

Underwriters Laboratories



ENERGY STAR New Program Requirements

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Overview

Changing Landscape in North America

The ENERGY STAR Program

Changes to program requirements

EPA plans for currently qualified products

CB and Lab Recognition

How to apply new ENERGY STAR program



Changing Landscape

A wave of changes...

Canada: Increasing the stringency and scope of existing minimum energy performance standards (MEPS), & introducing new MEPS & associated reporting and compliance requirements for several product categories

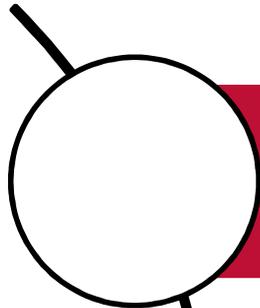
US: EPA now requires 3rd Party Certification, including qualification testing of products in approved labs, review by a Certification Body (CB), and participation in a CB's ongoing verification testing program for ENERGY STAR compliance

US: State specific regulations continue to evolve and add complexity to the regulatory environment

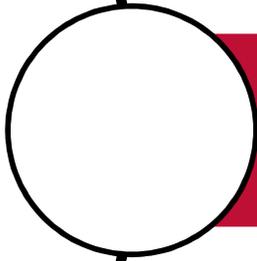


U.S. Environmental Protection Agency::

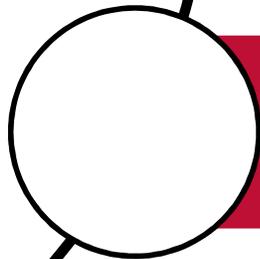
A Closer Look



Starting January 1, 2011, EPA will require that **all new product submissions** to the ENERGY STAR program be **reviewed by a Certification Body (CB)**, and that qualification testing be performed under specific criteria.



In particular, qualification will require **testing** to be performed **at EPA-recognized and approved facilities**. First-party (manufacturer) facilities are allowed under CB supervision.



Participating products will also be subject to an **annual, on-going verification program**, managed by the manufacturer's CB , which includes direct-from-market sampling and testing at third-party, EPA accredited laboratories.

⇒ **from Self-Declaration to 3rd Party Certification and Verification!**



Energy Efficiency Regulations::

A Closer Look

Increasingly more stringent requirements coming live in 2011 and 2012

Typically requires testing to be conducted in an approved laboratory

Other states/countries are looking into their respective requirements

⇒ Increasingly more stringent requirements and the trend is spreading!



The ENERGY STAR Program

What is the ENERGY STAR program?

- A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy.
- Helps save money and protect the environment through energy efficient products and practices



The Previous Program

What are the basics of the requirements?

- The product must be tested by the required test method and shown to meet the higher efficiency levels required by ENERGY STAR.
- This efficiency level is set so that only around 25% products in each category meet ENERGY STAR. This level of efficiency increases as technology in the product field improves.



The New Program

Qualification Testing

- Test data for each product from **approved, accredited lab**
- Labs may be independently accredited, or approved through a CB's Data Acceptance Program
- Data must be reviewed by an approved CB and provided to EPA

Verification Testing

- Ongoing verification as a condition for use of ENERGY STAR logo
- Requires 10% of certified products to be selected and tested on an annual basis
- Testing to be done in 3rd party labs, first party labs to be used only as an exception



Why was this change happened?

UL's activities to support new program.



Certification Bodies (CBs)::

What is a Certification Body or CB?

- An ISO/IEC Guide 65 accredited organization for conducting conformity assessment programs in specific disciplines
- Approved by the EPA.
- Serve as the technical reviewer and certifier of new products to use the ENERGY STAR mark.
- Maintain records of all product qualification and verifications and communicate with EPA on listing qualified products.
- Conduct an ongoing verification program of all ENERGY STAR Qualified products.



