



ENERGY STAR® Products Enhanced Testing and Verification

Update for CEE Evaluation Committee Meeting June 3, 2010

Background and Purpose



- Through over 15 years of shared effort, EPA and partners have built something of real value – the ENERGY STAR brand
- Maintaining the value of this brand requires ensuring products labeled with the ENERGY STAR deliver on their promise to the consumer

Historic Approach to ENERGY STAR Qualification and Testing



- EPA enters into Partnership Agreements with product manufacturers and issues program identity guidelines
- Manufacturing Partners submit test data to EPA to qualify their products within a designated timeframe; Lab accreditations required for certain product categories
- EPA reviews test data and adds products to list of qualified products
- EPA verifies energy performance through its compliance audit program

Why Enhanced Testing?



- Increased scrutiny of voluntary programs
 - Proliferation of green standards – national, international, media, retail
 - Concern over “greenwashing”
 - Inspector General Reports at EPA and DOE
 - Government Accountability Office ENERGY STAR Investigation
- New Partnership Agreement
 - “Verification of compliance with program requirements will be increased and efforts will be enhanced to identify and address product performance issues.”
 - “Verification of ENERGY STAR Qualifying Products will be enhanced in two ways:
 - All products will be required to be tested in an accredited laboratory and qualifying product information be submitted to the government before the product can be qualified as ENERGY STAR
 - Enhanced ‘off-the-shelf’ product testing will be instituted across the full suite of ENERGY STAR covered product categories through a combination of EPA/DOE testing, manufacturer funded/EPA-DOE administered testing, or other third party testing.”

Key Elements of Enhanced Testing Requirements



- Testing and reporting prior to qualification
 - Ensure that EPA has testing information on all products prior to labeling
 - Require test data from accredited labs that is representative of the product in the marketplace
- Continued testing after qualification
 - Verify that products continue to meet the ENERGY STAR requirements regardless of changes in the production process
 - Provide consumers with confidence that ENERGY STAR products are delivering the savings they expect

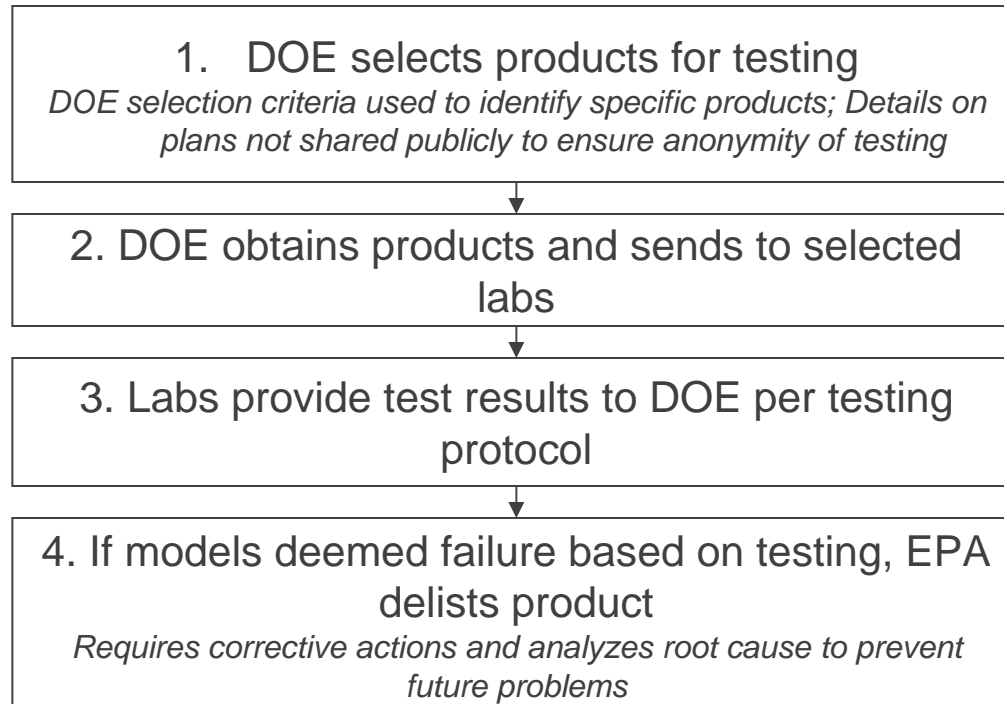
ENERGY STAR Enhanced Testing and Verification Overview



DOE Verification Testing Program Scope: All ENERGY STAR Product Categories

Process

Purpose: Ongoing government testing program to verify energy performance of product in the market against reported energy performance data.

