

ENERGY STAR Testing



Pilot Verification Program for Selected ENERGY STAR Products

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

- Recent publications raised questions about the energy (and water) 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)

**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>

State Energy Efficient Appliance Rebate Program (SEEARP)

SEEARP leverages \$300 million in stimulus funds to help states offer rebates on certain ENERGY STAR appliances.

State Energy Efficient Appliance Rebate Program (SEEARP)

- Drives energy savings
- Stimulates economy by encouraging consumers to replace old appliances with new ENERGY STAR models

Appliance Rebate Product	# of States offering Rebate
Clothes Washers	47
Refrigerators	44
Dishwashers	35
Room Air Conditioners	28
Freezers	26
Gas Tankless Water Heaters	25
Furnaces	25
Gas Storage Water Heaters	22
Electric Heat Pump Water Heaters	22
Central AC/ Air Source Heat Pumps	20
Solar Water Heaters	16
Boilers	14
Gas Condensing Water Heaters	13
Geothermal Heat Pumps	5

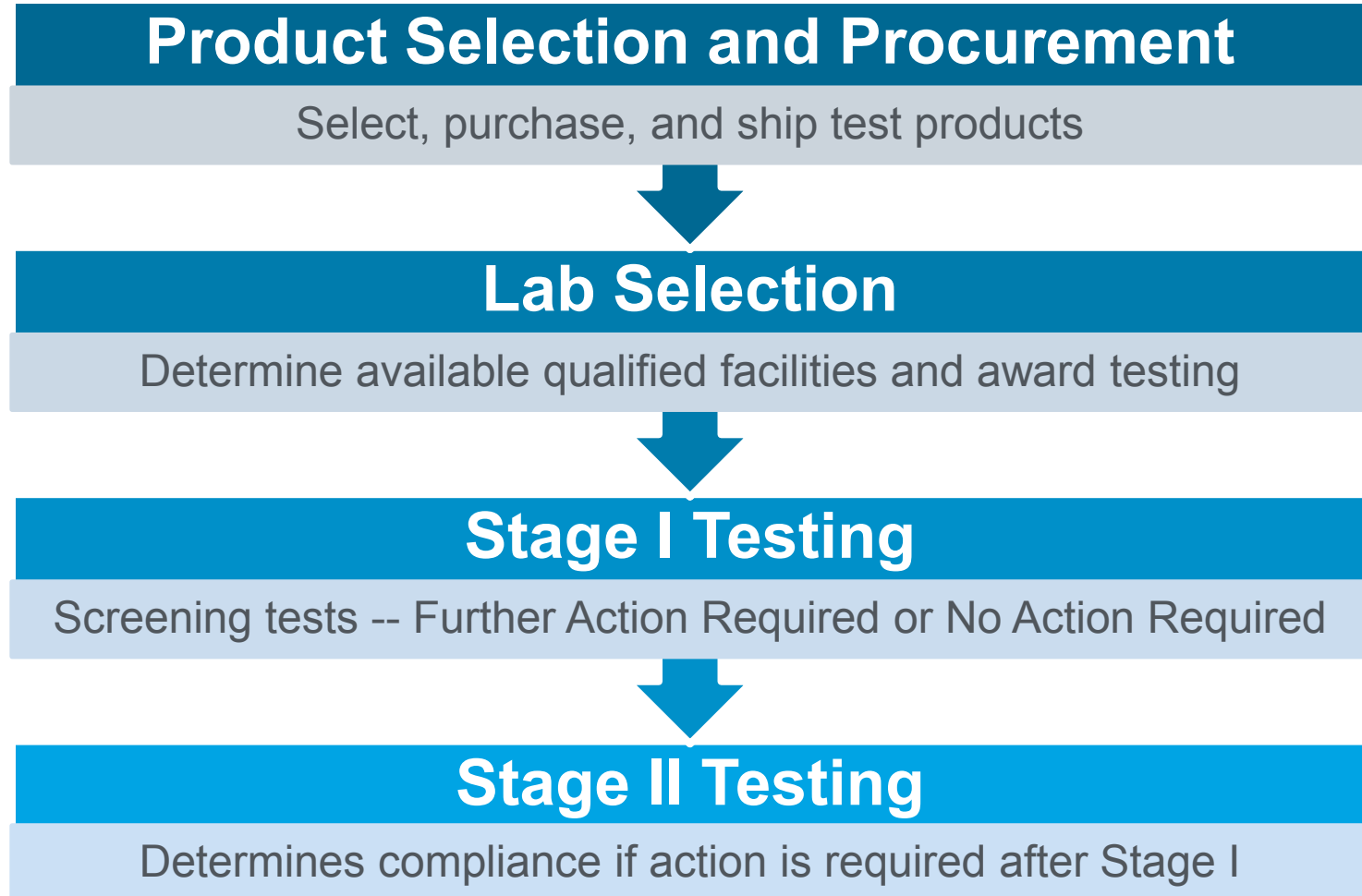
The ENERGY STAR Verification Program will benefit from, and also enhance, a number of additional DOE programs.

- 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

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 consumers and the nation achieve expected energy (and water) savings
- Help ensure 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



DOE targeted testing 20% of basic models for selected ENERGY-STAR appliance types, randomly selecting which units.

ENERGY STAR Product Category	Estimated Number of Basic Models¹	Target Number to Test
Refrigerators ²	405	82
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.

