

ENERGY STAR Testing

U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy



Pilot Verification Program for Selected ENERGY STAR Products

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1» Background and Overview

2» Testing Process

3» Results – Progress to date

4» Lessons Learned

Several recent events convinced the DOE to act now to bolster verification processes within the ENERGY STAR program.

- Recent publications raised questions about the performance of certain products
- Government Accountability Office (GAO) Report indicated vulnerability to “Fraud and Abuse”**
- Support needed for the State Energy Efficiency Appliance Rebate Program (SEEARP)
 - leverages \$300 million in ARRA funds to help states offer rebates on certain ENERGY STAR appliances.

**ENERGY STAR Program: Covert Testing Shows the ENERGY STAR Program Certification Process Is Vulnerable to Fraud and Abuse, March 5 2010.
<http://www.gao.gov/products/GAO-10-470>

Objective: Conduct a pilot testing program to ensure ENERGY STAR products meet the program requirements.

Related Goals:

- Maintain integrity of the ENERGY STAR label and consumer trust
- Help ensure that consumers and the nation achieve expected energy (and water) savings
- Help ensure that no manufacturer gains an unfair competitive advantage by misrepresenting the energy (and water) performance of its ENERGY STAR-labeled products
- Establish the foundation for a future extended verification program

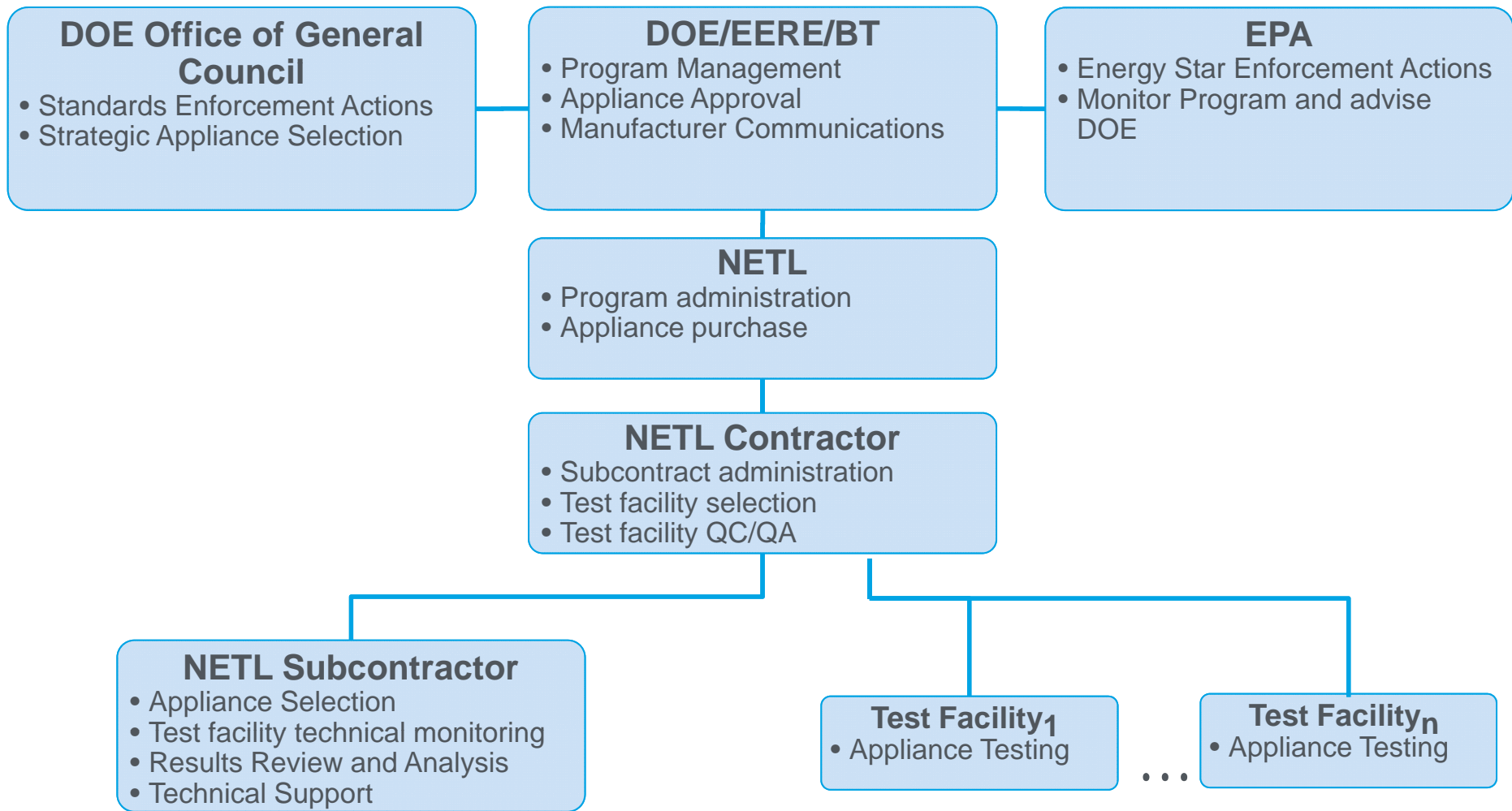
The ENERGY STAR Verification Program will benefit from, and also enhance, a number of additional DOE programs.

