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ENERGY STAR® is a U.S. Environmental Protection Agency program helping businesses and individuals fight global warming through superior energy efficiency.

Energy Star Update

Update on Specification development and Third Party Certification and Verification

What Is ENERGY STAR?



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- Voluntary climate protection partnership with the U.S. Environmental Protection Agency (EPA)
- Strategic approach to energy management, promoting energy efficient products and practices
- Tools and resources to help save money and protect the environment
- Influential brand recognized by over 80 percent of Americans

The ENERGY STAR Product Label



- The ENERGY STAR label was established to:
 - Reduce greenhouse gas emissions and other pollutants caused by the inefficient use of energy
- AND
- Make it easy to identify energy-efficient products that offer savings on energy bills without sacrificing performance, features, and comfort.

ENERGY STAR Guiding Principles



- ENERGY STAR label effectively differentiates products by labeling the most efficient products
- Other guiding principles:
 - Cost effective for the end user
 - Significant unit/national energy savings
 - Performance is maintained or enhanced
 - Efficiency performance is measured and verified with industry accepted test method
- Third-party certification procedures bolster the integrity of the program and ensure energy-efficient performance

Eligible ENERGY STAR Qualified CFS Equipment



Refrigerators and Freezers



Hot Food Holding Cabinets



Dishwashers



OVENS



Griddles



Fryers



Steam Cookers



Ice Machines

Overview of Improved Efficiency with ENERGY STAR



Product Type	% Improved Efficiency*
Dishwashers	25% (+ 25% more water efficient)
Fryers	30%
Griddles	10-25%
Hot Food Holding Cabinets	65%
Ice Machines	15% (+10% more water efficient)
Ovens	10-25%
Refrigerators and Freezers	30%
Steamers	60%

*Approximated values

Status of CFS Specification Revision



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Product Type	Estimated Revision
Dishwashers (expand scope to include flight machines)	Under revision – expected final June 2012 – effective March 2013
Fryers	Revised – Effective August 2011
Griddles	No expected revision in 2012
Hot Food Holding Cabinets	Revised – Effective October 2011
Ice Machines (expanded scope to include continuous)	Under revision – expected final April 2012 – effective January 2013
Ovens (expanding scope to include combi)	Revision underway – expected final Fall 2012 – effective Summer 2013
Refrigerators and Freezers	Initiate revision Summer 2012
Steamers	Initiate revision Fall 2012
Pre Rinse Spray Valves	Initiate development Summer 2012

From Self-Certification to Third-Party Certification (3PC)



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- **Self-Certification (1992- March 2010)**
 - Partners test products, confirm conformance to specification, and label with the ENERGY STAR.
 - Partners submit qualified product data to EPA according to frequency stipulated in specification (generally required to update EPA once per year).
 - EPA reviews qualified product data and adds models to lists of qualified products.
 - EPA verifies energy performance of select models only.
- **Modified Self-Certification (April 2010-December 2010)**
 - Partners test products and confirm conformance to specification.
 - Partners submit test reports and cover sheets to EPA to qualify their products.
 - EPA reviews test data, and adds products to lists of qualified products.
 - EPA notifies partners that they may label products with the ENERGY STAR.
 - EPA verifies energy performance of select models only.
- **3PC (effective January 2011)**
 - Partners will have products tested in EPA-recognized labs prior to qualification and labeling.
 - CBs will certify that products meet program requirements based on a review of data.
 - CBs will upload certified data to EPA for creation of qualified product lists.
 - CBs will conduct verification and challenge testing on select models after qualification.
 - CBs will evaluate retested products that have undergone significant post-qualification changes.

International Standards



INTERNATIONAL STANDARD ISO/IEC 17011

First edition
2004-09-01
Corrected version
2005-02-15

Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies

INTERNATIONAL STANDARD ISO/IEC 17025

Second edition
2005-05-15

General requirements for the competence of testing and calibration laboratories



GUIDE 65

General requirements for bodies operating product certification systems

EPA Recognition



- EPA accepts and reviews applications for recognition on an ongoing basis
- All ABs, CBs, and Labs require EPA recognition



Third Party Certification Overview



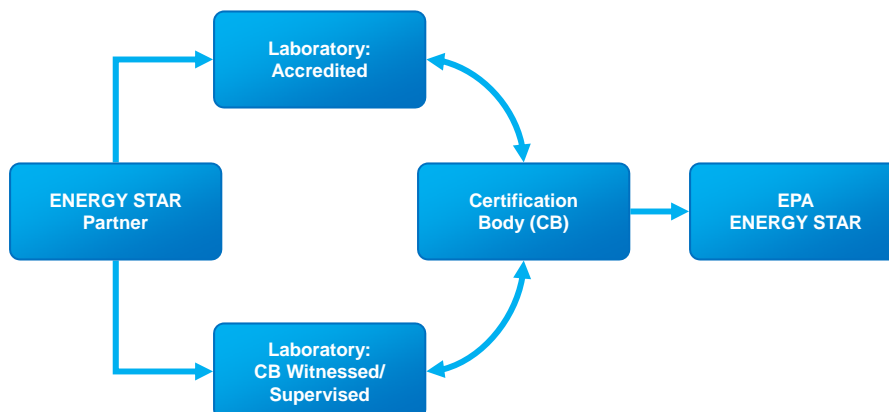
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- Since January 1, 2011, all new ENERGY STAR qualifications shall entail product testing by an EPA-recognized Laboratory, and certification by an EPA-recognized Certification Body (CB). CBs will certify that products meet program requirements based on a review of test data.
- Since January 2011, over 26,000 models have been third party certified
 - Over 1200 CFS models
- EPA-recognized Laboratories may be either:
 - First- or third-party laboratories **accredited** by an EPA-recognized Accreditation Body (AB) to ISO/IEC 17025.
 - Witnessed or supervised manufacturer's (i.e., first-party) testing laboratories (W/SMTLs) **assessed** to ISO/IEC 17025 by an EPA-recognized CB.

