



# HEAT PUMPS FOR ENERGY EFFICIENT HOMES

When most people think about places where we can solve climate change, reducing pollution from power plants, refineries, and vehicles probably come to mind. But even our homes and places of work can be a part of the solution.

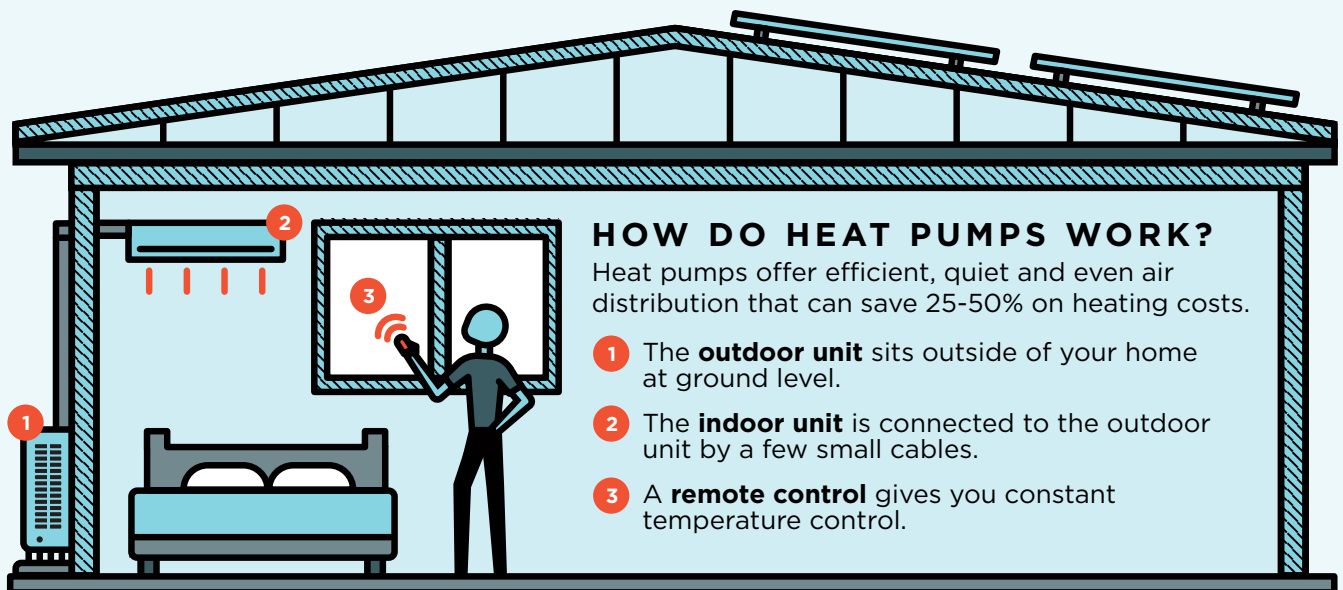
There are currently about 70 million homes in the country that use heating and cooling systems that emit carbon pollution.<sup>1</sup> As it turns out, space heating is the largest component of home energy consumption. According to the Center for Climate and Energy Solutions, 28 percent of residential carbon pollution comes from heating your home!<sup>2</sup>

Thankfully, affordable technology now exists to help homeowners do their part to cut climate pollution. Heating and cooling systems, also known as heat pumps, provide energy efficient solutions to home heating needs that save you money on your energy bills. These systems have an

outdoor unit like an air conditioner that connects to units inside your house to provide remote controlled year round heating and cooling. Heat pumps use the same technology as refrigerator coolers, moving heat from outdoors to indoors (and indoors to outdoors) using a vapor compression cycle—similar to an air conditioner.<sup>3</sup>

## WHY ARE HEAT PUMPS THE RIGHT CHOICE?

If just all 6.8M homes in the Northeast currently using oil or propane heating changed to more modern and efficient heat pump technology, it would remove over 10 million tons of carbon pollution—or the **equivalent of getting nearly two million passenger cars off the road.**



