

ENERGY STAR Appliance Roadmapping: Outlining Appliance Specification Revisions

Building on dialog with appliance partners and stakeholders, ENERGY STAR is pleased to provide an overview of the specification development process, and outline considerations for potential specification revisions in appliance product categories in 2016 and beyond.

Appliance Specification Development Overview

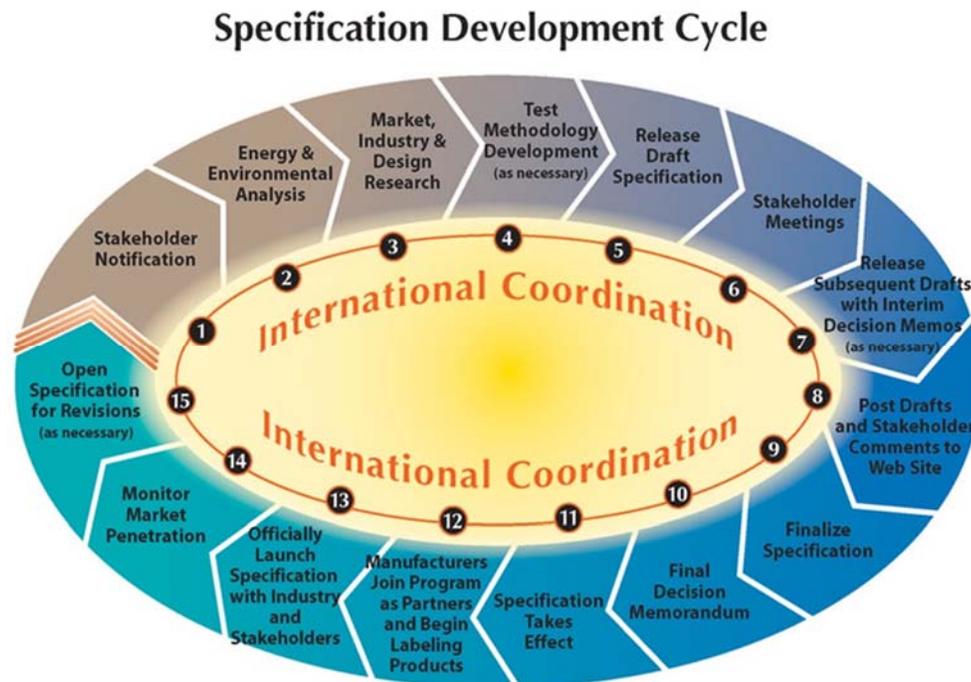
ENERGY STAR typically revises appliance specifications every three years, or when market share exceeds 35%. EPA collects annual unit shipment data from partners and/or their representative associations and uses it to project the market penetration of ENERGY STAR certified products.¹

A number of additional factors can drive the revision of the product requirements. These include:

- Change in the Federal minimum efficiency standards
- Technological advancements
- Product availability limitations
- Issues with consumers realizing expected energy savings
- Performance or quality issues
- Issues with test procedures

The specification development cycle (see Figure 1) begins with stakeholder notification and continues with supporting analysis on energy and environmental aspects, as well as market and industry research. The process is iterative and builds in multiple opportunities for stakeholder input, including one-on-one conversations with individual partners, review of and response to written comments on draft specifications, and participation in webinars describing and discussing draft specifications.

Figure 1. ENERGY STAR Specification Development Cycle



¹ EPA publishes annual summary reports on unit shipment data. The 2014 report is available [online](#).

EPA also considers new products for inclusion in the ENERGY STAR portfolio on a more limited basis. To be considered, these products must meet the ENERGY STAR Guiding Principles. These are:

- Significant energy savings will be realized on a national basis.
- Product energy consumption and performance and can be measured and verified with testing.
- Product performance will be maintained or enhanced.
- Purchasers of the product will recover any cost difference within a reasonable time period.
- Specifications do not unjustly favor any one technology.
- Labeling will effectively differentiate products to purchasers.