Product Qualification Process

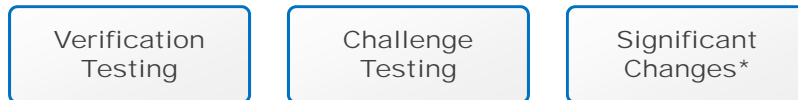


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Product Re-testing

➤ Three types:

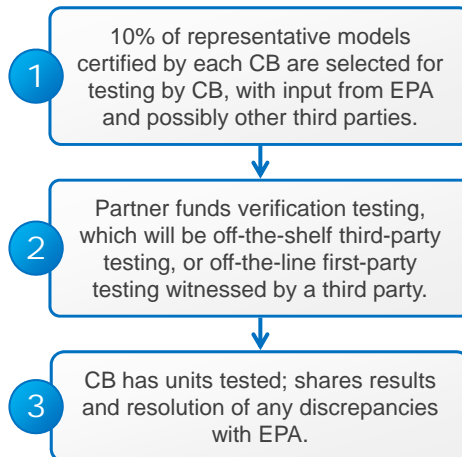


*Retesting in the case of significant changes to a given qualified model

- In case of failure to meet program requirements, EPA disqualifies and delists model and/or requires corrective and preventive measures on the part of the Partner

Product Re-testing: Verification Testing

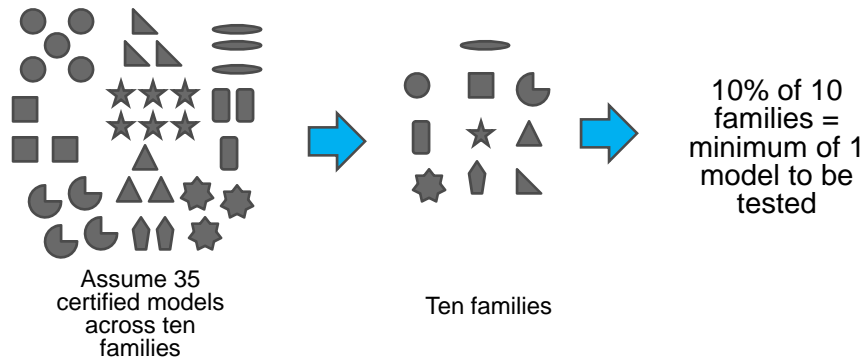
- Verification testing ensures models meet ENERGY STAR requirements post-qualification
- U.S. Department of Energy initiated verification testing of ENERGY STAR qualified models in 2010



Product Re-testing: Verification Testing



- 10% minimum of all products qualified per CB.
 - Products derived from representative models are subject to verification testing, but no more than one product per family may be selected.
- Example:



2011 Verification Testing



- 884 Products Tested **
 - 168 Appliances
 - 124 Lighting
 - 475 HVAC
 - 57 Vent Fans
 - 29 Electronics and OE
 - 19 Roofing Products
 - 12 CFS

** as of 3/2012

Product Re-testing: Challenge Testing



- All EPA-recognized CBs have in place a challenge testing procedure, and contractual provisions for challenge testing.
- Challenge may be initiated only when the CB has conveyed details of the challenge to the challengee, or confirmed the challenger has independently done so, and the CB has received the following:
 - Identification of the challenged model number; and,
 - Identification of the challenged parameters and the basis for the challenge.

Product Re-testing: In case of changes



- The partner must notify the CB that certified its product of any changes to that product that could result in it no longer meeting the requirements of the relevant ENERGY STAR specification.
- CB will require and evaluate the results of retesting of the product's performance.

Previously Qualified Products



- Most specifications have pending or anticipated revisions in 2011 or early 2012.
- In these cases, products qualified prior to January 1, 2011 will remain on Qualified Products Lists (QPLs) until the revised specification becomes effective.

Previously Qualified Products



- In 2011, Eight specifications were identified as not undergoing a near-term revision:

- Commercial Steam Cookers
- Commercial Refrigerators & Freezers
- Commercial Griddles (Gas)
- Central Air Conditioners and Air Source Heat Pumps
- Geothermal Heat Pumps (Water-to-Water)
- LCHVAC
- Roof Products
- Room Air Cleaners

- Products qualified prior to January 1 in these categories must have been registered with an EPA-recognized CB by March 31, 2011 in order to be retained on the Qualified Product list and eligible for verification testing.

Evaluation

- EPA tracks all non-compliance issues, and posts lists of disqualified models online at www.energystar.gov/integrity



Key Resources

- [Current ENERGY STAR Product Specifications](#)
- [ENERGY STAR Commercial Food Service Equipment](#)
- [ENERGY STAR Specifications under revision/development](#)
- [Third Party Certification Homepage](#)
- [Third Party Certification Frequently Asked Questions \(FAQs\)](#)

Please address questions not answered by these resources to Certification@energystar.gov.