

Chill your energy bill with a new refrigerator

Appliances account for about 20 percent of the energy consumption in your home, with the refrigerator accounting for about half of that amount. That makes your refrigerator the largest single user of electricity in your kitchen – especially if it’s an older unit that’s likely using two or three times as much electricity as models available today. In fact, investing in a high-efficiency refrigerator now could have such a significant effect on reducing your monthly power bills that you’ll be able to recover the purchase price of the new unit long before it has outlived its usefulness.

When you go shopping for a refrigerator, you’re going to be confronted with a lot of information about energy-saving technologies – some worthwhile and some not – and a seemingly unending list of convenience and “nice-to-have” features. To help decide which refrigerator best fits your needs, focus on these four things:

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- Size
- Door style
- Features
- Real cost

To determine the proper **size**, says the Home Appliance Manufacturer’s Association (www.aham.org/consumer/), figure on eight to 10 cubic feet of refrigerator space for two people – and one cubic foot for each additional family member. If you do a lot of entertaining or freeze large quantities of food, add a few more cubic feet.

When considering **door style**, you have three basic choices. A *top-mount* refrigerator (with the freezer on top) will be a little more energy-efficient than a *side-by-side* unit, but you’ll give up convenience; the side-by-side configuration works better in small kitchens, for a family with children and for someone in a wheelchair. A *bottom-mount* refrigerator puts the freezer under the refrigerated section; some models use a pullout drawer, which prevents

food from tumbling out when you open the door.

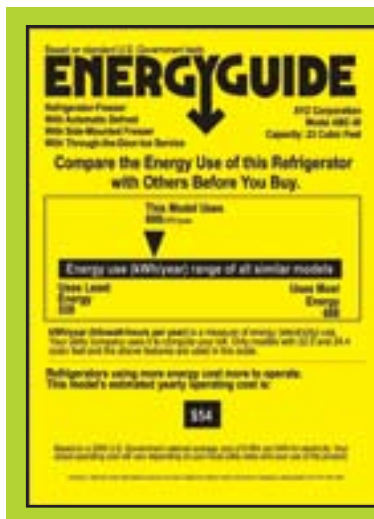
You’ll also find variations of these styles, including units with bottom freezers and side-by-side doors for the refrigerator above – and even four-door models that let you determine the use of the compartments. And if you’re remodeling your kitchen or building a new home, you might want to consider refrigerator drawers that fit into standard cabinet spaces and eliminate the need for a conventional refrigerator.

Some **features** can help reduce energy usage, while others simply make a refrigerator easier to use. For example, a unit with side-by-side doors may include an ice and cold-water dispenser in one of the doors, which eliminates the need to open the freezer door (and let the cold air inside escape).

Special drawer systems with separate temperature and humidity settings can help you keep different types of food fresher for longer periods. And sliding glass shelves make it easy to reach items at the back of the refrigerator – and they do a better job of containing spills than open shelves.

Every refrigerator has two prices that make up its **real cost** of ownership: one for *purchase price* and the other for *operating cost*. The purchase price is a one-time expense, but the operating cost runs for the lifetime of the refrigerator – an average of 13 years.

Operating costs include monthly electricity charges and maintenance. To estimate power costs, use the EnergyGuide label that’s required to be posted on every new refrigerator. (See box at left.) Maintenance costs are a little harder to estimate; check with the appliance store’s service department, talk with friends who have appliances from the same manufacturer or



Look for the EnergyGuide label

The federal government requires that all refrigerators display the bright yellow-and-black EnergyGuide label to help you compare the energy efficiency and estimated operating costs of comparably sized units. The label gives you two important pieces of information:

- Estimated energy use (in kWh per year), on a scale showing a range for similar models
- Estimated annual operating cost, based on the national average cost of electricity

go to the library or Internet and check annual consumer guides or magazines.

How does a refrigerator earn its ENERGY STAR?

It really doesn't make sense to purchase a refrigerator that isn't ENERGY STAR® qualified. Refrigerators displaying the ENERGY STAR come in all shapes and sizes, including models with top freezer, bottom freezer and side-by-side configurations. They use high-efficiency compressors, state-of-the-art insulation and precise temperature control systems to improve energy efficiency without sacrificing the features you want, such as automatic icemakers and adjustable interior storage shelves and bins.

To earn their ENERGY STAR,



conventional refrigerators larger than 7.75 cubic feet must be at least 15 percent more energy efficient than current federally mandated standards. As a result, today's ENERGY STAR qualified units consume about half as much energy as models manufactured through 1992 – and 40 percent less than ones sold in 2001.

Looking for a compact refrigerator to fit under a countertop in your family room or send to a college dorm room? Compact refrigerators – ones less than 7.75 cubic feet in capacity and 36 inches in height – must be at least 20 percent more efficient than the federal standard to be ENERGY STAR qualified.

FOR MORE INFORMATION on ENERGY STAR qualified refrigerators (including a list of manufacturers and a product listing), go to www.energystar.gov/index.cfm?c=refrig.pr_refrigerators.

From one price extreme to the other

These very different refrigerators both are ENERGY STAR qualified, and they illustrate that affordable doesn't mean featureless. When you go shopping, you're sure to find something that meets your needs.

For example, this basic, all-white GE 15.7-cubic-foot top-freezer refrigerator may look like a little plain, but it includes desirable features such as door storage for milk and other gallon-sized containers, encased condenser coils that don't require cleaning and a quiet design that significantly reduces operating noise. According to its EnergyGuide label, the estimated yearly operating cost of the GE Model GTH16BBSLWW is \$35; it has a suggested retail price of \$659.



At the other end of the spectrum, this LG 26.2-cubic-foot, side-by-side refrigerator includes a long list of premium features, such as a 15-inch, cable-ready LCD TV with DVD connection and FM radio; weather and info center; an eight-category recipe bank with 100 preloaded recipes; and a personal digital photo album that can display a slide show of favorite photos. The LG also includes a full complement of convenience features, including a door-mounted icemaker that saves valuable storage space (and makes three different cube sizes); an indirect cooling system that prevents dehydration, freezing or frosting of produce; an anti-bacterial door gasket; and a tall water dispenser that can handle a pitcher. According to its EnergyGuide label, the estimated yearly operating cost of the LG Model LSC27990TT is \$56; it has a suggested retail price of \$3,499 to \$3,699.



That old refrigerator in your garage or basement isn't doing you any favors

Keeping your 15- or 20-year-old refrigerator around may seem like a good idea – after all, it's paid for and it still seems to be working fine. However, the reality is that the old appliance may be costing you a lot more than it's worth; in fact, if you really need the cold-storage capacity of a second refrigerator, you'll likely be better off buying a new, low-cost, ENERGY STAR qualified unit.

New refrigerators are much more efficient than old models. On average, pre-1993 refrigerators cost at least \$50 more per year more to operate than today's ENERGY STAR qualified models – and pre-1980 units can cost about \$150 more per year. (And that's before you factor in the cost of future maintenance when the seals begin to leak, refrigerant needs recharging or mechanical parts fail).

If you want to check the predicted operating costs of your present older refrigerator (or your semi-retired one), go to this page on the ENERGY STAR Web site – www.energystar.gov/index.cfm?fuseaction=refrig.calculator – and run the Refrigerator Retirement Savings Calculator. All you have to do is enter your refrigerator's model number and the amount you pay per kWh of electricity. The results may surprise you!