Changes to Program Requirements



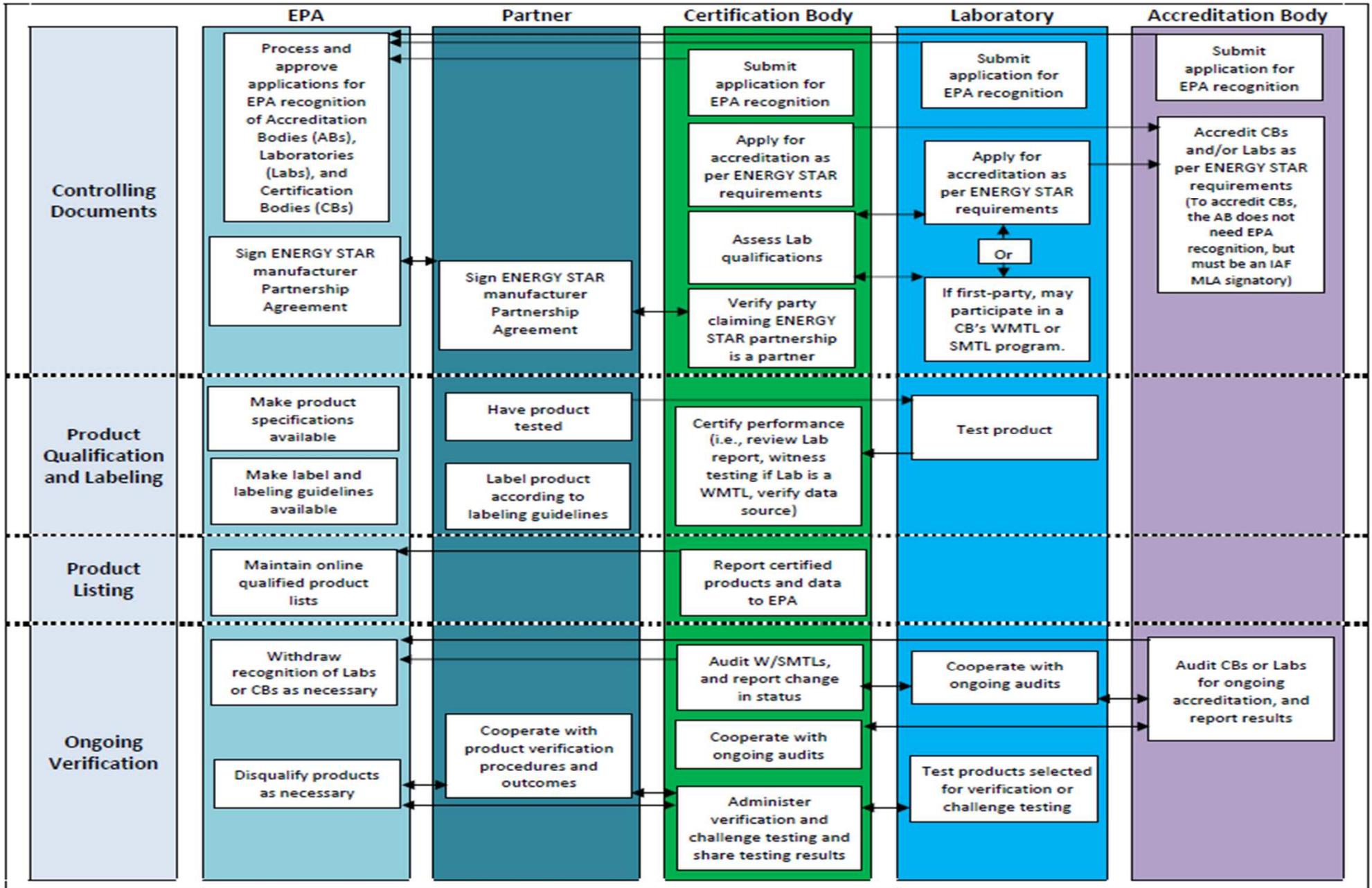
Partner Commitments

- Require third-party certification of all products
- This will require manufacturers to submit new ENERGY STAR products through an EPA recognized Certification Body for approval.
- Effective January 1, 2011

Product Specifications

- Minor changes to ensure a clear and effective product qualification process
- EPA will continue aligning testing and other requirements through the specification revision process