- DOE Lab Accreditation Program
 - Will insure labs conduct tests as per federal test procedures
 - Will assist ENERGY STAR program by accelerating test lab selection in the future
- DOE Lab Round-Robin Testing
 - Test labs used in ENERGY STAR program will participate in round robin testing
- DOE Accelerated Test Procedure Development
 - ENERGY STAR program will identify gaps in test procedures and create/revise procedures
- DOE Energy Conservation Standards Rulemakings
 - Provides minimum performance requirements on available units

Pilot Program Structure – Contributors



Energy Efficiency &
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Testing Process – Key Steps

Product Selection and Procurement

Select, purchase, and ship test products



Lab Selection

Determine available qualified facilities and award testing



Stage I Testing

Screening tests -- Further Action Required or No Action Required



Stage II Testing

Determines compliance if action is required after Stage I

DOE randomly selected 20% of basic models for testing, and then modified the selection based on strategic considerations.

- Basic models picked through random selection
- Omitted basic models that were not available for sale through normal retail distribution channels
- DOE added about 10 basic models based on strategic considerations

Appliance	Number of Basic Models ¹	Target Number to Test
Refrigerators ²	405	81
Freezers ²	121	26
Clothes Washers	200	40
Dishwashers	54	11
Tankless Water Heaters	59	12
Storage Water Heaters	55	11
Room Air Conditioners	398	80

¹A basic model includes all variations of a unit made by a manufacturer that have the same energy-use characteristics.

²DOE subdivided the selection of refrigerators and freezers based on Product Class shipment data.

Appendix: Test Labs

Four test facilities met the stringent requirements for various products.

BR Laboratories, Inc.

- Refrigerators/freezers, dishwashers, residential clothes washers, room air conditioners, water heaters

CSA International (Toronto) and CSA OnSpeX (Cleveland)

