



Overview

The Appliance and Equipment Standards Program at the Department of Energy (DOE) is a Congressionally directed activity that helps ensure energy security and grid resiliency and establishes a uniform and equitable market for domestic manufacturers. The program covers more than 70 products, representing about 90% of home energy use, 70% of commercial building energy use, and 30% of industrial energy use. Standards implemented since 1987 have reduced utility bills for American households and businesses by \$105 billion in 2024 alone.

National Benefits

National energy efficiency standards ensure uniform requirements across the U.S. to eliminate a patchwork of state and local requirements, reducing regulatory burden for manufacturers and providing them with a larger national marketplace. Standards also promote grid resiliency and reliability by reducing peak demand and enable greater energy security. Standards adopted through January 2025 are expected to save over 160 quadrillion Btus of energy through 2035, which is more energy than the entire U.S. consumes in one year. More specifically, standards implemented from 2021 – 2024 will together reduce utility bills by over \$1 trillion over 30 years and save the average family at least \$100 a year through lower utility bills. These standards will cumulatively reduce greenhouse gas emissions by approximately 2 billion metric tons—an amount roughly equivalent to the emissions of 15 million gas-powered cars over 30 years.

Consumer Benefits

DOE's Standards Program has resulted in large energy bill savings for consumers and businesses. In 2024, a typical household saved about \$576 per year off their energy and water bills as a result of standards. Standards help renters, who often pay their energy bills, but don't get to choose major energy-using appliances.



In addition, efficiency standards help lower the costs of innovative energy efficient technologies by encouraging economies of scale. The result is higher efficiency products that are more widely available and more affordable to own.

Manufacturer Benefits

Federal energy efficiency standards benefit appliance and equipment manufacturers by preempting a potential patchwork of state standards with a single federal standard, reducing regulatory burden. A uniform national standard also assures a larger market, lower compliance costs, and better economies of scale for manufacturers, their distributors, and retailers. Uniform test procedures lower testing costs, lower regulatory burden, and provide a neutral platform upon which manufacturers can compete to differentiate and market the performance of their products.

The Program's enforcement efforts protect industry competitiveness by lowering the risk of investing in energy efficient technologies and ensuring importers of foreign-made products play by the same rules.

Rulemaking Schedule and Process

The Standards Program's predictable rulemaking schedule is almost entirely driven by statutory deadlines DOE must meet to comply with Energy Policy and Conservation Act, as amended by subsequent energy legislation. The schedule reflects the program's obligation to review all standards and test procedures at intervals of six and seven years, respectively.

DOE considers transparency and stakeholder

participation to be essential and encourages all stakeholders to participate in the rulemaking process. Stakeholders include consumers, manufacturers, trade associations, utilities, energy efficiency advocates, and the general public. The Standards Program has established the Appliance Standards and Rulemaking Federal Advisory Committee as means of facilitating deeper stakeholder engagement by allowing for negotiated rulemakings under the guidelines set forth in the Federal Advisory Committee Act.

Benefits Resulting from Appliance and Equipment Standards

The Appliance Standards Program provides benefits for the nation, individual consumers and businesses, and manufacturers.



- Promotes energy security, grid resiliency and reliability by reducing peak demand
- Creates and protects manufacturing jobs in the U.S.
- Spurs innovation and competition in the marketplace



- Disseminates reliable and comparable product operating cost information
- Provides access to improved products with new features and comfort attributes
- Delivers utility bill savings to consumers



- Reduces regulatory burden by preempting a potential patchwork of state standards with a single federal standard.
- Protects manufacturers of quality products from those manufacturing inferior products, including importers, by ensuring a level playing field.
- Creates economies of scale, which decreases costs to develop and produce innovative energy efficient technologies.
- Facilitates market introduction of energy efficient technologies by validating product performance



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For more information, visit:
energy.gov/eere/buildings/appliance-and-equipment-standards-program

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