

ENERGY GUIDE LABELS

When purchasing large appliances, consumers need to pay special attention to the "Energy Guide Labels." These labels have black letters on a bright yellow background, and they are found on the following major large appliances: refrigerators, freezers, water heaters, dishwashers, clothes washers, room and central air conditioners, and furnaces.

There are three types of labels. One type gives **general information** and tells you to look for a fact sheet that contains more information. Central heating and cooling systems will carry this kind of label. On the fact sheets you will find specific energy information for comparative shopping.

The second type of label gives a **dollar figure** that shows the model's estimated annual energy cost. The lower the dollar figure on this label, the more efficient the appliance is. Appliances to be labeled with a dollar cost are refrigerators, freezers, water heaters, dishwashers, and clothes washers.

Labels for clothes washers and dishwashers carry two sets of energy costs -- one for electric water heaters and one for gas water heaters. You need this information because the main expense of using a dishwasher or clothes washer is the cost of heating the water.

The third type of label shows an **energy-efficiency rating**. Climate-control appliances, such as room and central air conditioners and furnaces, will carry this label. With the energy-efficiency rating, the higher the number, the more efficient the appliance.

Computing Life-Cycle Costs

According to the American Council for an Energy-Efficient Economy publication, The Most Energy-Efficient Appliances 1992-93, "the best appliance buy is not necessarily the least expensive model nor the one with the highest efficiency." To decide which is the best buy, ACEEE recommends you compute and compare life-cycle costs of the different models being considered.

To compute a life-cycle cost, you will need to know: (see below)

- ◆ The **appliance's purchase cost** (ask the dealer).
- ◆ The **cost of energy** (ask your local utility company).
- ◆ The **yearly energy cost** to operate the appliance (check the Energy Guide Label).
- ◆ The **estimated lifetime** of the appliance in years (see chart "Characteristics of Appliances" on back page)
- ◆ A **discount factor**-a number that adjusts for inflation and for the fact that a dollar spent today will not have the same value as a dollar spent in the future, since today's dollar could be invested and earn interest over time (see chart on back page).

The information you have for the above points can then be used in the following formula to calculate life-cycle costs:

$$\text{Life-Cycle Cost} = \text{Purchase Price} + [\text{Annual Energy Cost} \times \text{Estimated Lifetime} \times \text{Discount Rate}]$$

Energy Guide Labels on appliances can help you select more efficient models. Be sure to use them when you shop for a new energy-efficient appliance!

Sources

American Council for an Energy-Efficient Economy. (1993). Consumer guide to home energy savings (3rd ed.). Berkeley, CA: ACEEE.

American Council for an Energy-Efficient Economy. (1992). Energy-efficient appliances 1992-93. Washington, DC: ACEEE.

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CHARACTERISTICS OF APPLIANCES FOR LIFE-CYCLE COST COMPARISONS

	Average lifetime of appliance (in yrs.)	Discount factor*
Water heater (elec.)	13	0.83
Water heater (gas)	13	0.83
Refrigerator/Freezer	20	0.76
Freezer	20	0.76
Air conditioner (central)	12	0.84
Air conditioner (room)	15	0.81
Range/oven	18	0.78
Clothes washer	13	0.83
Clothes dryer	18	0.78
Dishwasher	12	0.84

* Based on a real discount rate of 5% and an energy price escalation rate of 2% per year above inflation. Source: Consumer Guide to Home Energy Savings. Reprinted with permission from the Consumer Guide to Home Energy Savings, 3rd edition, copyright 1993 by the American Council for an Energy-Efficient Economy. Available for \$8.95 (ppd.) from ACEEE, 2140 Shattuck Ave., Suite 202, Berkeley, CA 94704.

The average lifetime of an appliance may be different than the average useful life. Consumers may choose to "retire" an appliance early because repairs are no longer cost effective. For example, while the average lifespan of a refrigerator may be 20 years, the average useful life is around 13 years (Association of Home Appliance Manufacturers, 1990).

Source: Association of Home Appliance Manufacturers (1990). Average useful life of major home appliances. Chicago, Illinois: National Family Opinion Inc.

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