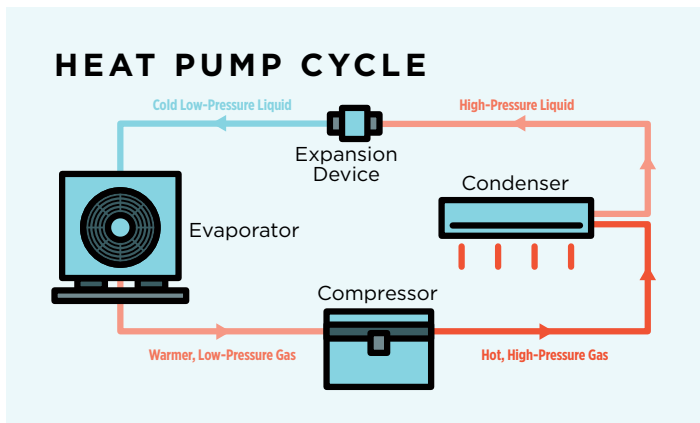
	Households Using this technology	Yearly Household Savings from switching (\$)	Total Annual Savings if Everyone Switched (\$)	Total Reduction in Carbon Dioxide pollution (metric tons)	Total "Cars" taken off the road
Switching from an Oil Furnace	6,100,000	82	400,160,000	9,856,852	1,888,848
Switching from a Propane Furnace	700,000	801	448,560,000	541,045	103,679
Switching from an Electric Furnace	2,900,000	1,460	3,387,200,000	12,472,266	2,390,034

Not to mention, making the switch to heat pumps would create over **\$848,720,000 in annual savings** for consumers.<sup>4</sup> And that doesn't begin counting those who use gas. Powering heat pumps with clean energy like rooftop solar increases those benefits even further.

Check out the info above to see how much your household could save by switching over to heat pump technology along with the very real benefits switching to a heat pump could help to curb climate change.

### WHAT CAN YOU DO TO HELP?

First, if it's time for you or a family member to replace your air conditioner, now is your opportunity to get a



heat pump. Current heat pumps can both heat and cool your house, and many local heating and air conditioning companies offer rebates and services to install them, so make sure and get the right one!

But, if you've already installed a heat pump, or if you're looking for other ways to help, more can be done in each of our communities to incentivise the use of cleaner, energy efficient heat pump technology.

Tell your state officials to support administrative programs that provide incentives for upgrading home heating systems and installing clean, efficiency heat pumps that are designed and operated for New England's climate. One great way to fund such programs would be to limit and price pollution from outdated and dirty heating systems like oil and gas.

Together we can do our part and reduce carbon pollution in the region, creating comfortable carbon free communities that save you money while helping to curb climate change!

### ENDNOTES

- 1 Carbon Emission Comparison Between Residential Heating and Cooling Options, [http://www.energysolutionscenter.org/assets/1/Page/GHP\\_Position\\_Paper\\_and\\_apndx\\_031710.pdf](http://www.energysolutionscenter.org/assets/1/Page/GHP_Position_Paper_and_apndx_031710.pdf)
- 2 Center for Climate and Energy Solutions, Residential and Commercial Emissions in the United States, <https://www.c2es.org/energy/use/residential-commercial>
- 3 Northeast Energy Efficiency Partnerships, Northeast/Mid-Atlantic Air-Source Heat Pump Market Strategies Report 2016 Update, [http://www.neep.org/sites/default/files/NEEP\\_ASHP\\_2016MTStrategy\\_Report\\_FINAL.pdf](http://www.neep.org/sites/default/files/NEEP_ASHP_2016MTStrategy_Report_FINAL.pdf)
- 4 Northeast Energy Efficiency Partnership, 2017 Air-Source Heat Pump Incentive Summary; <http://www.neep.org/sites/default/files/resources/2017ASHPSnapshot.pdf>

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