



## HELP PROTECT THE CLIMATE

Climate change is a real and urgent challenge affecting people and the environment worldwide.

Human activities such as electricity production and transportation add significant amounts of carbon pollution to the atmosphere. This carbon pollution, along with other greenhouse gases, is the primary cause of most of the global temperature rise observed over the past 50 years.

Global warming has already led to rising sea levels, melting glaciers, and shifting rainfall patterns, among other changes. Unchecked carbon pollution can lead to long-lasting changes in our climate that threaten human health, society, and ecosystems. To learn more about climate change and what you can do to reduce its impacts, visit [epa.gov/climatechange](http://epa.gov/climatechange).

## DO YOUR PART

Choosing energy-efficient products and practicing simple energy saving measures reduces the amount of carbon pollution added to the atmosphere. EPA's ENERGY STAR program offers tips and product information to help you do your part in protecting your family and your community from the effects of climate change now and in the future.

**If just one household in 10 bought heating and cooling equipment that had earned the ENERGY STAR, we would prevent 13 billion pounds of greenhouse gas emissions—equal to emissions from 1.2 million cars—every year.**

EPA 430F-12-003, September 2012.  
Recycled/Recyclable—Printed  
with Vegetable Oil Based Inks on  
Recycled Paper (Minimum 50%  
Post-consumer Content)

  
United States  
Environmental  
Protection Agency  
6202J  
Washington DC 20460  
Official Business  
Penalty for Private Use \$300



Choose ENERGY STAR® Certified  
**Heating  
& Cooling**

Helping you save money and protect the climate  
through energy-efficient products and practices.



## WHAT IS ENERGY STAR?

ENERGY STAR is a widely recognized and trusted label on products that meet strict energy-efficiency requirements set by the U.S. Environmental Protection Agency (EPA). ENERGY STAR certified products are third-party certified and subject to ongoing verification testing.

Products that have earned the ENERGY STAR help you save energy and money without sacrificing performance. By using less energy, these products also help reduce greenhouse gas emissions that contribute to climate change.

Today, the ENERGY STAR label can be found on more than 65 different kinds of products found in our homes and workplaces including lighting, appliances, office equipment, consumer electronics, and heating and cooling equipment. Energy-efficient new and renovated homes, as well as schools, government buildings, and commercial and industrial buildings also can earn the ENERGY STAR.

Learn more at [energystar.gov](http://energystar.gov)



## ENERGY STAR CERTIFIED HEATING AND COOLING EQUIPMENT

Heating and cooling can account for nearly half of the energy used in your home. While ENERGY STAR certified heating and cooling products may cost more than standard products, they can yield annual energy bill savings of 10 to 30 percent.

### AIR CONDITIONERS

Compared to standard models, ENERGY STAR certified room air conditioners use about 10 percent less energy on average, saving about \$50 in energy costs over its lifetime.

ENERGY STAR certified central air conditioners have higher seasonal energy efficiency ratio (SEER) and energy efficiency ratio (EER) ratings, making them more than 15 percent more efficient than standard models.

### GEOHERMAL HEAT PUMPS

Geothermal heat pumps use stable ground temperatures to provide heating and air conditioning. ENERGY STAR certified models are more than 45 percent more energy efficient than standard options.

### AIR-SOURCE HEAT PUMPS

Electric air-source heat pumps move heat between the inside and outside to keep your home a comfortable temperature year-round. ENERGY STAR certified models are more efficient in both heating and cooling than standard models. In fact, they are likely to be at least 20 percent more efficient than what you have in your home now.

### DUCTLESS HEATING AND COOLING SYSTEMS

ENERGY STAR certified ductless heating and cooling systems are highly efficient products that deliver warm or cool air directly into different zones in your home, instead of routing it through ducts first. They are an increasingly popular, cost-effective solution to replace inefficient baseboard electric heating and window air conditioners in older homes. Replacing your system with an ENERGY STAR certified model could cut your heating and cooling costs by 30 percent.

