



Factsheet

# RESIDENTIAL HEAT PUMPS

Air source heat pumps use an outdoor unit to extract heat from the air and are an effective way to heat and cool homes, while also saving on operating costs and reducing greenhouse gas emissions.



## AFFORDABLE TECHNOLOGY

Heat pumps convert electricity into heat much more efficiently than other fuels because they produce more heating and cooling.



## CLEAN ENERGY

Unlike burning oil or gas, which will always produce harmful carbon emissions, electricity that powers heat pumps tends to get greener every year as more renewable energy sources are added to the grid.



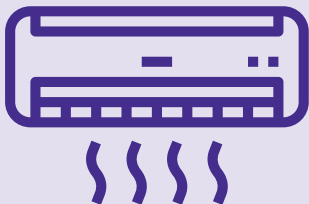
## CUSTOMIZABLE

The two main types of air source heat pumps, ducted and ductless, each have hundreds of models available on the market today. This means there are thousands of system configurations for all different types of home layouts.



## HEALTHY AND SAFE

Heat pumps can filter and dehumidify air, which can improve the air quality and comfort of your home. When fossil fuels, like gas, are burned inside the home, they can create dangerous indoor air pollutants, like carbon monoxide.



## YEAR-ROUND HEATING AND COOLING

A heat pump is one system that can replace your air conditioner and furnace or fuel tank since it can provide both functions.

## MYTH: Heat pumps don't work below freezing



Some HVAC installers have told their customers to turn off heat pumps when outside temperatures drop below freezing.

**This is no longer true.** Today's cold-climate units have enhanced heating capacity in cold weather and can operate in all outdoor conditions.

All information in this factsheet is from Northeast Energy Efficiency Partnerships' [Air Source Heat Pump Buying Guide](#)



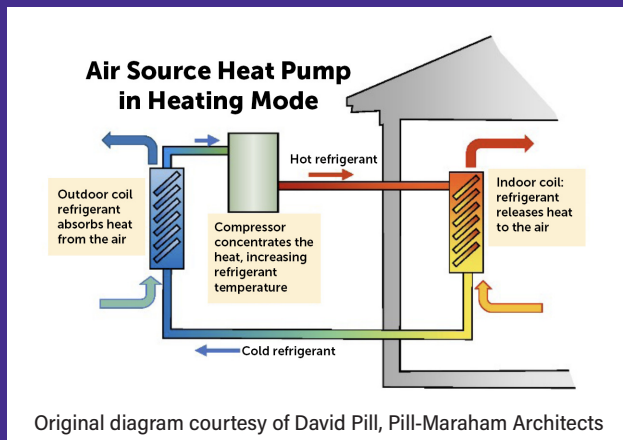
YOUR LINK TO ENERGY SAVINGS

[MontgomeryEnergyConnection.org](http://MontgomeryEnergyConnection.org)

For more information on how to electrify everything, scan the QR code or go to [MyGreenMontgomery.org/electrify](http://MyGreenMontgomery.org/electrify)



# How do heat pumps work?



A heat pump effectively extracts heat from the cold outdoors, concentrates it, and delivers it inside to keep you comfortable all winter.

## HOW TO SHOP FOR A HEAT PUMP IN 3 STEPS

Don't wait until your HVAC system fails! Start researching all-electric replacement systems now.

### Step 1: Find a quality installer

Your utility supplier offers a list of qualified installers through the EmPOWER Maryland program. Research companies using the Better Business Bureau, Maryland's Dept. of Labor HVAC Contractor search, and customer references.

### Step 2: Get a quote and insist on load calculations

Once you find an installer, ask if they'll do a free evaluation and quote.

Make sure the quote details the equipment model numbers and itemizes any other parts and accessories that you'll be charged. Insist on load calculations. This means the installer measures the rooms and window dimensions and makes a list of the insulation values in attics, walls, and basements, along with window types and direction. This will ensure your heat pump is right sized for your home.

Try to compare at least 3 quotes and avoid shopping only on price. Make sure any required electrical service upgrades are included in the quote.

### Step 3: Ask questions

Ask the installer about how they service equipment and respond to emergencies, if they're insured to provide HVAC services, and what brands of all-electric heat pumps they offer. Make sure you collect information about warranties, required maintenance like air filters changes, and if any incentives are available.

## START SMALL

If your existing system isn't near the end of its life, think about installing one or two single zone ductless units where they can do the most for you – in the family room, in the living/dining/kitchen area of an open plan house, or in the home additions.

Then you can plan on getting some help with weatherization (below), and when you're ready or when your main heating system needs replacement, you can finish the job.

## MAKE YOUR HOME COMFORTABLE

To improve the efficacy of the heat pumps, your home's energy efficiency, and your comfort, start by scheduling a **Home Performance with ENERGY STAR® Audit** with your local utility supplier.

This comprehensive audit of your home will provide a detailed report with recommended improvements, rebates, and the potential energy savings you could receive. The audit can unlock up to \$7,500 in rebates.