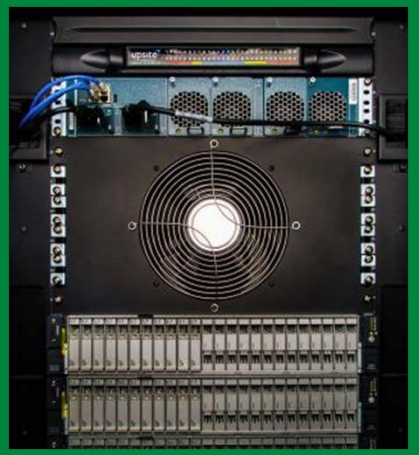
The U.S. Appliance Standards Program



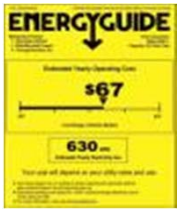
U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Building Technologies Office
Energy Efficiency and Renewable Energy
United States Department of Energy

PROGRAM ELEMENTS

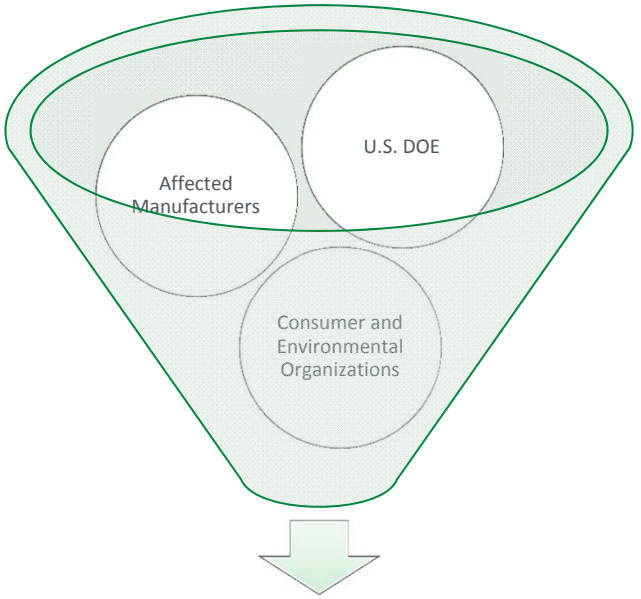
- Test Procedures
  - *Energy efficiency is often difficult to define, and requires different metrics for different products.*
  - *Test procedures must be carefully developed, so they can't be gamed.*
- Standards
  - *The standard is defined in terms of the test procedures established by the Program.*
  - *Manufacturers test their products using the DOE test procedure; products must meet the standard level to be sold in the U.S.*
- Partner with DOE General Counsel on Certification and Enforcement
  - *Over 2 million products certified as compliant to DOE and over $15 million in fines assessed.*
- EPA Partnership on ENERGY STAR
  - *DOE leads test procedure development, testing/verification, and identify ENERGY STAR MOST EFFICIENT appliances*

- Work with FTC on Energy Guide labels on appliances
  - *Results are based generally on calculations resulting from DOE test procedures.*
  - *Manufacturers file ratings for each appliance with FTC; FTC allows manufacturers to submit data to DOE via CCMS.*



STAKEHOLDER ENGAGEMENT

- Approaches to Standards Development
  - Regulatory process with stakeholder engagement throughout
  - Negotiated through Federal Advisory Committee with industry and other stakeholder representatives (e.g., pumps)
  - Consensus agreements by stakeholders brought to DOE (e.g. motors)
  - Industry voluntary agreements (e.g. set-top boxes)



Less Contentious Outcome; Less legal action; Less delay

DOE supports collaborative approaches.

STANDARDS SAVE *BIG*: PRODUCT PROFILE

Over 60 covered products

Consumer

Commercial and Industrial

Lighting

Plumbing

90% of residential energy use covered

60% of commercial energy use covered

30% of industrial energy use covered

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APPLIANCE EFFICIENCY GAINS DUE TO STANDARDS

The Standards Program has helped drive remarkable gains in the energy efficiency of household appliances and equipment, resulting in large energy bill savings.

- A typical new refrigerator uses one-third the energy than in 1973—despite offering 20% more storage capacity and being available at half the retail cost.
- A typical new clothes washer uses 70% less energy than the typical 1990 model.
- A typical new dishwasher uses more than 40% less energy than the typical 1990 model.
- A typical new air conditioner uses about 50% less energy than the typical 1990 model.

STANDARDS SAVE *BIG*: MONEY AND ENERGY

$58 Billion

The annual utility bill savings to **consumers** from standards promulgated to date in 2014. This amounts to nearly $250 per household per year in energy bill savings.

$1.8 Trillion

The cumulative utility bill savings to **consumers** from standards are estimated to be over $960 billion through 2020, growing to nearly $1.8 trillion through 2030.

128 quadrillion Btu

The cumulative energy savings of standards promulgated to date will be about 70 quadrillion British thermal units (quads) of energy through 2020, and will amount to nearly 128 quads through 2030 – more than 1 year's worth of US energy use.

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2014 ACCOMPLISHMENTS - STANDARDS

10 Final Rules

The number of final rules issued by DOE in 2014 – the most ever in one calendar year. DOE also issued 8 final rules for test procedures.

$78 billion

The cumulative utility bill savings to **consumers** from standards issued in 2014 are estimated to be $78 billion through 2030.

435 million metric tons

The cumulative carbon emissions savings through 2030 – equivalent to the emissions of electricity use of 60 million homes in one year.