawn becomes a permanent energy source. You will enjoy the benefits of the most comfortable, reliable and cost-efficient heating, cooling and water heating system available on the market today.

HOW A GEOTHERMAL SYSTEM WORKS

A geothermal heat pump is an electrically powered system that takes advantage of the earth's constant temperature using a antifreeze-based solution circulated through buried pipes. In cold weather, this solution absorbs heat from the earth and carries it to the geothermal unit. The geothermal system then concentrates this heat and delivers it throughout your home.

In warm weather, excess heat is carried from your home into the earth so you keep refreshingly cool during even the hottest summer day. In addition, the geothermal system can be integrated with your water heater to provide low-cost hot water.

SMART ALTERNATIVE TO FOSSIL FUELS

Geothermal heat pumps offer some of the highest efficiency of any heating and cooling systems on the market today. Geothermal heat pumps can be four to five times more efficient than the most efficient gas furnaces.

It is a smart, efficient, emission and carbon-free system that works with the earth by moving heat rather than making heat. Because heat always moves from hot to cold, a geothermal system can efficiently warm and cool your home by transferring heat energy to or from the earth.

GEOTHERMAL

> “Now our heating and air conditioning bills are only 25 to 30 percent of the total we paid in our previous home, which was similar in square feet.”

BENEFITS

- The U.S Environmental Protection Agency and Department of Energy ranked geothermal technology as the most efficient and environmentally safe heating and cooling option available.
- Geothermal heat pumps can cut your home heating costs by 50 percent in the winter and cooling costs by 40 percent in the summer while also providing low-cost hot water for your home.
- Geothermal heat pumps have fewer mechanical components, making them more reliable and less prone to failure.

COMFORT

Geothermal systems are very quiet and provide even temperature and humidity levels to create a pleasant environment.

Here’s what some people said about geothermal heat pumps:

“Now, our heating and air conditioning bills are only 25 to 30 percent of the total we paid in our previous home, which was similar in square feet.”

“I can’t believe how even the heating and cooling is. The temperature stays pretty even. And it’s very quiet, too.”

“We installed a geothermal heat pump and the heat bills are low. It provides a nice, even heat. We would highly recommend the geothermal heat pump.”

FLEXIBILITY

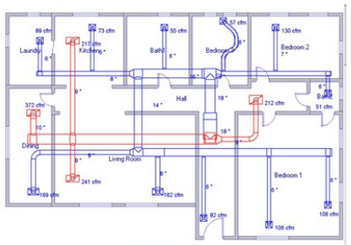
Geothermal heat pumps can be placed in new or existing homes. Today, many homeowners are requesting multi-function geothermal units that deliver in-floor heating while providing a forced air system in another part of the house.

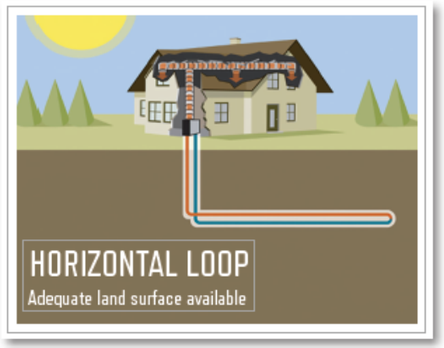
PEACE OF MIND

Geothermal systems have no flues or flames. They create no dangerous carbon monoxide and come with a sealed refrigerant circuit. There are no unsightly tanks or noisy outdoor equipment to bother you or your neighbors.

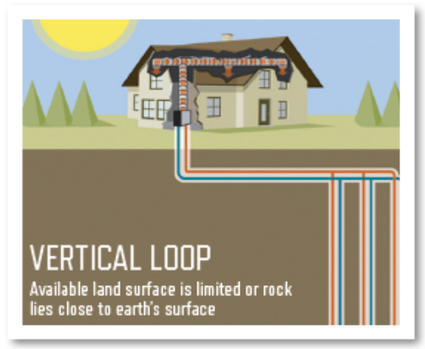
Installing the right size of equipment for the home is essential to getting the best performance and comfort. It is important to contact a qualified geothermal heat pump installer as there are a number of factors that should be considered when sizing your geothermal system. An installer will perform a load analysis of the specific heating and cooling requirements for your home. From there, the contractor will be able to calculate the size of heat pump unit and loop field.

Whether you are thinking about installing a geothermal system in an existing home or new home construction, maximizing the home's thermal envelope (insulation/air leakage) can reduce the size of the system needed. The smaller the system is, the lower the initial investment.

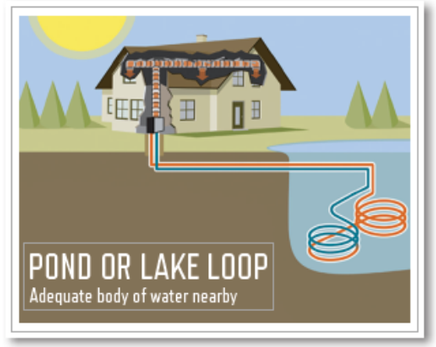




Horizontal loops are trench into the ground below the frost line with Polyethylene tubing (300-600 feet of trench per ton). The majority of horizontal installations in Iowa use a slinky coil loop. This design allows three times the amount of pipe to be installed (laid upright or flat) in a trench. Horizontal loop requires more land, but has a lower installation cost.



Vertical loops use drilling equipment to bore small-diameter holes from 50 to 200 feet deep. Polyethylene tubing is then fed down these holes creating a loop pattern. The individual loops are all joined together and tied to the indoor heat pump unit.



Pond or lake loops are economical to install. Coils of Polyethylene tubing are simply placed on the bottom of the pond or lake.

CONNECTING TO THE EARTH

It’s surprisingly simple. The most popular method of installing geothermal units in Iowa is the closed loop system, which circulates a water-based solution through small-diameter underground pipes. These pipes enter the home below the ground and attach directly to the indoor equipment. You can select from several closed loop versions. Available land space, soil type and amount of rock near your home will determine which installation is best for you. All installation types are equally efficient and offer the same high performance.

According to the EPA, replacing an ordinary HVAC system with geothermal is the environmental equivalent of planting 750 trees.