



Cooperative efforts raise building energy codes and appliance standards

THE BENEFITS

Raising energy codes and standards helps to:

- Reduce energy consumption
- Lower building operating costs
- Lower consumer energy bills
- Focus and accelerate energy technology R&D

The Program

To increase the energy efficiency of buildings, appliances, and equipment, the U.S. Department of Energy (DOE) Office of Codes and Standards is leading a comprehensive effort to establish minimum efficiency codes, standards, and guidelines that lay the groundwork for reduced energy use and lower operating costs.

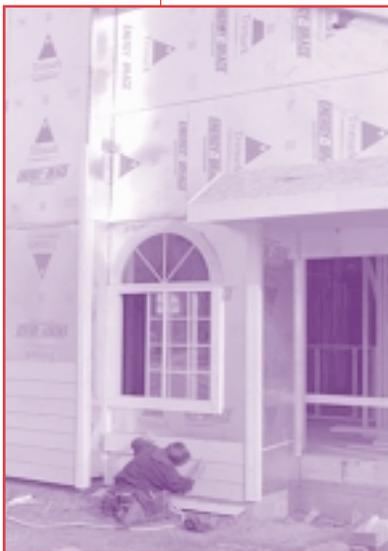
- The Building Standards and Guidelines Program helps code and building industry organizations to upgrade model energy codes and helps States to adopt and implement these models.
- The Lighting and Appliance Standards Program develops test procedures and minimum efficiency standards for residential appliances and commercial equipment.

The Approach

The Office of Codes and Standards works with a broad coalition of builders, designers, code officials, manufacturers, environmental organizations, States, utilities, and consumer groups to develop codes and standards that are technologically feasible and cost-effective and save significant energy.

The Building Standards and Guidelines Program works within the building industry consensus standard and code revision process to upgrade model energy-efficient building codes and standards. The program then develops training materials to help States adopt and implement these models. Financial assistance is also provided. The program promulgates energy standards for Federal buildings based on upgraded model codes.

The Lighting and Appliance Standards Program sets energy efficiency standards for appliances and equipment, using test procedures it develops to measure energy efficiency and energy use and estimate the annual operating cost. Standards on products such as refrigerators, air conditioners, furnaces, and dishwashers help Americans save on their energy bills with every new appliance, whether budget model or top of the line. In some cases, manufacturers have developed innovative energy-efficient products in anticipation of future revised standards, making energy awareness a competitive factor in the marketplace.



Together, these programs are working to achieve bottom-line benefits for building owners and consumers: improved performance and lower energy bills.





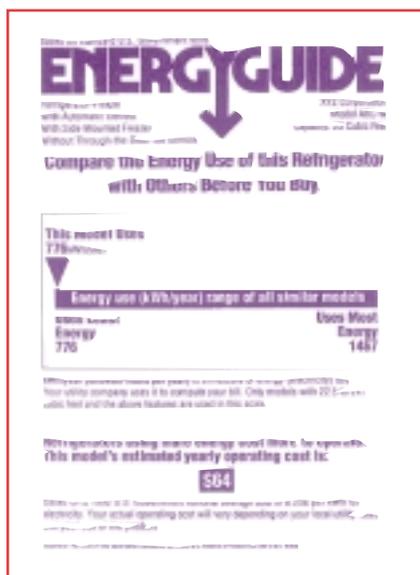
BUILDINGS FOR THE 21ST CENTURY

Buildings that are more energy-efficient, comfortable, and affordable . . . that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy/money saving opportunities to both builders and buyers of homes and commercial buildings
- Works with State and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to States and communities for deployment of energy-efficient technologies and practices

The Results

DOE officials estimate that energy use in buildings is growing at a rate of 3.3 percent each year, with the Nation's 95 million households and 4.5 million commercial buildings spending \$195 billion each year. A 30 percent improvement in U.S. building efficiency would reduce consumer costs by \$38 billion within 15 years.



The Lighting and Appliance Standards Program develops test procedures to help consumers compare the energy use and cost to operate of comparable models. This information is prominently displayed on the EnergyGuide label.

The Building Standards and Guidelines Program plays a key role in reaching this target. Energy code development, adoption, and support activities to date have achieved 104.3 Tbtu in energy savings; \$755 million in energy cost savings (1995 \$); and 2.4 MMTons of carbon reductions.

Lighting and Appliance Standards Program results are equally impressive. Current appliance standards, first enacted in 1987, have already saved consumers \$17.5 billion in energy costs. As new appliances continue to replace old, these savings will accumulate. With the new 1997 energy standard, for example, every refrigerator manufactured after July 1, 2001, will use up to 30 percent less energy than the typical refrigerator on sale today—without sacrificing size or features. In 2010, total energy savings from standards already adopted are expected to be 0.62 quads of energy—the equivalent of shutting down nearly five large power plants. For consumers, annual savings on energy costs will average over \$38 per household in 2010 or \$4.4 billion nationwide.

With such a significant reduction in the combustion of fossil fuels for power generation, it is also estimated that existing standards will have prevented approximately 8.7 million tons of carbon emissions in 2010—the equivalent of removing 9 million automobiles from the road.

TO LEARN MORE ABOUT THE OFFICE OF CODES AND STANDARDS, CONTACT:

Office of Codes and Standards, EE-43 • U.S. Department of Energy
1000 Independence Avenue, SW • Washington, DC 20585-0121 • (202) 586-9127

Visit the Codes and Standards Web site at: www.eren.doe.gov/buildings/codes_standards
Or call the Energy Efficiency and Renewable Energy Clearinghouse at: 1-800-DOE-3732