

# Clean Heating & Cooling Solutions

for Residential Properties



**REDUCE**  
your carbon  
footprint

**IMPROVE**  
comfort

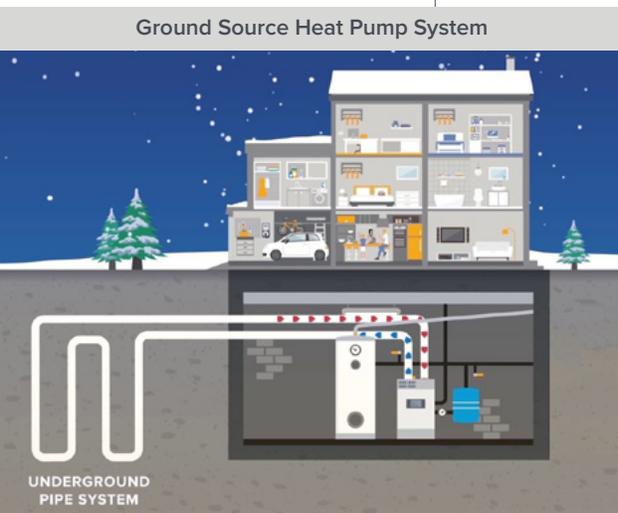
**LOWER**  
energy use

## Heat pumps provide a clean, cost-effective alternative for heating and cooling

Heat pumps are a more efficient heating and cooling option that eliminate fossil fuels, can provide up to 100 percent of your heating and cooling needs, and help you save on your energy bills.

### Ground source heat pumps

Heating, ventilation, and air conditioning (HVAC) systems are the second largest source of pollution and account for 32% of greenhouse gas emissions in New York State. However, there are renewable and sustainable alternatives for regulating indoor temperature. Ground source heat pumps (also known as geothermal heat pumps) are a natural, viable heating and cooling option and use significantly less energy than conventional systems.



#### How they work

A ground source heat pump uses the Earth's year-round, stable ground temperature as a heating and cooling source. During the winter, heat is extracted from the ground through an underground pipe system and distributed throughout the building. In the summer, the process is reversed. A minimal amount of energy is used during the process to power the compressor and circulation pumps.

#### Advantages

Ground source heat pumps are a particularly good option if you're planning a major renovation or building a new home. They are quiet and efficient, regulate temperature in different zones simultaneously, require no fossil fuels (gas or oil), and produce significantly less carbon. Because there is no combustion, they are safer and healthier to run. Systems can lower energy costs up to 50% and last approximately 25 years, greatly increasing return on investment.

call:  
**1-866-NYSERDA**

visit:  
[nyserdera.ny.gov/heat-pumps](http://nyserdera.ny.gov/heat-pumps)



**NYS Clean Heat**



## Air source heat pumps

Installing clean HVAC technologies, including air source heat pump systems, can reduce your energy costs, decrease your carbon footprint, and increase everyday comfort. When paired with improved insulation and air sealing, the benefits are even greater.

Air source heat pumps can be installed in spaces with ductwork (central systems) or spaces without ductwork (ductless mini-split systems) making them a great solution for any space.

### How air source heat pump systems work

Air source heat pumps extract heat from the air outside, and distribute it inside your home or business. During warmer months, the process is reversed to provide cooling by pulling heat out of your interior space. These systems are highly efficient, and can provide up to 100% of your heating and cooling needs.

### Advantages

**Lower energy use.** Air source heat pumps are 2-3 times more efficient than traditional HVAC systems, you could save hundreds of dollars annually.

**Increased comfort.** Install in a single room, such as an addition, or heat and cool only the rooms you want via zone control; dehumidify interior air more effectively than traditional HVAC systems.

**Low maintenance.** Air source heat pumps are easy to install and require little maintenance.

**Clean, healthy, and safe.** No combustion of fossil fuels, no fuel storage, no emissions, and no risk of carbon monoxide fumes.

## Incentives and financing

Electric utility companies offer rebates on both air and ground source heat pumps, and low-interest financing options are available through NYSERDA.

## Ready to get started?

Visit [nyserderda.ny.gov/heat-pumps](https://nyserderda.ny.gov/heat-pumps) to learn more about air and ground source heat pumps.