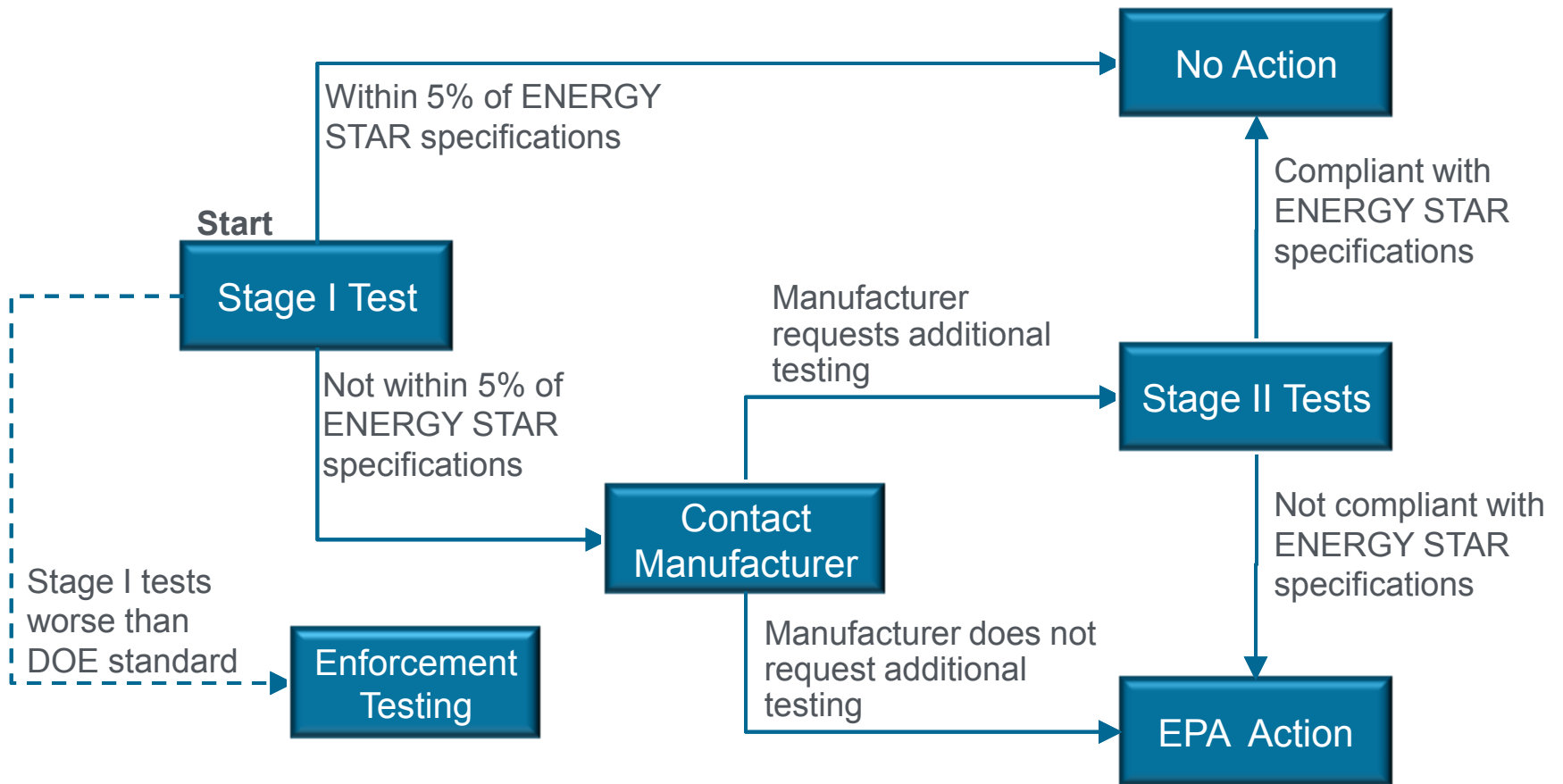
²DOE subdivided the selection of refrigerators and freezers based on Product Class shipment data.

The test laboratories were selected based on a number of criteria:

- Independent and not affiliated with appliance manufacturers
 - Ensure the testing is conducted in an unbiased manner
- Located in the United States or Canada
 - Minimizes shipping cost and facilitates test setup inspections
- Experienced in conducting the program specific tests
 - Ensure speed and reliability
- Generally recognized as a credible source for appliance testing services
- Able to meet schedule requirements at a competitive cost
- Acceptable quality control and quality assurance procedures

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.

Interim Results (Stage I)

Over 50 percent of Stage I tests are complete.

Appliance	Total	Tested	Remaining
Refrigerators	82	55	27
Freezers	24	8	16
Clothes Washers	40	28	12
Dishwashers	11	9	2
Tankless WH	12	10	2
Storage WH	11	8	3
Room Air Conditioner	86	21	65
TOTAL	266	139	127

Interim Results (Stage II)

Based on test results to date, we project that approximately 47 of the 266 appliances will require Stage II testing.

Appliance	Total	Tested	Stage I Models requiring Action	Total projected models that will require action	Stage II Tests Complete**
Refrigerators	82	55	8	11	0 of 8 (2 models)
Freezers	24	8	2	3	0
Clothes Washers	40	28	5	5	4 of 8 (2 models)
Dishwashers	11	9	2	3	4 of 4 (1 model)
Tankless WH	12	10	0	1	0
Storage WH	11	8	2	2	0
Room Air Conditioner	86	21	5	22	0 of 12 (3 models)
TOTAL	266	139	24	47	8 of 32

*Projections are approximated from current rates

** Results being analyzed

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

- Shorten Selection and Testing Cycle
 - Small batch testing may lead to a shorter procurement selection time and testing cycle
- Focus Selection of Products
 - Testing the newest products and high-volume products is more representative of the market
- Enhance Test-Lab Quality Control
 - Future accreditation of labs will facilitate selection of experienced labs having appropriate facilities and test protocols
- Continually Refine Test-Report Templates
 - Provide a consistent process for delivering uniform and complete reports
- Continually Refine Testing Guidelines
 - Ensure that testing is standardized

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