ENERGY STAR Process Flow Diagram



ENERGY STAR Process Flow Diagram

Let's simplify!
And bring it down to
three easy steps

Step 1: Qualification of New Products

› ENERGY STAR Qualification requirements and timeline

- New products introduced after Jan 1 must be submitted to a CB for certification
- Testing – 3 options:
 - In your lab: SMTL/WMTL via CB's Data Acceptance Program
 - Independently accredited, EPA recognized lab (first party)
 - Approved accredited laboratory
- Certification - Report and datasheets will be sent to/created by the CB
- The engineer will evaluate and, if approved, send to EPA for inclusion in ENERGY STAR and file in UL online directory when bundled with safety services
- Manufacturers can use the ENERGY STAR mark once CB certifies product



Step 2: Ongoing Verification Program

› Verification Program Requirements

- CB will select 10% of the products in the verification program for re-testing on an annual basis, per ENERGY STAR requirements
- These models are ***preferably*** selected off the shelf and tested in the CB laboratory. Other options exist, which include models selected off the manufacturing line, and from a warehouse
- Results will be reported to manufacturer as well as ENERGY STAR and filed in electronic database
- Verification program covers newly qualified products (and existing products, for some customers)
- Samples procured during the testing process will be returned to customer or donated to charity



Step 3: Requalification to New Specs

- › EPA will introduce new specs for High Tech Equipment in 2011-2012
- › Full re-qualification will be required when new specs come on line
- › Draft timeline from EPA is.....

Recent ENERGY STAR Specification Effective Dates

ENERGY STAR Specification	Effective Date
Version 2.0 Commercial Refrigerator/Freezer	January 1, 2010
Version 1.2 Water Coolers	January 20, 2010
Version 5.0 Displays	January 30, 2010 (displays between 30 and 60 inches)
Version 2.0 Light Commercial HVAC	May 01, 2010
Version 4.0 Televisions	May 01, 2010
Version 2.0 Audio/Video	July 30, 2010 (Tier 2)
Version 5.0 Computers – Game Console	August 1, 2010



ENERGY STAR® Regulated Products

Appliances, Residential	Clothes Washers, Dishwashers
	Dehumidifiers
	Refrigerators & Freezers
	Room Air Cleaners
	Water Coolers

Appliances, Commercial	Commercial Clothes Washers
	Commercial Dishwashers
	Water Coolers

Commercial Kitchen Package	Commercial Fryers
	Commercial Griddles
	Commercial Hot Food Holding Cabinets
	Commercial Ice Machines
	Commercial Ovens
	Commercial Refrigerators & Freezers
	Commercial Steam Cookers

Computers & Electronics	AV; TVs, Imaging Equipment
	Battery Chargers
	Combination Units (TV & DVD, VCR & DVD)
	Computers and Displays
	Cordless phones
	Enterprise Servers
	External Power Adapters
	Set top boxes and Cable boxes
	Digital to Analog Converter

Products in Development	Climate Controls
	Data Center Storage, Small Network Equip
	Heat / Energy Recovery Ventilators
	Integral LED Lamps
	Laboratory Refrigerators & Freezers
	Pre-Rinse Spray Valves
	UPS

Heating & Cooling	AC, Central and Room
	Boilers and
	Furnaces
	Dehumidifiers
	Fans, ventilating
	Heat Pumps – Air source, Geothermal
	Light Commercial Heating and Cooling
	Room Air Conditioners
	Insulation Material

Lighting & Fans	Solid-State (LED) Lighting
	Decorative Light Strings
	Ceiling Fans and Kits
	Compact Fluorescent Lamps
	Fluorescent Lamp Ballasts



