How They Work

Heat pumps aren't new. However, since debuting in the 1930s they've improved dramatically. The U.S. Department of Energy says heat pumps marketed today are more reliable and many applications can offer substantial energy and dollar savings. In other words, if you haven't seen a heat pump lately, you haven't seen a heat pump.

Heat pumps are just that – pumps. They pump heat from a source at a low temperature and discharge it at a higher temperature. That translates to higher efficiency and lower operating costs.

Even in the coldest weather, there is heat energy in the air. In extreme cold, heat pumps use built-in supplemental heating to ensure comfort in even the coldest climates.

In the summer, heat pumps reverse the process, moving the warm air from inside the home outside. Air-source heat pumps also dehumidify better than standard central air conditioners, resulting in less energy usage and more cooling comfort in summer months. They really are the best year-round home comfort solution. Ask your electric cooperative for more information.

The Power of Today

Heat pumps are just one example of why electricity is the clean power of today. People are discovering that electric technologies are more efficient and cleaner than combustion energy sources. Electric technologies simply do more with less energy.

But the story doesn't end with heat pumps. There is a broad spectrum of electric home heating and cooling options, ranging from flexible baseboard units to high-tech radiant heating. Electric air conditioners, water heaters, dryers and ranges make your home more efficient and more convenient. Electric water distillers and high-efficiency lighting save energy while reducing emissions.

Talk to your electric cooperative today about getting an air-source heat pump installed in your home.

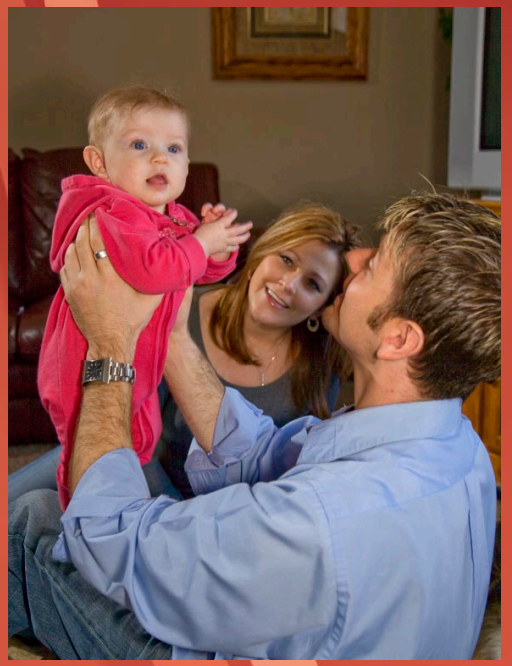
Your Touchstone Energy® Cooperative

The power of human connections

To learn more about your heating and cooling options, talk to your local electric cooperative.

Air-Source Heat Pump

Energy efficient, cost-effective and reliable year-round



Energy Saver

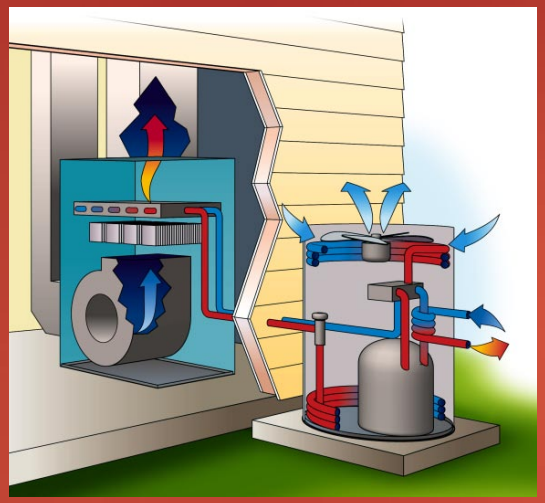
When it comes to heating and cooling a home, it's tough to beat the efficiency of an electric heat pump. They're proven and reliable. They work on the same principle as a refrigerator, transferring heat rather than creating it. An air-source heat pump pulls its heat indoors from the outdoor air in the winter and from the indoor air in the summer. **When properly installed, air-source heat pumps require little maintenance and can deliver 1.5 to 3 times the energy they use.**

Because they use very little energy to get the job done and because they're electric, you know they're clean, reliable and safe. No fumes, no tank to fill, no pilot lights, no worries.

At Work For You

Heat pumps use your home's existing ductwork, so it's easy to convert an inefficient propane or oil system. They can also be used in an add-on role, working in tandem with a furnace for significant savings.

Heat pumps are a great choice when it's time to update, refurbish or expand a home. And they're perfect for new construction too. Another type of heat pump is the geothermal system, which offers the highest heating and cooling efficiency available anywhere today. Ask your electric cooperative for advice on heat pump dealers and installers in your area.



Heat pumps are able to reverse their cycle of operation from heating to cooling mode, giving them unique, double-duty capabilities.

Clean Savings

Heat pumps are also environmentally clean. Studies show heat pump heating is much more efficient than gas heating in terms of total energy used, and that's good for the environment. Of course, high efficiency also has a direct, positive impact on your home budget. Compare the numbers here to see what you can save:

Annual costs	Heating	Cooling	TOTAL
90% efficient propane furnace with 13.5 SEER central air	$ 2,076	$ 213	$ 2,289
90% efficient natural gas furnace with 13.5 SEER central air	$ 1,439	$ 213	$ 1,652
Air-source heat pump with electric furnace backup	$ 615	$ 120	$ 735

Comparison based on 2,300 ft.² home in the upper Midwest. Actual operating costs may vary due to weather, operating conditions and construction. Calculations based on the following costs. Propane: $1.60/gal. Natural gas: $1.20/therm. Electric: $0.045/kWh.