### BOILERS AND FURNACES

A properly sized and installed ENERGY STAR certified boiler uses about 5 percent less energy than a standard new boiler. ENERGY STAR certified furnaces have higher Annual Fuel Utilization Efficiency (AFUE) ratings and higher efficiency blower motors, making certified gas furnaces, on average, over 10 percent more efficient than standard models.

## TIPS FOR ENERGY STAR CERTIFIED HEATING AND COOLING PRODUCTS AND INSTALLATION

Your comfort and the performance of your new heating, ventilation, and air conditioning (HVAC) system depends on how well it is installed. Make informed decisions and increase the efficiency of your heating and cooling system with the help of these simple suggestions:

**Find the Right Contractor** – Look for a contractor with several years of experience, who is licensed and insured (if required) to perform HVAC installation and repair work. Ask for a written contract of all work. The contractor should provide his/her certification for refrigerant handling. Expect the contractor to spend significant time inspecting your current system and home to assess your needs. Both you and the contractor should sign a written proposal before the work begins.

**Install a Programmable Thermostat** – A programmable thermostat helps make it easy for you to save by offering four pre-programmed settings to regulate your home's temperature in both summer and winter—when you are home, asleep, or away. The pre-programmed settings are intended to deliver savings without sacrificing comfort. Through proper use of a programmable thermostat (using the four pre-programmed settings) you can save about \$180\* every year in energy costs. Save more energy and money by adjusting your thermostat when using your ceiling fan to let the fan take over some of the heating and cooling duties.

**Seal and Insulate** – Ducts circulate air from the furnace, central air conditioner, or heat pump throughout the house. Often ducts have damage or poor connections that leak the hot or cold air and waste a lot of energy. Ask your contractor to seal and insulate ducts in unconditioned spaces such as an attic or crawlspace. Sealing and insulating ducts can improve the efficiency of your heating and cooling system by as much as 20 percent.

### COMMON TERMS YOU MIGHT HEAR

**AFUE** – The annual fuel utilization efficiency (AFUE) is the percentage of the heat in the fuel your furnace or boiler uses that actually heats your home.

**EER** – The energy efficiency ratio (EER) is how efficiently your unit cools your home when its 95° F outside, or for geothermal, at any time.

**SEER** – The seasonal energy efficiency ratio (SEER) is how efficiently your unit cools your home at a variety of outside temperatures.

**HSPF** – The heating seasonal performance factor (HSPF) is how efficiently your heat pump heats your home at a variety of outdoor temperatures.

*\*The \$180 savings assumes a typical, single-family home with a 10 hour daytime setback of 8° F in winter and setup of 7° F in summer, and an 8 hour nighttime setback of 8° F in winter and a setup of 4° F in summer.*

**Properly Size and Install Your System** – Bigger is not always better. A system actually operates best when each component is properly sized. Oversized equipment may cycle on and off more frequently, making the home less comfortable and shortening the life of the equipment. Ask your contractor to take measurements of your home and calculate the appropriate size for your air conditioner, furnace, or heat pump. As part of a proper installation, a certified technician should:

- Install equipment in accessible areas for easy maintenance.
- Test for adequate airflow and verify that the system has been charged with the correct refrigerant level in accordance with the manufacturer's guidelines.
- Conduct a combustion safety test after ducts are sealed to be sure all gas or oil-burning appliances are working properly.
- Replace indoor and outdoor coils for maximum efficiency.

**Use Your Ceiling Fan** – You can reverse the motor and airflow direction of ENERGY STAR certified ceiling fans to operate the fan year-round. In the summer, use the ceiling fan to produce downward airflow, creating a wind-chill effect that cools the occupants of the room. In the winter, reverse the motor and operate the ceiling fan at low speed to produce a gentle updraft that forces warm air near the ceiling down into the occupied space.

**Maintain Your System** – Schedule your contractor to do annual check-ups of your heating and cooling system to help prevent future problems and unwanted costs. Check your filter every month, especially during heavy use months (winter and summer). If the filter looks dirty after a month, change it. At a minimum, change the filter every 3 months.