

House and Home

Energy Star® Appliances

Energy Star®-labeled appliances save you money by using less electricity and water than other appliances. Better appliance energy efficiency comes from quality materials and technologically advanced materials.

Although energy efficient models sometimes cost more to purchase initially, any extra up-front cost can often be made up with savings on your utility bill. One helpful way to figure out if buying an Energy Star® appliance makes sense for you is to think of two price tags.

The **first price tag** is the purchase price that you pay at the store when you buy the appliance. Some local utilities offer rebates on the purchase and installation of Energy Star® rated appliances. If yours does, this would reduce the initial price.

The **second price tag** is the cost to operate the appliance over its lifetime. You pay to operate the appliance every month for as long as you own the appliance. You might be surprised to see how much it can cost to own an appliance that seems like a good deal up front.

What is an Energy Star® Appliance?

The Energy Star® may be found on clothes washers, refrigerators, dishwashers, and room air conditioners. An appliance receives the Energy Star® rating if it is significantly more energy efficient than the minimum government standards, as determined by standard testing procedures. The amount by which an appliance must exceed the minimum standards is different for each product rated, and depends on available technology. Energy Star® rated products are always among the most efficient available today.

Energy Star® clothes washer

Energy Star® clothes washers use superior designs that require less water to get clothes thoroughly clean. These machines use sensors to match the hot water needs to the load, preventing energy waste.

There are two designs: top-loading and front-loading.

Both designs will get clothes cleaner and take better care of your fabrics, while using less water and energy than standard washing machines.

Front-loading Energy Star® models are similar in design to washers used in laundromats. These horizontal-axis or tumble-action machines repeatedly lift and drop clothes, instead of moving clothes around a central axis.

Top-loading Energy Star® washers use sensor technology to closely control the incoming water temperature. To reduce water consumption, they spray clothes with repeated high-pressure rinses to remove soap residues rather than soaking them in a full tub of rinse water.

What does this mean to you?

- Nearly **50 percent less water** and 30% to 40% less energy used per load
- Washer design causes **less wear and tear** on clothes
- **Bulky items** such as blankets fit easily in the super capacity basket
- Better water extraction means **less dryer time**, for further energy savings

A typical household does nearly 400 loads of laundry per year, using about 40 gallons of water per full load with a conventional washer. In contrast, a full-size Energy Star® clothes washer uses 20 to 25 gallons per load. You could save as much as 7,000 gallons of water per year. And, you are saving all the energy that would have been needed to heat that water. This adds up to savings for you and a big boost for the environment.

How do I choose the right washer?

Energy Star® clothes washers come in a range of capacities from about 1.6 cubic feet up to 2.9 cubic feet. A typical large-capacity washer, such as found in most households, is about 2.7 cubic feet.

Because washers are most efficient when they are fully loaded, you should choose a size that most closely matches your laundry needs. For a family that does a lot of laundry, one of the larger models probably makes the most sense. For an individual or couple who do less laundry, a small model will be the most economical.

Some Energy Star® models can be stacked or mounted under a countertop. This is a useful feature for people short on space, such as in an apartment dwelling. Check with the manufacturer to see which models are available in this configuration.

Energy Star® refrigerators

The refrigerator is the single biggest power consumer in most households. A typical refrigerator made around 1990 uses over 900 kilowatt hours per year—that's the same amount of energy you would use by leaving a 1,250 watt hair dryer on for a month! And the older your refrigerator is, the more power it burns. Energy Star® refrigerators incorporate a number of advanced features to save energy while keeping your food fresh. To make a better refrigerator, manufacturers use:

- Better insulation
- More efficient compressors
- Improved heat transfer surfaces
- More precise temperature and defrost mechanisms

With improved insulation, the compressor needs to run less often. Since the compressor runs less often and therefore produces less heat while it is running, the kitchen remains cooler. This in turn reduces the need to air condition as much to maintain the same comfort level. Energy Star® refrigerators must exceed minimum federal standards for energy consumption by at least 20%.

Manual defrost refrigerators are not covered under the Energy Star® program, but are generally more efficient than automatic defrost refrigerators. Proper maintenance of manual defrost refrigerators is necessary to realize the energy savings. The Department of Energy offers tips on buying refrigerators and lowering the energy usage of your refrigerator.

Energy Star® dishwashers

Energy Star® dishwashers save by using both improved technology for the primary wash cycle, and by using less hot water to clean. Construction includes energy efficient motors, and other advanced technology such as sensors that determine the length of the washing cycle and the temperature of the water necessary to clean the dishes.

A significant savings can be realized by minimizing the amount of hot water needed. Dishwashers use built-in electric heaters to heat water to a temperature hot enough to clean the dishes effectively. Energy Star® dishwashers minimize the amount of water needed, saving the energy required to heat it in addition to other efficiencies. Energy Star® dishwashers must exceed minimum federal standards by at least 13%.

Energy Star® room air conditioners

Energy Star® room air conditioners feature high-efficiency compressors, fan motors, and heat transfer surfaces.

In an air conditioner, the air is cooled when it passes over the refrigerant coils which have fins, similar to an automobile radiator. The compressor sends the cooled refrigerant through the coils, and cools the air as it is forced over the coils. By using advanced heat transfer technologies, more of the heat from the air is transferred into the coils than in conventional models, saving energy required to compress the refrigerant.

It is important to buy an air conditioner that is the correct size for the room. Air conditioners remove heat and humidity from the air. Humidity is removed when the air in a room passes over the cooling coils of an air conditioner. If the unit is too large, it will cool the room quickly, but only remove a portion of the humidity. This leaves the room with a damp, clammy feeling to the air, since the air will not have been circulated enough. A properly sized unit will remove humidity effectively as it cools. Running a smaller unit for a longer time will use less energy to completely condition a room than running a larger unit for a shorter time.

What about other types of appliances?

Other appliance types are not currently covered by the Energy Star® program. However, it is always important to consider energy efficiency when purchasing any appliance. The Department of Energy offers guidelines and tips on purchasing Clothing Dryers, Ovens and Ranges, and Water Heaters.

Also, be sure to read the Federal Trade Commission's publication "[How to Buy an Energy-Efficient Home Appliance](#)" for general information about shopping for an efficient appliance.

Where can I get appliances?

Energy Star® appliances are carried by retailers nationwide. To see a list of all qualified products or to find specific models that qualify for the Energy Star® rating, go to the [Energy Star® website](#).

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