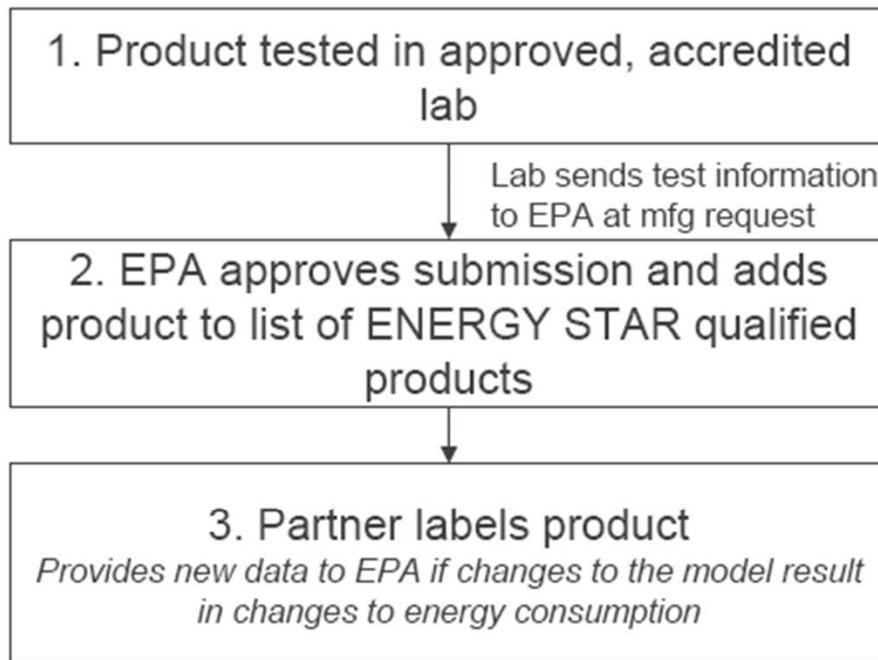
ENERGY STAR® Enhanced Testing and Verification – Market-Based Testing Program

Market-Based Testing

Scope: All ENERGY STAR Product Categories

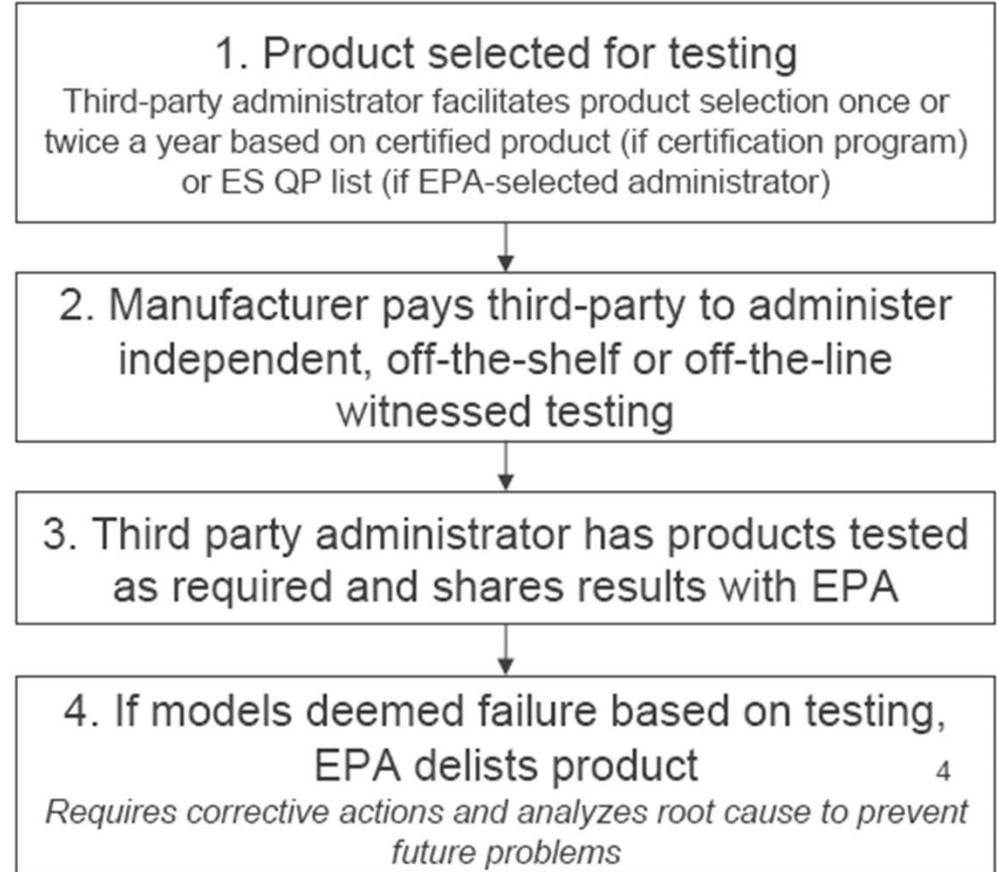
Qualification Testing

Purpose: Ensure that testing is conducted as required by ENERGY STAR specification and that lab submits test results to EPA that are representative of products sold to customer



Verification Testing

Purpose: Ensure that products continue to meet ENERGY STAR requirements



Previous Qualified Products

Products qualified prior to January 1, 2011

Specification changes anticipated in 2011 or early 2012

No product model will be permitted to bear the ENERGY STAR label after the effective date of the specification change unless it is Third-Party Certified.