- Refrigerator/freezers, dishwashers, residential clothes washers, water heaters

Intertek Testing Services

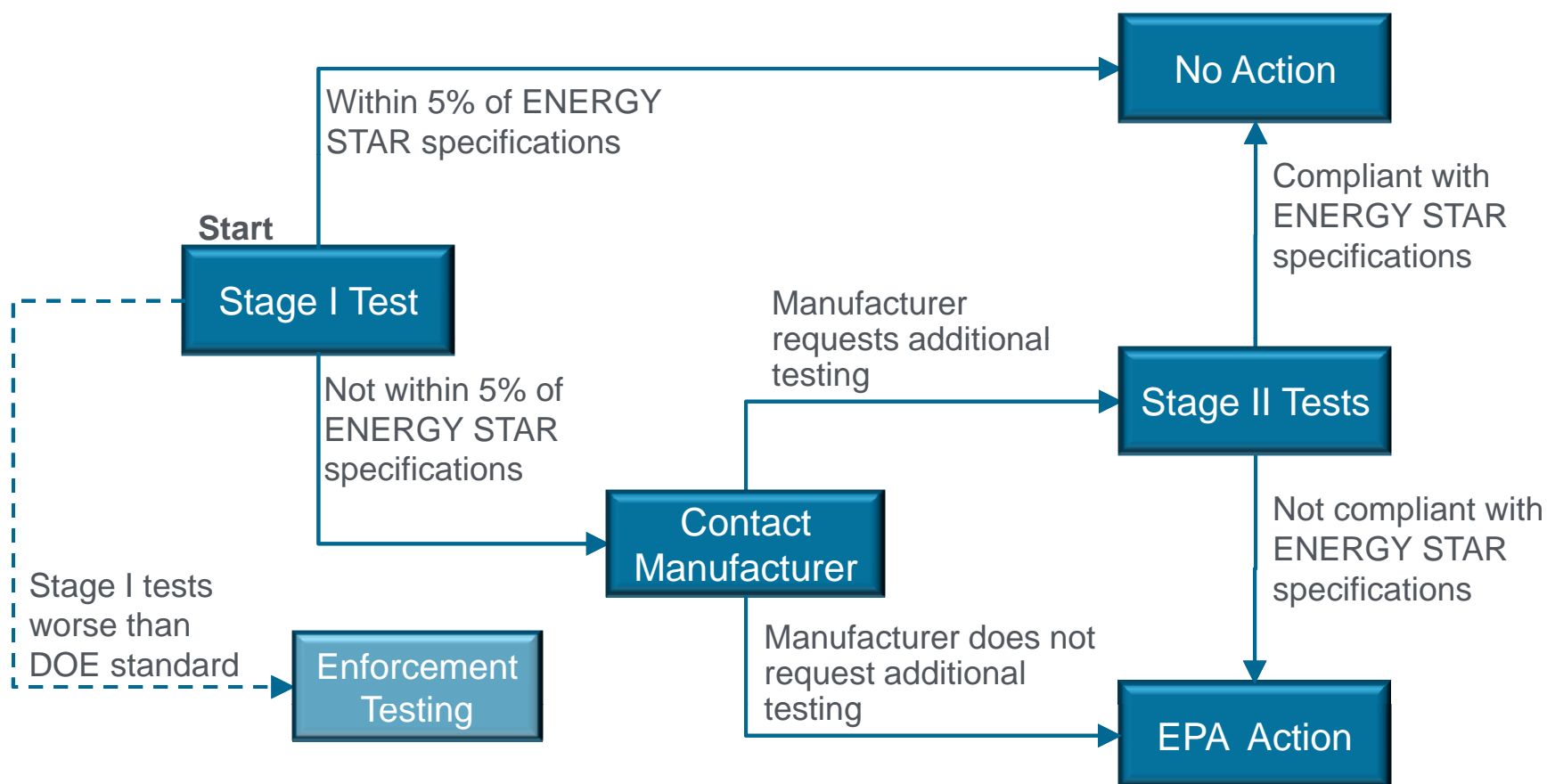
- Refrigerator/freezers, dishwashers, room air conditioners, water heaters

Springboard Engineering

- Residential clothes washers

Verification Testing

The process begins with a Stage I test, then proceeds to a Stage II test, if warranted.



What about products not requiring further action?

- Information on these performing within 5% or greater of ENERGY STAR program requirements will not be released.
- Previous experience with CFL testing provided an unfair market advantage to lamps meeting ENERGY STAR program requirements.

