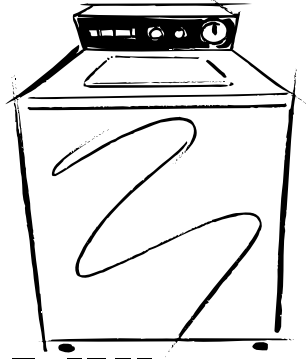


## Boosting Efficiency, Saving Energy

Whether you're adding a second refrigerator and freezer or buying your first air conditioner, you're joining a global revolution in appliance ownership. Worldwide, sales of domestic electrical appliances grew by 5 percent in the late 1990s. And the potential for growth is enormous, particularly in developing countries, where appliance penetration rates have until recently been low.

Domestic appliances improve quality and convenience in our lives. But they also consume large amounts of resources. Home appliances are the world's fastest-growing consumers of energy after automobiles—accounting for 30 percent of electricity use in industrial countries and 12 percent of their greenhouse gas emissions. And in rapidly developing China, electricity demand surged more than 400 percent during the 1980s because of purchases of new refrigerators and other items.

The good news is that running these products doesn't have to require high inputs of energy and water. If more consumers demand it, manufacturers will develop new and better products that perform the same services but with less environmental impact: for instance, dishwashers that use less soap and water, or air conditioners that require less energy.



### DID YOU KNOW...?

- \* The average size of refrigerators in U.S. households increased by 10 percent between 1972 and 2001, and the number per home rose as well.
- \* More than 65 percent of Chinese city-dwellers now own a refrigerator, and more than 90 percent own a clothes washer—both up from less than 5 percent only two decades ago.
- \* In India, sales of frost-free refrigerators are projected to grow nearly 14 percent annually.
- \* In 1978, 56 percent of American homes had cooling systems, most of which were small window units; 20 years later, three quarters of U.S. homes had air conditioners, and nearly half were large central systems.
- \* Standby power—the electricity consumed when appliances are turned “off” but not unplugged—could account for as much as 10 percent of total electricity use in industrial countries by 2020. This will require almost 400 additional 500-megawatt power plants that will emit more than 600 million tons of carbon dioxide annually.

**TAKE ACTION!**

### SIMPLE THINGS YOU CAN DO:

- ✓ When buying new appliances, look for energy efficiency labels and consider models that use less water, detergent, and other resources.
- ✓ Keep your appliances clean and in good working order, to help them run more efficiently.
- ✓ Check the age and condition of your major appliances—especially the refrigerator. You may want to replace it with a more energy-efficient model before it dies.

## SUCCESS STORIES

- ❖ Many countries have adopted mandatory national energy standards and efficiency labeling programs to save energy and other resources and to steer consumers towards appliances that won't dominate their electricity bills or damage the environment. The U.S. government's Energy Star label, for example, helps shoppers identify products that exceed federal efficiency standards and also result in lower energy costs.
- ❖ Since the establishment of national energy efficiency standards in the U.S. in 1987, manufacturers have achieved major savings in appliance energy use, nearly tripling the efficiency of new refrigerators between 1972 and 1999, while also saving consumers money.
- ❖ By 2000, 43 countries had household appliance efficiency programs in place—seven times as many as in 1980. Most of these were in Europe and Asia; North America lags relative to its share of appliance use.
- ❖ In the early 1990s, facing a 14-percent annual increase in electricity demand, the Thai government initiated a partnership with manufacturers to improve the efficiency of buildings, lighting, and cold appliances. Between 1996 and 1998 alone, the market share of efficient refrigerators in Thailand skyrocketed from 12 to 96 percent.
- ❖ Technologies available today could advance appliance efficiency by at least an additional 33 percent over the next decade, and further improvements in dryers, televisions, lighting, and standby power consumption could avoid more than half of projected growth in consumption in the industrial world by 2030.
- ❖ A study in the mid-1990s of 18 U.S. co-housing communities, where residents share common gardens, recreational spaces, or other areas, found that members owned 4 percent fewer cars once they moved in to the communities, while their ownership of washers and dryers dropped by 25 percent, and of lawnmowers by 75 percent.

## CHALLENGE YOURSELF AND OTHERS:

Turning appliances and electronics completely off after use saves a lot of power. Make an effort to turn your appliances off. Educate your work place, school, or house of worship about this by posting information in common areas like kitchens and computer centers.

## FOR MORE INFORMATION

- 🔌 **Collaborative Labeling and Appliance Standards Program (CLASP)** ([www.clasponline.org](http://www.clasponline.org)) provides comprehensive information on energy efficiency standards and labels around the world.
- 🔌 **Alliance to Save Energy (www.ase.org)** is a leader in the design and implementation of labeling and efficiency standards programs in the U.S. and worldwide.
- 🔌 **American Council for an Energy Efficient Economy (ACEEE) (www.aceee.org)** is dedicated to advancing energy efficiency as a means of promoting both economic prosperity and environmental protection.
- 🔌 **Energy Star (www.energystar.gov)** is a U.S. government program that helps businesses and individuals protect the environment through superior energy efficiency.