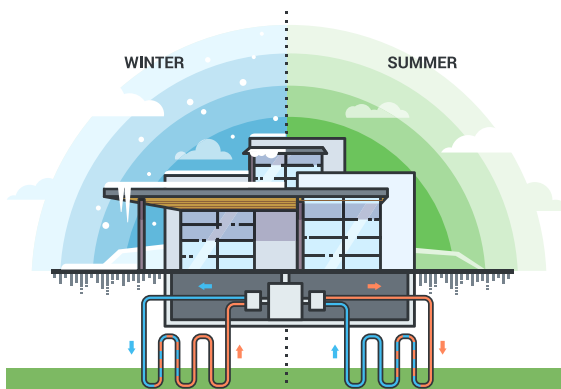


# GEOHERMAL HEAT PUMP BASICS



Geothermal energy is a renewable, all-electric technology that uses heat from the earth to heat and cool buildings. "Ground source heat pumps" is another name for this technology.

## HOW DOES IT WORK?



Below the frost line, the temperature of the earth doesn't change very much.

Geothermal "takes" heat from the ground in the winter to heat the building.

During the summer, the geothermal system "stores" heat in the ground to cool the building.

## WHY GEOHERMAL?

Save money on heating and cooling costs. Geothermal systems pay off in 8 - 11 years. In new construction designed for geothermal heating and cooling, the payback is immediate.

**SUPER** efficient - geothermal systems can have up to 400% efficiency, compared to the most efficient furnaces that are only 80-90% efficient.

Durable and long-lasting equipment - most systems have 30-year warranties!

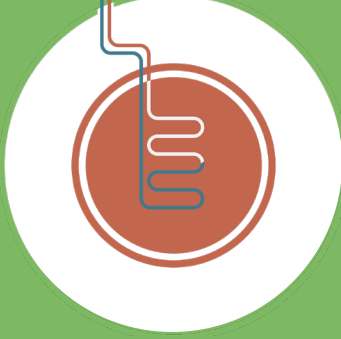
Quiet and comfortable heating & cooling.

Geothermal energy is always available.

Reduce fossil fuel use.



## A GEOTHERMAL SYSTEM HAS 3 MAJOR PARTS



The **GROUND LOOP EXCHANGER** is a system of underground pipes circulating a liquid that *exchanges* heat with the earth.

The **HEAT PUMP** uses electricity to pump heat from one place to another.

The **DISTRIBUTION SYSTEM** consists of the ducts and vents that transport heated air to where you want it.



## WHAT TYPES OF BUILDINGS CAN USE GEOTHERMAL?

### BUSINESSES

Wisconsin business can save money and water by switching to geothermal heating and cooling. Expensive, water-consuming cooling towers can be replaced with long-lasting geothermal systems that are better for Wisconsin.

### HOMES

Many Wisconsin homeowners are taking advantage of the renewable, low cost heating and cooling of geothermal energy. Plus, Focus on Energy offers an incentive of up to \$750 for geothermal systems and there is a federal tax credit of 26% through the end of 2020.

### SCHOOLS

Wisconsin school districts are increasingly choosing geothermal as a way to reduce operating costs. Fond du Lac High School, for example, saves almost \$300,000 per year!