RETAIL INDUSTRY LEADERS ASSOCIATION

DOE APPLIANCE AND EQUIPMENT STANDARDS: AN INTRODUCTION FOR RETAIL

This Appliance and Equipment Standards factsheet is a part of a series on Energy Efficiency in Buildings - Standards and Codes for Retail

BACKGROUND AND EXECUTIVE SUMMARY

More than 40 percent of the total energy consumed, and 70 percent of the electricity used in the United States is used for operating buildings. Appliances and building-related equipment such as electric motors, lighting, refrigerators, and water heaters account for almost all the energy used in buildings—the U.S. Department of Energy (DOE) estimates that these products represent about 90 percent of residential energy use, 60 percent of commercial building energy use, and 30 percent of industrial energy use. [EESI Fact Sheet: Energy Efficiency Standards for Appliances, Lighting and Equipment] Making these processes more efficient in buildings saves businesses billions of dollars on energy bills, avoids unnecessary pollution, creates jobs, improves U.S. competitiveness, and reinvigorates domestic manufacturing [EERE: Energy-Saving Homes, Buildings & Manufacturing].

To inform retailers and other commercial businesses on the latest updates in building efficiency standards and energy codes at both the national and state levels, RILA is producing a series of factsheets covering:

- DOE Appliance and Equipment Standards
- Light Bulb Efficiency Standards
- Building Energy Codes: ASHRAE vs. IECC
- State Energy Efficiency Laws and Codes

This fact sheet provides a starting point and quick reference tool for retailers on DOE Appliance and Equipment Standards, as well as a timeline on the development and maturity of the DOE Process Rule. The summary table below provides an overview of various standards recently updated within the DOE's Appliance and Equipment Standards Program—a part of a suite of programs housed under the Building Technologies Office (BTO) aimed to help reduce building energy consumption.

DOE APPLIANCE AND EQUIPMENT STANDARDS

In accordance with the Energy Policy and Conservation Act of 1975 (EPCA), as amended, the DOE implements minimum efficiency standards for a wide range of appliances and equipment used in residential and commercial buildings [EESI Factsheet: Energy Efficiency Standards for Appliances, Lighting and Equipment], including air compressors, battery chargers, commercial packaged boilers (CPBs), portable air conditioners (ACs), and more. The national energy efficiency standards completed through 2016 are expected to save 71 quadrillion British thermal units (quads) of energy by 2020 and nearly 142 quads through 2030 [BTO: Saving Energy and Money with Appliance and Equipment Standards in the United States].

In 2019, DOE proposed changes to the 1996 Process Rule guiding the development of appliance efficiency standards. The proposal was designed to change the agency's process for setting energy-efficiency standards and test procedures for residential appliances and commercial equipment, enhancing transparency, accountability, and regulatory certainty for stakeholders by expanding early opportunities for public input on priority setting and rulemaking activities, defining a significant energy savings threshold for updating energy conservation standards, and committing to publishing final test procedures at least 180 days in advance of a standards proposal, among other things.

In February 2020, DOE published the final rule. Key components of the updated Process Rule include:

- Establishing a threshold for "significant" energy savings of at least 0.3 quads of site energy over 30 years, or, if less than that amount, a 10% improvement in appliance efficiency over existing standards;
- Requiring that DOE establish final test procedures at least 180 days before proposing a new energy efficiency standard;
- Clarifying that DOE will codify private sector consensus standards for efficiency test procedures;
- Providing more deference to the efficiency standards established by ASHRAE for commercial products;
- Requiring that DOE "cover" products before setting efficiency standards;

- Requiring that DOE re-start the standards rulemaking process whenever the test procedure is amended;
- Requiring that DOE re-start the rulemaking process whenever more products are included within the scope of a regulation; and
- Adding a mandate that makes the process rule legally binding in all instances.

For additional information related to DOE Appliance and Equipment standards, please refer to DOE's website with factsheets, quick links, and contact information. [DOE: Appliance and Equipment Standards Program]

As DOE proceeds with its rulemakings, the Edison Electric Institute notes that there is a possibility that key decisions related to updating certain efficiency standards could be finalized by the end of 2020, pending numerous lawsuits over the Process Rule and several requests from the DOE for information related to both efficiency standard test procedures and appliance energy conservation standards. [EEI: Energy Codes for Buildings & Equipment Efficiency Standards]

The table below provides an overview of various standards recently updated within the DOE's Appliance and Equipment Standards Program.

STANDARD	DESCRIPTION	DATE IN EFFECT
Uninterruptible Power Supplies	In this final rule, DOE is adopting new energy conservation standards for uninterruptible power supplies, a class of battery chargers. DOE determined that the new energy conservation standards for these products would result in significant conservation of energy and are technologically feasible and economically justified. Learn more here.	The effective date of this rule is March 10, 2020. Compliance with the new standards established for uninterruptible power supplies in this final rule is required on and after January 10, 2022.
Commercial Packaged Boilers	In this final rule, DOE is adopting a more-stringent energy conservation standards for certain commercial packaged boilers. Learn more here.	The effective date of this rule is March 10, 2020. Compliance with the amended standards established for commercial packaged boilers in this final rule is required on and after January 10, 2023.
Air Compressors	In this final rule, DOE is adopting new energy conservation standards for air compressors. DOE determined that the adopted energy conservation standards for these products would result in significant conservation of energy and are technologically feasible and economically justified. Learn more here.	The effective date of this rule is March 10, 2020. Compliance with the new standards established for compressors in this final rule is required on and after January 10, 2025.

STANDARD	DESCRIPTION	DATE IN EFFECT
Portable Air Conditioners	In this final rule, DOE establishes new energy conservation standards for portable ACs. DOE determined that the energy conservation standards for these products would result in significant conservation of energy and are technologically feasible and economically justified. Learn more here.	The effective date of this rule is March 10, 2020. Compliance with the standards established for portable ACs in this final rule is required on and after January 10, 2025.

RETAIL COMPLIANCE CENTER:

- The Retail Compliance Center (RCC) provides resources on environmental compliance and sustainability for all types and sizes of retailers. The RCC's goal is to develop retail-specific resources, tools and innovative solutions to help companies cost-effectively improve their compliance and environmental performance.
- Visit the Retail Compliance Center