

Heat Pumps

For Agriculture



Learn how to heat and cool your space with heat pumps

Use energy-efficient, environmentally friendly electric heat pumps across all four seasons.

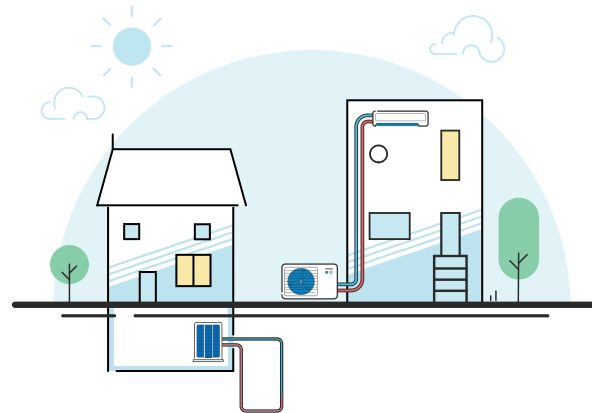
What Is a Heat Pump?

A heat pump is a convenient, highly efficient, electrically powered system that performs both heating and cooling functions. Because a heat pump runs on electricity it is considered “clean,” no oil, natural gas, or propane is required.



How Do Heat Pumps Work?

Heat pumps pull heat from the air or from underground and use it to heat your space in the colder months. In the warmer months, they work in reverse and use a refrigerant to cool your space.



The Benefits of Heat Pumps

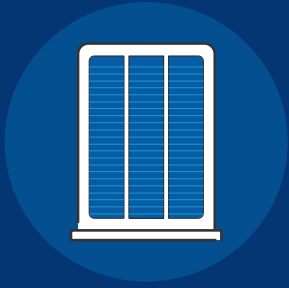
If your current heating/cooling systems are nearing end of life, or have low efficiency ratings, consider switching to a heat pump. The benefits of heat pumps include:

- **Dual heating and cooling.** Work well in cold climates and can be used as cooling systems in the summer.
- **Cost effective.** The cost of space heating and cooling is typically less than oil, propane, or electric resistance.
- **Efficient.** Significantly more efficient than oil-fueled systems.
- **Cleaner and safer.** There is no combustion of fossil fuels, fuel storage, or carbon monoxide emissions associated with heat pumps. Heat pumps also have the lowest carbon emissions of any heating source.
- **Save time:** Require minimal maintenance, no scheduled fuel deliveries, no fluctuating fuel costs.



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Types of heat pumps



Geothermal heat pumps

Geothermal heat pumps (or ground source heat pumps) take heat from underground and use it to warm water. That water holds onto the heat until it gets pumped into your space to warm the air. This system is the most efficient type of heat pump.

Up to **4x** more efficient than oil-fueled systems



Air source heat pumps

Air source heat pumps extract heat from outside air that is then used for heating indoor spaces during the colder months. They can also extract heat from indoors and expel it outside to cool indoor spaces during the warmer months.

Up to **3x** more efficient than oil-fueled systems



General Maintenance

Like any mechanical equipment, heat pumps require regular maintenance. Typical maintenance activities include:

- Checking refrigerant levels (leaking refrigerant is a common cause of heat pump problems).
- Keeping the air filters clean and replacing them on a recommended schedule.
- Keeping coils clean.
- Making sure the thermostat temperature is set correctly and working properly.
- Scheduling yearly tune-ups with a qualified HVAC contractor.

Ideal Environments for Heat Pumps

Heat pumps systems are customizable and can be adapted to a variety of uses. Some ideal environments include:

- Water heating.
- Space heating (especially in controlled environment agriculture or greenhouses).
- Dairy milk cooling.



Ready to get started?

Talk with the Agriculture Energy Audit Program representative. Make sure to inquire about New York State utilities rebates, State and federal tax rebates, and other incentives.

call: **800-732-1399** email: aEEP@nyserda.ny.gov

visit: [nyserda.ny.gov/putenergytowork/chc](https://www.nyserda.ny.gov/putenergytowork/chc)



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