



ENERGY STAR® Home Upgrade

2023 Key Messaging

ENERGY STAR ENERGY STAR Home Upgrade

Why choose an ENERGY STAR Home Upgrade?

- An [ENERGY STAR Home Upgrade](#) is a set of six high-impact energy efficiency improvements that you can make for your home that are designed to work together to deliver significant energy and cost savings.
- Communities around the country have begun the transition to a clean energy future. More and more of the electricity we use is being generated from clean, renewable sources instead of fossil fuels, which pollute the air and contribute to climate change. The Environmental Protection Agency and the ENERGY STAR Program want to help you and your family be part of this transition in a way that saves you money on your energy bills and improves the health and comfort of your home.

What does an ENERGY STAR Home Upgrade entail?

- An ENERGY STAR Home upgrade includes the following ENERGY STAR certified equipment:
 1. Heat pump
 2. Heat pump water heater
 3. Smart thermostat
 4. High-performing windows
 5. A well-sealed and insulated attic
 6. Making sure your home is electric-ready.
- Upgrading these elements can help you save energy and money and help you transition away from fossil fuels for a healthier, and more comfortable home.
- You can choose the improvements that make the most sense for your home and implement them as old equipment is replaced.

How does an ENERGY STAR Home Upgrade improve your home's cooling and heating?

General

- For the average American household, almost half of the annual energy bill goes towards heating and cooling – approximately \$900 a year. Therefore, finding ways to efficiently heat and cool your home are key to reducing energy usage and saving money year-round.
- Efficient heating and cooling is a key focus of an ENERGY STAR Home Upgrade. Upgrading your heating and cooling system to a heat pump that has earned the

ENERGY STAR and using a smart thermostat to manage your home energy usage can have a significant impact on your heating and cooling costs.

Cooling

- It may be time to consider switching out or upgrading your cooling system, if:
 - Your central air conditioner or cooling system is more than 10 years old, needs frequent repairs, and/or your energy bills are going up.
 - Some rooms of your home are either too hot or too cold
 - Your home experiences humidity problems, excessive dust, or rooms that never seem to get comfortable.
- Replacing your air conditioner with an ENERGY STAR certified heat pump is a great way to both heat and cool your home and can provide energy and cost savings year-round.
- During the summer months, the heat pump serves as a central air conditioner and reduces cooling costs compared to a conventional air conditioner.
- Replacing your central AC with a heat pump does not require renovation or an electrical panel upgrade and can be done for a modest extra cost compared to the installation of a standalone AC system.

Heating

- It may be time to consider switching out or upgrading your heating system, if:
 - Your HVAC or heating system is more than 10 years old, needs frequent repairs, and/or your energy bills are going up.
 - Some rooms of your home are either too hot or too cold
 - Your home experiences humidity problems, excessive dust, or rooms that never seem to get comfortable.
- Ductless heat pumps, or mini/multi split heat pumps, are an increasingly popular alternative to radiator or baseboard heating because they're super-efficient, and no duct work is needed.
- Many new ENERGY STAR certified ASHPs excel at providing space heating even in the coldest of climates, as they use advanced compressors and refrigerants that allow for improved low temperature performance.
- Heat pump technology has improved significantly over the past several years, and many ASHP systems are capable of delivering heating capacity and efficiency at low outdoor temperatures.
 - ENERGY STAR certification requires third-party verified performance for low temperatures, testing ASHPs down to 5°F.
 - Testing cold climate ASHP performance at 5°F ensures that your ASHP will provide all the heat you need to keep your home comfortable all winter.
- An ENERGY STAR certified heat pump can provide heating for approximately 1/3 the cost of traditional electric baseboard heating, depending on where you live, and approximately 1/2 the cost of oil heat.
- Because they transfer rather than generate heat, ENERGY STAR certified mini splits use up to 60% less energy than standard home electric radiators.

What are the benefits of each project?