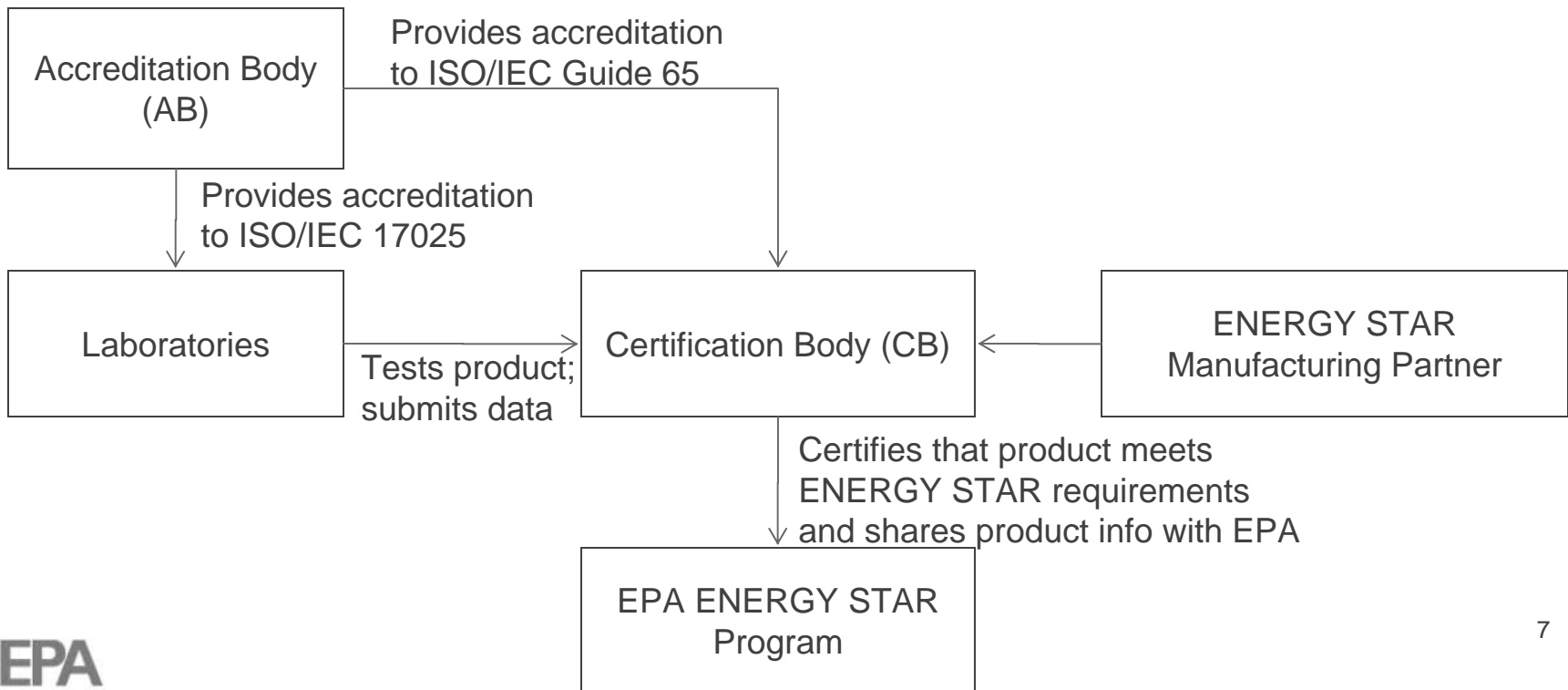


ENERGY STAR Enhanced Testing and Verification Overview (cont.)



New Requirements for all ENERGY STAR Products
Scope: All ENERGY STAR Product Categories

- Third-party certification
- Testing conducted in EPA-recognized labs



Accreditation Bodies (AB)



- Key Responsibilities:
 - Attest to the technical competence of laboratories to perform tests as outlined in the ENERGY STAR Laboratory Accreditation Requirements
 - Assure the list of specific test procedures is included within the scope of accreditation for the laboratory
 - Conduct onsite assessments of each laboratory per the ILAC MRA and ISO/IEC 17011 requirements
 - ABs must operate accreditation program in accordance with ISO/IEC 17011 and must maintain status as a signatory to ILAC MRA (International Laboratory Accreditation Forum Mutual Recognition Arrangement)
 - Publish current list of accredited laboratories on Web site

EPA-recognized Labs



- Maintain accreditation to ISO/IEC 17025, which includes:
 - Have a policy that sets out quality objectives, commitments and operational procedures;
 - Employ experienced personnel who have the education and training needed to conduct the tests; have the physical plant facilities and test equipment needed for proper testing;
 - Develop and maintain separate laboratory test methods for each accredited ENERGY STAR test method that detail how testing will be conducted utilizing the laboratory's test facilities, fixtures, equipment and personnel;
 - Ensure that measuring equipment is accurate and calibrated and that calibration records are maintained;
 - Maintain a record of all original observations, test data and calculations;
 - Maintain arrangements to ensure the freedom of laboratory management and personnel from any undue internal or external commercial, financial or other pressures and influences that may adversely affect the quality of their work.

