energize CONNECTICUT

Introduction to heat pumps

Heat pumps can efficiently heat your home in the winter and double as a cooling system in the summer—while lowering greenhouse gas emissions.

ADVANTAGES

COST Compared to heating with oil, propane, or electric resistance (baseboard), heat pumps can allow you to save money on energy expenses.

CONVENIENCE Heat pumps provide all-in-one comfort: heating, cooling, and dehumidification in one unit.

EFFICIENCY Heat pumps can be up to 400% efficient—for every 1 unit of energy used to power a heat pump, up to 4 units of heat energy are supplied.

ENVIRONMENTAL IMPACT Heat pumps help reduce your carbon footprint by emitting less greenhouse gases.

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HOW HEAT PUMPS WORK

Heat pumps are highly-efficient heating and cooling systems that move heat inside in the winter and draw heat outside in the summer. Instead of burning fossil fuels, like oil or propane, they use a refrigerant cycle, powered by electricity, to move heat and keep your home at a comfortable temperature year-round.

This clean technology is environmentally friendly, affordable to operate, and can last longer than other heating and cooling systems.

There are two main types of heat pumps, air source and ground source (geothermal). Both air and ground source heat pumps offer highly efficient heating and cooling in one system.

AIR SOURCE HEAT PUMPS

Air source heat pumps extract heat from the air outside and distribute it inside in the winter. During warmer months, this process is reversed to provide cooling. These systems can be installed either with or without ductwork and can heat and cool either an individual room or your whole home.

- Ductless heat pumps, also known as mini-splits, are an efficient alternative for heating and cooling areas where ductwork doesn't exist or can't be installed.
- If your home has ductwork for heating and cooling, a centrally-ducted heat pump can use it to heat and cool your home more efficiently.

GROUND SOURCE HEAT PUMPS

Ground source heat pumps use the earth's constant temperature to provide heating and cooling. In the winter, fluid circulating in underground pipes carries the earth's heat to your home, and in the summer, the process is reversed to provide cooling. Ground source heat pumps are the most efficient type of heat pump and are a great option for properties with sufficient outdoor space.

CONSIDERATIONS

EFFICIENCY FIRST: Before upgrading your heating system, consider preliminary measures, such as sealing and insulating your ductwork or completing weatherization work.

ELECTRICAL USAGE: A heat pump is an electrical system, so running one will add to your electrical use. In many cases, that additional electrical use is offset by savings elsewhere, such as a propane or oil heating fuel bill.

QUALITY INSTALLATION: Heat pumps work best when correctly sized and designed for your home. Working closely with a qualified contractor will help ensure your system is designed to meet your heating and cooling needs.

NEXT STEPS

If you're looking for some assistance, the Sponsors of Energize Connecticut℠ can help provide technical guidance and support. Schedule a no-cost virtual consultation with a Heat Pump Specialist.

Our Heat Pump Specialists have been trained to help you make informed decisions specific to your goals and the unique needs of your home and can connect you with contractors participating in the Energize CT Heat Pump Installer Network.

For more information, visit EnergizeCT.com/HeatPump.

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1-0392 Rev 05/22