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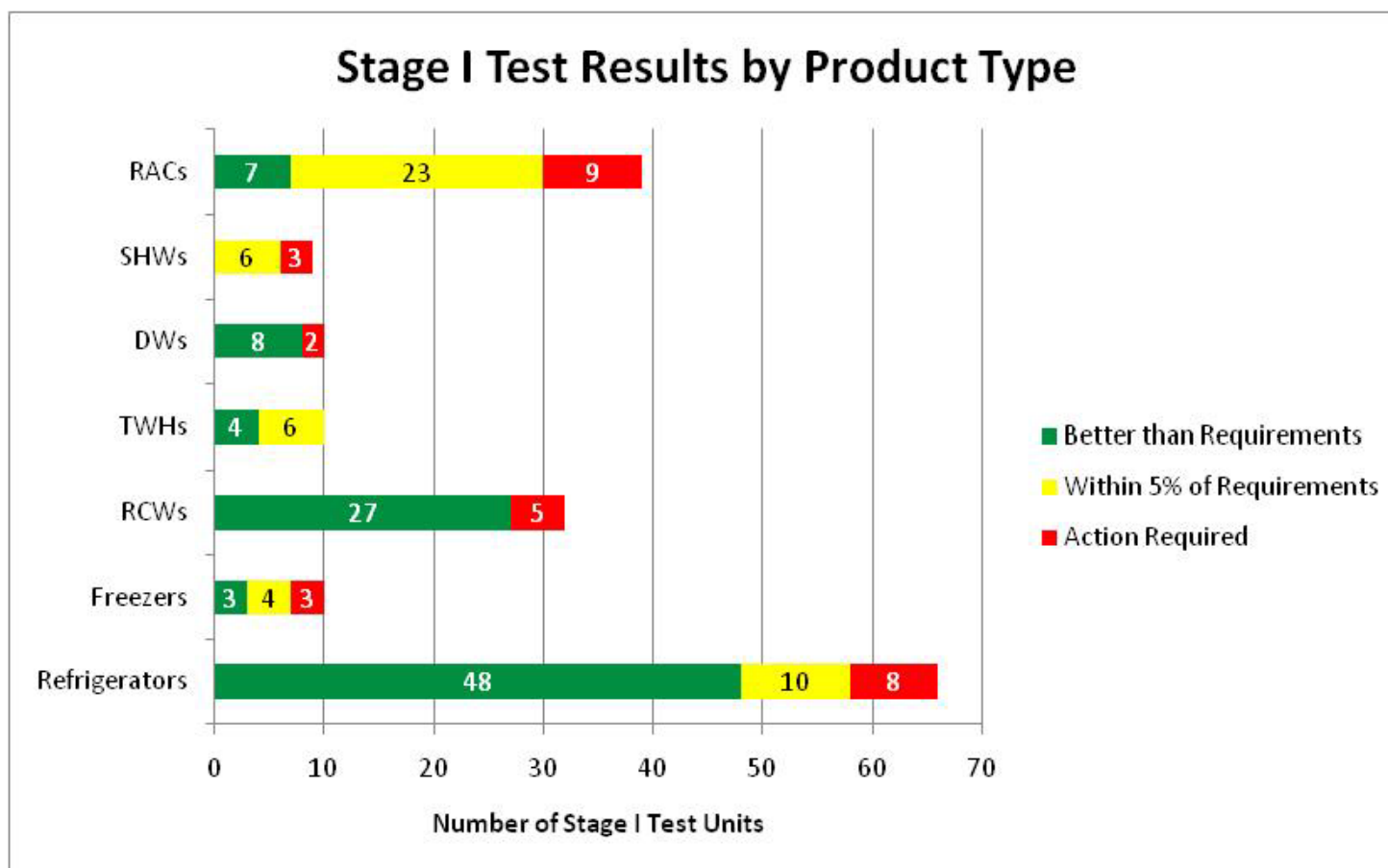


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Interim Results (Stage I)

30 of the 176 units tested (17%) require further action (tested more than 5% worse than ENERGY-STAR specifications).



*Action Required = DOE to contact manufacturer regarding the test results

Interim Results (Stage II)

Based on test results to date, we project that approximately 49 of the 265 appliances will require Stage II testing.

Appliance	Total	Tested	Stage I Units that Require Action	Projected units that will require action
Refrigerators	82	66	8	10
Freezers	24	10	3	7
Clothes Washers	40	32	5	6
Dishwashers	11	10	2	2
Tankless WH	12	10	0	0
Storage WH	11	9	3	4
Room Air Conditioner	87	39	9	20
TOTAL	267	176	30	49

*Projections are approximated from current rates

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Many lessons have been learned from the verification pilot program that will help improve future programs.

- Streamline Test Lab Selection
 - Preliminary accreditation of labs allows for timely selection of experienced labs with appropriate facilities
- Focus Selection of Products
 - Testing the newest products and high volume products is more representative of the market
- Continually Refine Test Report Templates
 - Provide a consistent process for delivering uniform and complete reports
- Continually Refine Testing Guidelines
 - Ensure that testing is standardized and transparent with the support of stakeholders

Questions?