



ENERGY STAR[®]

Appliance Specification Updates:

An Overview in Preparation for the Road Ahead Session 2015 ENERGY STAR Products Partner Meeting

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ENERGY STAR Overview

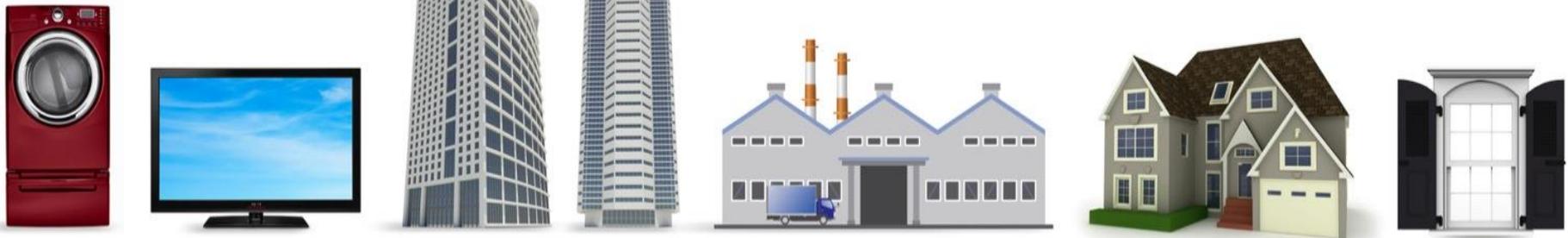
Product Updates

- Laundry: Washers & Dryers
- Room Air Conditioners
- Residential Dishwashers
- Residential Refrigerators-Freezers

What's New?

EPA's ENERGY STAR identifies the most energy-efficient **products**, **buildings**, **plants**, and **new homes** – all based on the latest government-backed standards.

Today, every ENERGY STAR label is verified by a rigorous third-party certification process.





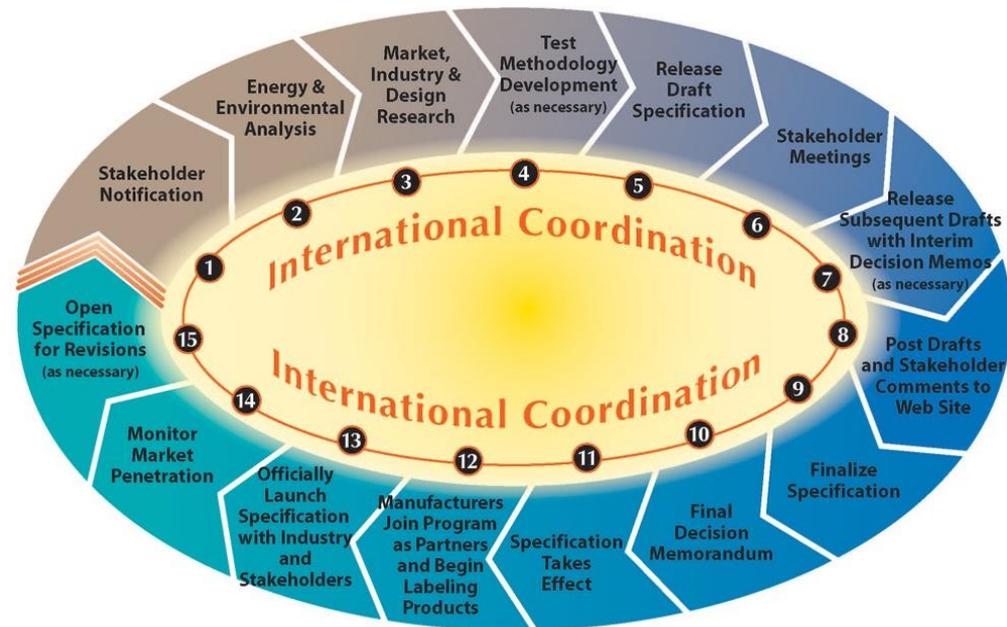
Specification Development

- Specifications are reviewed every 3 years or when market share exceeds 35%
- When developing or revising a specification, EPA balances:
 - The need to keep pace with evolution among leading products and continue to effectively differentiate for consumers
 - Timing of new Federal standards
 - Production cycles and other factors important to the industry

ENERGY STAR Guiding Principles

1. Significant energy savings
2. Product performance maintained or enhanced
3. Purchasers can recover investment in increased efficiency within a reasonable time period
4. Efficiency achieved through one or more technologies; products can be broadly available
5. Energy consumption can be measured and verified with testing
6. Label provides meaningful differentiation