1. Heat Pump Heating and Cooling

- Switching to an ENERGY STAR certified air source heat pump will help you save energy and money all year long. Heat pumps are more efficient than furnaces and boilers because they move heat instead of creating it. In other words, they are not relying on electricity or the burning of fossil fuels to generate heat, but instead are pulling heat from the outside air. Heat pumps serve double duty with heating and cooling, making this an investment that counts throughout the year.
- If you currently have central air, consider switching in a heat pump next time you replace your system. Replacing your central AC with a heat pump does not require renovation or electrical panel upgrades and can be done for a modest extra cost compared to the installation of a standalone AC system.
- During the summer months, the heat pump serves as a central air conditioner and reduces cooling costs compared to conventional air conditioners. Replacing your existing AC with a heat pump creates a dual-fuel system, meaning you'll still use your existing heating system as needed. Dual fuel systems allow for the flexibility of heating with a heat pump or with a more traditional gas or oil furnace and enables you to use each system optimally based on costs and environmental benefits.
- Even homes without duct work can benefit from a heat pump. Ductless heat pumps, or mini split heat pumps, are an alternative to radiator or baseboard heating, as well as a replacement for window units for cooling. No duct work is needed. Instead, a head unit, or multiple head units, are mounted on an interior wall or ceiling, with an accompanying unit outside

2. Heat Pump Water Heater

- After heating and cooling systems, your water heater is the second largest energy user in your home and uses more energy than your refrigerator, clothes washer, dishwasher, and dryer, combined. Given the energy intensity of water heaters, switching to an energy efficient heat pump water heater, specifically one that has been independently certified to earn the ENERGY STAR label, can save you hundreds of dollars on your yearly energy costs.
- Heat pump water heaters are more efficient than standard water heaters because they use electricity to move heat from one place to another – in this case, from surrounding air to water – as opposed to generating heat directly.
- Currently, the most efficient electric options on the water heater market are ENERGY STAR certified heat pump water heaters (HPWHs). Compared to a standard electric resistant water heater, a HPWH can save a family of four as much as \$425 a year on their energy bill. That is nearly a 50 percent savings over standard electric resistance water heaters, with a lifetime savings of around \$3,700.

3. Smart Thermostat

- A smart thermostat that has earned the ENERGY STAR label is the perfect way to control your temperature settings to save energy and money. They're called smart

because they learn your family's preferences for heating and cooling without you having to program them like old programmable thermostats. Plus, they take the guess work out of what settings will optimize for comfort and energy savings, adjusting the temperature in your home throughout the day to fit your needs and save money on energy bills.

- Families with high energy use can save \$100 per year.

4. High-Performing Windows and Storm Windows

- ENERGY STAR certified windows save you energy and money while providing comfort and performance. Windows also have the lowest insulating power of any part of the home envelope (or shell).
- Replacing old, drafty windows with ENERGY STAR certified windows improves the comfort of your home and lowers household energy bills by a national average of 12%.

5. A Well-Sealed and Insulated Attic

- The proper sealing and insulation of your home is a very important, but often overlooked aspect of your comfort and home energy use as insulation is out of sight and out of mind. Roughly 9 out of 10 homes in the U.S. are under-insulated.
- Sealing air leaks all around your home and adding insulation in easy-to-access places can help you save an average of 10% on your total annual energy use and an average of 15% on your heating and cooling costs.

6. Making your Home Electric Ready

- The future of transportation is electric, so even if you don't plan on getting an EV right away, there are things you can do now to make your home electric vehicle ready. Installing the necessary wiring at your house will help you prepare for this change to a cleaner, cheaper transportation fuel. If you do purchase an EV, look for an ENERGY STAR certified charger to save on energy bills.
- To make your house electric ready work with your electrician to confirm whether your electric panel can accommodate additional electric loads -like a water heater, EV charger and a heat pump. In some cases, particularly in older homes, electrical upgrades may be required.

How can I Save on these Upgrades?

- While upgrading these elements of your home may cost more as an upfront purchase, the savings on your annual energy bills will help recoup these costs. There are also [federal tax credits](#) and utility [rebates](#) that you can take advantage of to help lower the initial purchase cost.
- There are a number of ENERGY STAR certified product categories that qualify for a federal tax credit, including products for the interior of a home, as well as improvements to a home's envelope or exterior – such as windows, doors, insulation, and similar items.
- ENERGYSTAR.GOV is the source of information for consumers who want to learn about these new tax credits and how they can help them maximize their savings on home energy efficiency projects. Consumers are encouraged to bookmark our webpage on [Federal Tax](#)

[Credits](#), and stay up-to-date on information related to tax credits that are available to homeowners.

Where can I find Additional Information?

- You can find additional information on an ENERGY STAR Home Upgrade at energystar.gov/homeupgrade, which also features buying guidance, tips and advice for installation, and incentives like rebates and tax credits to make these improvements more affordable for consumers.