- Includes specifications with January 1, 2011 effective dates.
- EPA will maintain the list of currently qualified products until the specification change is effective.
- After the specification change, EPA will generate qualified product lists based on information from recognized CBs.



New Program :: Qualifying Products

Submittals on or after January 1, 2011

New products must be certified by an EPA recognized Certification Body (CB).

- Products may not be submitted directly to EPA for qualification.
- List of CBs maintained on www.energystar.gov/testingandverification

Testing must be conducted in an EPA-recognized laboratory.

CBs will certify products, conduct regular verification testing of products and conduct challenge testing per EPA requirements.



How to Meet the New Requirements

New requirements:

- Partner with a Certification Body.
 - EPA does not absolutely require but does highly recommends that manufacturers use only one CB per product category.
 - Submit an up-to-date list of models by product category to the CB.
- Ensure compliance with new Product Specifications taking effect on 1/1/2011.
- Submit all new product submittals or qualifications through the CB via one of the following methods:
 - Either add or expand the current SMTL scope, thus allowing qualification testing to be conducted in their lab.
 - Have a witness test conducted in manufactures' lab.
 - Submit a product to an EPA recognized lab.
- The new program requires a minimum 10% product verification testing yearly.



How to Meet New Requirements ::

CBs and Labs

Possible CBs and Labs:

- A list of EPA recognized CBs and laboratories are found on the EPA website.
- http://www.energystar.gov/index.cfm?c=partners.enhanced_test_verification

Clarification: EPA requires manufacturer's labs that are ISO 17025 to still belong to a CBs SMTL program and undergo audit by a EPA Recognized CB.



The Verification Process ::

Product Selection

A minimum of 10% of the basic models certified by the CB from a manufacturer will be tested annually for verification. This is based on the total number of basic models enrolled by product category with the CB.

How will products be selected?

- About half of the above models will be selected at random, with an exception given to models that have been tested recently as part of verification or challenge testing.
- The remainder shall be selected considering previous base model failures, referrals from consumers, input from consumer groups or regulatory agencies, and the sales volume of models.



The Verification Process ::

Product Procurement

Model procurement for verification testing

- The CB will make selections in priority order:
 - 1) Off the shelf (A minimum of three possible selection locations must be provided.)
 - 2) From a warehouse (The manufacturer must provide access to the location.)
 - 3) Off the line (Off the line shall only be used in certain circumstances when the other means are not feasible.)
 - Note: Manufacturers are not allowed to self select product for testing.

Manufacturers are not allowed to use one CB for qualification and another for verification.



The Verification Process ::

Testing

Location of Verification testing

- At the CB's chosen, EPA recognized, third party laboratory for models selected off the shelf and from a warehouse.
- If selected off the line, then the manufacturer's laboratory can be used, provided it testing is conducted as a WMTL project.



The Verification Process ::

Product Changes and Testing Tolerance

If the product is changed retesting may be necessary.

- The manufacturer is required to report to the CB any changes to an ENERGY STAR product that could effect the qualification status. Most likely, changes to critical components will require retesting.

Is there a test tolerance?

- It depends. If the test method has tolerances built in, EPA will allow the defined allowable variance but will not go above what is in the specification.



The Verification Process ::

Failures and Challenges

Product fails to meet ENERGY STAR requirements during annual verification ?

- The EPA requires the CB to notify the EPA of the failure within 2 business days. Partner will be given the opportunity for testing a second sample.

What happens if an ENERGY STAR Certified product is challenged?

- The challenge is notified.
- The challenger pays the cost of the challenge unless the product fails to meet ENERGY STAR requirements.





Thank you very much! 