Specification Development Cycle



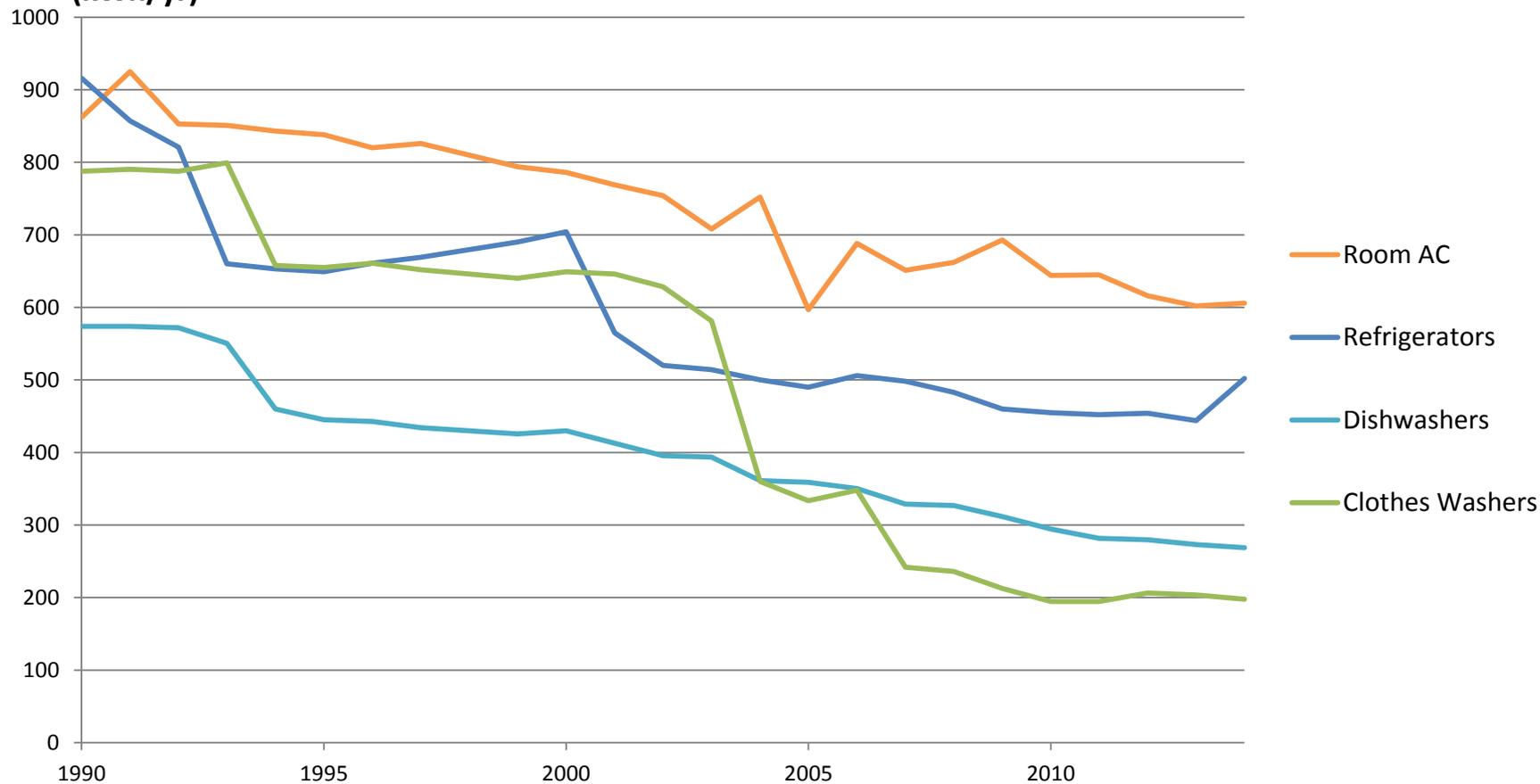
Description of specification process is also available on ENERGY STAR web site.



Efficiency Gains

Energy Use per Year
(kWh/yr)

U.S. Shipment Weighted, Average Annual Energy Use, 1990-2014





ENERGY STAR Overview

Product Updates

- ***NEW V 4.0*** Room Air Conditioners
- ***NEW V 6.0*** Dishwashers
- **Laundry: Washers & Dryers**
- **Residential Refrigerators-Freezers**

What's New?

Room Air Conditioners Specification Takes Effect Oct 26, 2015

	Room Air Conditioners Version 4.0
Opportunity	•About 6 million room A/Cs sold in 2014
Efficiency Criteria	10% less energy use than conventional model
Other	Installation requirements ¹
Savings	56 kWh/yr, on average (\$6.85/yr)
“Connected”	Included ¹ (<i>Optional</i>)
Metric, Test Method	CEER ² , DOE Appendix F

- As of June 30, 2015, new products must certify to Version 4.0.

¹Installation and Connected Criteria FAQ available on ENERGY STAR RAC partner page. Visit www.energystar.gov/specifications and click on Room Air Conditioners.