EPA-recognized Labs (cont.)



- Key Responsibilities:
 - Have recorded in its Scope of Accreditation its specific competence to carry out the test methods as outlined in the ENERGY STAR program
 - Agree to participate in relevant and available inter-laboratory comparison testing when EPA/DOE deems it necessary
 - Submit documentation demonstrating impartiality if an in-house lab
 - Also considering option for in-house labs that are covered by a Certification Body's (CB) accreditation
 - Labs would need to meet the same criteria, but CB rather than AB would have oversight of the lab

Certification Bodies (CB)



- Key Responsibilities:
 - Maintain accreditation to ISO/IEC Guide 65
 - Provide EPA with third party written certification for each model intended for ENERGY STAR qualification by reviewing test results
 - Maintain product design specifications for the products it certifies, and conduct random inspections at the manufacturing location
 - Have in place a verification testing procedure that fulfills EPA requirements
 - Have in place a challenge testing procedure that meets EPA requirements
 - Oversee competency of in-house labs through supervised or witnessed testing program (optional)

Key Proposed Elements of Qualification and Verification



New Requirements for all ENERGY STAR Products

Scope: All ENERGY STAR Product Categories

Qualification

Verification

1. Product tested in recognized lab. Lab assessment to be conducted by Accreditation Body (AB) or Certification Body (CB) per EPA requirements.

2. Certification Body (CB) provides third party certification for each model by reviewing test results from EPA-recognized lab.

3. CB sends product data to EPA. EPA confirms partnership with manufacturer and adds qualifying model to list of ENERGY STAR qualifying products.

4. Partner labels product.
Provides new data to CB if changes to the model result in changes to energy consumption.

1. Products selected for testing by CB (most product categories) or third-party administrator (lighting).

2. Partner pays all costs associated with verification testing, which will be off-the-shelf or off-the-line witnessed testing.

3. CB or third-party administrator has products tested and shares results and resolution of any discrepancies with EPA.

Other verification activities may include ongoing audits of product design parameter files and challenge testing.

4. For failures, EPA delists model(s) and/or requires corrective and preventative measures on the part of the partner(s) as necessary.

Verification Testing



- CBs to administer testing; decentralized process
- EPA-recognized, third-party laboratories test products
 - Option for limited use of in-house laboratory, if testing witnessed by qualified personnel from an EPA-recognized laboratory
- 10-30 percent of all ENERGY STAR models tested each year; CBs may cap the number of models from one manufacturer tested in a given year
- Off-the-shelf testing where possible
 - Combination of random and pre-selected models
- Challenge testing and product design parameter file audit requirements

Lighting Product Verification



- Third party to administer testing; centralized process
- Selected by EPA/DOE through a competitive proposal process
- Administrator responsibilities include:
 - Coordinating the Product Selection Working Group
 - Managing participating labs and verification process
 - Delivering final test results to EPA/DOE

Product Selection Input



- Centralized process
- CEE members and others provide nominations and rationale
- EPA shares nominations with relevant CBs
- Ongoing/Regular opportunities for product nominations

Timeline



- Stakeholder feedback is encouraged within tight timeframe

Key Milestones	
May 3:	Draft AB requirements
May 17:	Draft Lab requirements
June 4:	Draft Qualification and Verification requirements
July:	Finalize all requirements; begin accepting AB and CB applications
July-Dec:	Recognize ABs, CBs, and labs
Sept:	Finalize Partner Commitments and resign all agreements
Dec 31:	Require qualification in recognized labs for all new ENERGY STAR products; phase-in retesting requirements for existing products

Improving Quality of Market Data for ENERGY STAR Qualified Products

EPA/DOE Proposal



- Discontinue retailer-based data collection effort
- Extend manufacturer-based approach, which requires annual submittal of unit shipment data
- Modify partnership requirements to require reporting for 2010 shipments

Rationale



- Data quality/consistency
 - Retailers don't provide full representation of sales
 - Retailers that submit data vary from one reporting period to the next
- Utility of data for EEPS evaluations
 - No current ability to differentiate data by efficiency level
 - State appliance rebates complicate analysis
 - EEPS programs changing as product markets mature

Advantages



- Well-defined universe of appliance manufacturing partners and non-partners
- Fewer CFL manufacturing partners than retail partners
- Manufacturers can more easily assess qualified (and unqualified) models during a specification change
- Manufacturers in better position to account for individual CFL lamps
- Manufacturers' shipment data is not confined to specific sales channels

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