EPA does not anticipate a wide expansion of products in the appliance category recognized by the program at present.

2016 Revision Launches

In 2016, ENERGY STAR plans to begin work on revisions for specifications in two appliance product categories: Residential Refrigerators and Clothes Washers.

Residential Refrigerators

The ENERGY STAR Version 5.0 specification for Residential Refrigerators was finalized in May 2013 and took effect in September 2014, in alignment with the DOE federal standard change. As part of EPA's three-year specification review cycle, the Agency anticipates a possible revision starting in late 2016/early 2017. In its review, EPA will weigh the factors described above in the Appliance Specification Development Overview section.

Clothes Washers

In 2016, EPA plans to evaluate the aspects of performance most relevant to ENERGY STAR residential clothes washers. The goal of this effort will be to ensure that ENERGY STAR clothes washers continue to meet consumer expectations for performance, in anticipation of the development of a Version 8.0 specification. EPA welcomes partner participation in identifying performance parameters and metrics and sharing product data and experiences.

Residential Clothes Washer efficiency levels were updated as part of the Version 7.0 revision effective March 2015, in alignment with the DOE federal standard change. An ENERGY STAR Version 8.0 Clothes Washer revision would aim for an effective date in alignment with the next DOE federal standards for Residential as well as Commercial Clothes Washers scheduled to take effect on January 1, 2018. Of note is that the Commercial Clothes Washer efficiency levels were unchanged by the Version 7.0 revision, and should be updated to reflect the Appendix J2 test method and the Appendix J2 Modified Energy Factor (MEF_{J2}) and Integrated Water Factor (IWF) efficiency metrics.

During the Version 8.0 Clothes Washer specification revision, given the recent addition of an ENERGY STAR category for Clothes Dryers and adoption of the Appendix D2 test method, EPA anticipates evaluating potential scope expansions for products with drying functionality that are currently excluded from ENERGY STAR eligibility, i.e., combination all-in-one washers, and washers with an optional dry cycle, pending additional information. EPA would consider: a) market share of such products; b) efficiency of such products and available technologies for improving efficiency; and c) confirmation that the energy use of the drying cycle can be accurately measured and reported.

2016 New Product Efforts

If resources allow in 2016, EPA will evaluate launching a specification development effort for one new appliance product category: Miscellaneous Refrigeration. EPA will continue to carefully monitor the DOE standards development process and seek alignment on definitions, product classes, and test methods. Once EPA has sufficient information on these factors, the ENERGY STAR specification development process may launch, with a likely effective date of early 2017. Partners interested in this category are encouraged to provide information on available products and efficient technology advancements.

2016 and Beyond

There are multiple factors that trigger revision of ENERGY STAR specifications. Table 1 indicates the projected effective dates for upcoming ENERGY STAR revisions, based on ENERGY STAR's regular three-year review cycle. Factors such as those described in the Appliance Specification Development Overview section may drive a revision earlier, or may call for a delay.

Table 1. ENERGY STAR Appliance Specification Revisions in 2016 and Beyond

Product Category	ENERGY STAR			DOE Standards		Anticipated Effective Date of Next ENERGY STAR Revision
	Current ENERGY STAR Specification	Final Date of Last Spec Revision	Effective Date of Last Spec Revision	Effective Date of Last DOE Standards Change	Effective Date of Next DOE Standards Change	
Refrigerators	V 5.0	2013	2014	2014	TBD	2017
Residential Clothes Washers	V 7.0	2014	2015	2015	2018	2018
Commercial Clothes Washers	V 7.0	2014*	2015	2013	2018	2018
Clothes Dryers	V 1.0	2014	2015	2015	TBD	2018
Dishwashers	V 5.2 (V 6.0 effective Jan 29, 2016)	2015	2016	2013	TBD	2019
Room Air Conditioners	V 4.0	2015	2015	2014	TBD	TBD

*Commercial clothes washers were unaffected by V 7.0 revision. The last modification to commercial clothes washer criteria was finalized in 2013 in the V 6.1 specification.