²Combined Energy Efficiency Ratio (CEER)



V 4.0 ENERGY STAR Room Air Conditioner Highlights

- EPA built anticipated use of SNAP alternatives (e.g., propane and R-32) into its analysis of proposed levels, as one of a suite of technology advances/options to achieve higher efficiency.
- V 4.0 includes installation requirements to improve efficiency and consumer comfort:
 - Weather stripping/gasket materials that resist air and water infiltration and UV degradation
 - Materials are intended to seal all areas between the unit and window opening
 - For window units, side curtains must have minimum R-value of 1
 - Products must ship with installation instructions. For through-the-wall units, this includes recommendations re: appropriately sized covers for the off-season



Residential Dishwashers Specification Takes Effect Jan 29, 2016

	Residential Dishwashers Version 6.0
Opportunity	<ul style="list-style-type: none"> Continue to see more efficient products and new technologies being implemented
Efficiency Criteria	Standard: ≤ 270 kWh/yr , ≤ 3.5 gal/cycle Compact: ≤ 203 kWh/yr , ≤ 3.1 gal/cycle
Other	<i>Optional</i> Cleaning Performance Reporting using the ENERGY STAR Residential Dishwasher Cleaning Performance Test Method (Rev. Feb – 2014)
Savings	12% energy, 30% water savings (standard dishwasher) Per Unit: \$6/yr, on average
“Connected”	Included (<i>Optional</i>)
Metrics, Test Method	Annual Energy Consumption (AEC) and per-cycle water consumption, DOE Appendix C1

- As of Sept 15, 2015, new products must certify to Version 6.0.



Laundry Specifications Took Effect in Early 2015

	Clothes Washers Version 7.1	Clothes Dryers Version 1.0
Opportunity	<ul style="list-style-type: none"> • Good product availability at efficiencies exceeding current criteria 	<ul style="list-style-type: none"> • Significant savings opportunity, in particular, with more effective automatic cycle termination • Recognize new efficient technology being introduced to U.S market
Savings	25% energy, 40% water savings National: \$4 billion Per Unit: \$40/year, on average	20% energy savings National: \$1.5 billion Per Unit: \$9-18 /year
Other	None	Drying cycle time User Information Requirements
“Connected” Criteria	Included (Optional)	Included (Optional)
Effective Date	March 7, 2015	January 1, 2015
Metrics¹, Test Method	IMEF, IWF - DOE Appendix J2 In development: Demand response test	CEF - DOE Appendix D2 In development: Demand response test

Refrigerators & Freezers Specification Took Effect Sept 15, 2014

	Refrigerators & Freezers Version 5.0
Program Summary	<ul style="list-style-type: none"> • Over 1150 refrigerator products and 100 freezer products have certified to the Version 5.0 specification, representing over 90 brands • 21 refrigerator products have certified as having demand response tested functionality
Savings	Approximately 10% less energy than models meeting the 2014 DOE standards (\$4.5-10/year – varies by type/size)
“Connected” Criteria	Included (<i>Optional</i>)
Metric, Test Method	Annual Energy Use, DOE Appendix A and Appendix B Final test method for refrigerator/freezer demand response capabilities



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What's New?



ENERGY STAR Most Efficient 2015 Update: Growing Utility Collaboration

- Utility efficiency program sponsors: 15 in 2014 to over 40 in 2015
 - Partners serve approximately 26 million residential customers, or nearly 70 million consumers
 - 10 more program sponsors expressed interest in leveraging ENERGY STAR Most Efficient
- Spot marketing to raise awareness and build demand of ENERGY STAR Most Efficient among target consumers
 - In 2014, spot marketing in Albany, NY and Sacramento, CA. Online and radio ads focused on the benefits of ENERGY STAR Most Efficient products. Banner placements in online publications (HGTV, The New York Times, and Forbes). 12 million impressions in 2014.
- Enhancing the functionality of the ENERGY STAR Most Efficient website, adding price and locator information. Pilot with refrigerators and clothes washers, extending to all products sold at retail



ENERGY STAR Most Efficient 2016 Criteria

- Clothes Washers
 - Modest adjustment to harmonize the criteria for front load and top load products certified to V 7.1
 - **33% less energy and 32% less water than the 2015 federal standard (based on a front load model)**
 - Retains suspension of small volume washers
- Dishwashers
 - Retains 2015 criteria for products certified to V5.2 and V6.0
 - **22% less energy and 36% less water than the 2013 federal standard**
- Refrigerators
 - **~15% less energy than the 2014 federal standard**
 - Retains 2015 criteria for bottom freezers and side-by-sides
 - Revised criteria (to be finalized October 16, 2015) allow for greater recognition of the energy savings associated with top freezer models
 - Refrigerators are eligible for dual recognition under the 2016 Emerging Technology Award, which will feature low Global Warming Potential (GWP) refrigerant systems that deliver added energy savings.



ESPPM Teasers: The Road Ahead, Oct 14 at 10am

- A facilitated dialogue among ENERGY STAR partners including appliance retailers, manufacturers, EEPS
- Let's discuss what you've identified as key opportunities and challenges facing ENERGY STAR appliances in the next 5 years
- Please review the discussion topics included in the Sept 30th email and come ready to participate – we'd love to hear your input!



Contacts

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