

NOW IS THE TIME FOR CONNECTICUT TO JUMP START HEAT PUMP DEPLOYMENT

Heating and cooling Connecticut homes should be healthy and affordable. But for many households, outdated and inefficient heating equipment is driving up energy bills and polluting the air. There's a better way.

Upgrading homes with highly-efficient electric heat pumps when existing systems break will lower energy bills for most households while adding the same level of cooling as an AC. These upgrades will also slash air pollution and climate-warming emissions.

Connecticut Policy Makers Need to Act Now

- **For more affordable energy bills.** Upgrading to a heat pump can lower utility bills by up [to 35%](#) for homes with heating oil or propane furnaces. The average household in Connecticut can save up [to 10%](#) on their utility bills by switching from a fossil fuel water heater to an electric heat pump water heater.
- **For clean air.** Burning gas, oil, and propane in building equipment generates [eight times more](#) smog-forming nitrogen oxide pollution than all of the state's power plants combined.
- **For climate.** Burning fossil fuels in buildings is also responsible for roughly [30% of Connecticut's](#) total climate-warming greenhouse gas emissions, causing more extreme weather, flooding, and temperature spikes.
- **To manage electricity demand for a more resilient electricity grid.** The electric heat pumps that are installed across the Northeast use an average of [29% less electricity](#) to maintain the same level of cooling. Heat pump water heaters are [two to three times](#) more energy efficient than conventional electric resistance water heaters.
- **To leverage federal funding.** [Tax credits](#) are available now and rebates available later this year through the Inflation Reduction Act will cover 100% of electrification project costs for low-income households.

Key Opportunities This Legislative Session:

- Heat pump installation target
- Funding for state incentives and job training programs
- Networked geothermal pilot programs

What is a heat pump?

Heat pumps work by transferring heat from one place to another. In heating mode, heat pumps extract heat from the outside air (even in cold temperatures) and transfer it indoors to warm the space. In cooling mode, the process is reversed, and heat is taken from the indoor air and expelled outside. Electric heat pump equipment exists for both HVAC systems and water heating.

Connecticut Households Can Save Thousands on Heat Pump Installation with State and Federal Incentives

- [Energize Connecticut](#) offers up to [\\$15,000](#) in combined rebates for a residential air-source heat pump, which could cover the entire cost of this heating and cooling system for some homes.
- [Energize Connecticut](#) also offers [\\$750](#) for residential heat pump water heaters, which they estimate to cost \$1,700 to \$3,000.
- Federal [incentives](#), which will become available later this year through the Inflation Reduction Act, will cover 100% of electrification project costs for low-income households and 50% of costs for moderate-income households.
- [Tax credits](#) of up to \$2,000 for qualified heat pumps are already available through the Inflation Reduction Act (IRA).

Networked geothermal: a neighborhood-scale alternative to Connecticut's gas system

Networked geothermal, a subset of [thermal energy networks](#), is the most efficient and dependable method for providing heating and cooling to multiple homes and buildings through a collective network of water pipes. These pipes are buried several feet underground, where the temperature remains consistently moderate throughout the year. Heat pumps are employed to transfer heat from the pipes into homes, providing year-round temperature control.

Because thermal energy networks rely largely on the same engineering principles and know-how needed to maintain today's gas system, these networks represent a pathway to high paying jobs for Connecticut's gas workforce.

Connecticut lawmakers can explore the potential of thermal energy networks by passing legislation that requires utilities to invest in pilot projects. Projects are already being implemented in [Massachusetts](#) and [New York](#).

Heat pumps work in cold climates

- Heat pumps are able to provide efficient heating in cold climates even at outdoor temperatures [as low as -22° F](#), according to Efficiency Maine.
- Europe's coldest countries have the highest heat pump adoption. In Norway, where temperatures sink [as low as -40° F](#), [60% of buildings](#) are fitted with a heat pump.

