Required Test Methods for EPA-Recognized Laboratories

Introduction

Per Directive #2011-02, EPA Policy on Laboratory Scopes of Accreditation for the ENERGY STAR Program, for a laboratory to be recognized by the U.S. Environmental Protection Agency (EPA) to test non-lighting products for ENERGY STAR® qualification, the laboratory’s scope of accreditation must include at a minimum the title of the relevant ENERGY STAR product specification. If the laboratory wishes to list the specific test methods that specification references, then it must include each of the test methods listed in this document for that specification.

Each of the test methods and standards listed here are listed by product specification, as enumerated in the table of contents on the next page. If you have any questions about this document, please contact Certification@energystar.gov.

Lighting product categories are outlined in “ENERGY STAR Guide to EPA Laboratory Recognition by Lighting Category,” on the Laboratory Resources web page.

Acronyms Used in This Document

AC = Air Conditioning
AHAM = Association Of Home Appliance Manufacturers: www.aham.org
AHRI = Air-Conditioning, Heating, and Refrigeration Institute
ANSI = American National Standards Institute: www.ansi.org
ASHRAE = American Society of Heating, Refrigerating, and Air-Conditioning Engineers: www.ashrae.org
ASTM = American Society for Testing and Materials International: www.astm.org
CEA = Consumer Electronics Association: www.ce.org
CRRC = Cool Roof Rating Council: www.coolroofs.org
DGX = Direct geoexchange (geothermal heat pumps)
HVAC = Heating, cooling, and air conditioning
HVI = Home Ventilating Institute: www.hvi.org
IEC = Commission Electrotechnique Internationale: www.iec.ch
IESNA = Illuminating Engineering Society of North America: www.iesna.org
ISO = International Organization for Standardization: www.iso.org
NFRC = National Fenestration Rating Council: www.nfrc.org
NVLAP = National Voluntary Laboratory Accreditation Program: www.nist.gov/pml/nvlap
STB = Set-Top Box
UL = Underwriters Laboratories: www.ul.com
UPS = Uninterruptible Power Supply
# Required Test Methods for EPA-Recognized Laboratories

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## Required Test Methods for EPA-Recognized Laboratories

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<td>ENERGY STAR Program Requirements Product Specification for Residential Refrigerators and Freezers Version 5.0</td>
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<td><strong>Coefficient of Performance:</strong></td>
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| ENERGY STAR® Program Requirements for Connected Thermostat Products Version 1.0 (v1.0 CT spec) | - Functionality in the absence of connectivity – v1.0 CT spec, sections 4) D and 4) E  
- Static temperature accuracy – v1.0 CT spec, sections 4) D and 4) F  
- Network standby power consumption & Time to standby – IEC 62301, Ed. 2.0, 2011-01, subject to clarifications in v1.0 CT spec sections 4) D and 4) G |
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| **Furnaces** |  |
- ANSI/ASHRAE 193-2010 |
| **Geothermal Heat Pumps** |  |

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<td>ENERGY STAR Program Requirements Product Specification for Room Air Cleaners Version 1.2</td>
<td>- UL 867 Ed. 4.0, Electrostatic Air Cleaners</td>
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<td>- IEC 62301 Ed. 1.0 (or 2005), Household electrical appliances – Measurement of standby power</td>
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¹ DOE understands that various basic models may need a test procedure waiver to show the benefits of various operations pursuant to 10 CFR Part 430.27.
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<td>- 10 CFR 430, Subpart B, Appendix E (Electronic Code of Federal Regulations)(^2)</td>
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<td><strong>Commercial Dishwashers</strong></td>
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<tr>
<td><strong>Commercial Fryers</strong></td>
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<tr>
<td>2 Note on recovery efficiency: For thermostatically-controlled water heaters that do not completely recover or do not undergo a recovery cycle prior to the start of the second draw of the simulated-use test, the recovery efficiency shall be determined as specified in Section 11.2 of ASHRAE 118.2.</td>
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                              | - AHRI Standard 810-2007 with Addendum 1, (AHRI 810) Performance Rating of Automatic Commercial Ice-Makers |
| Commercial Ovens            | See Below |
| - Commercial Combination Ovens | - ASTM F-2861-14, Standard Test Method for Enhanced Performance of Combination Oven in Various Modes |
| - Commercial Rack Ovens     | - ASTM F2093-11, Standard Test Method for Performance of Rack Ovens |
| Commercial Refrigerators and Freezers | - 10 CFR Part 431 Subpart C (Electronic Code of Federal Regulations)  
                                          | - 10 CFR Part 431.64 (Electronic Code of Federal Regulations)  
<pre><code>                                      | - 10 CFR Part 431.66(e)(2) (Electronic Code of Federal Regulations) |
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<td>- Enhanced Performance Displays</td>
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- CEA-2037-A, Determination of Television Set Power Consumption |
| Enterprise Servers | - ENERGY STAR Test Method for Computer Servers, Rev. Apr- 2016  
| ENERGY STAR Program Requirements Product Specification for Computer Servers Version 2.1 |  
| Enterprise Servers | - ENERGY STAR Test Method for Computer Servers, Rev. Sep- 2018  
| ENERGY STAR Program Requirements Product Specification for Computer Servers Version 3.0 |  
| Imaging Equipment | - ENERGY STAR Imaging Equipment Test Method, ENERGY STAR Program Requirements for Imaging Equipment, Rev. Sep-2014 |
| ENERGY STAR Program Requirements Product Specification for Imaging Equipment Version 2.0 |  
| Large Network Equipment | - ENERGY STAR Test Method for Large Network Equipment, Rev. December-2015 |
| ENERGY STAR Program Requirements Product Specification for Large Network Equipment Version 1.0 |  
| Set-top Boxes & Cable Boxes | - ENERGY STAR Test Method for Set-top Boxes (Rev. May-2016)  
- CTA-2043, “Set-top Box (STB) Power Measurement” (Rev. Aug-2013) |
| ENERGY STAR Program Requirements Product Specification for Set-top Boxes Version 5.1 |  

³ For the purposes of this document, the most current SERT version is listed in the most recently published Servers 2.1 Clarification Memo, located on the Enterprise Servers Specification Version 2.1 website (https://www.energystar.gov/products/spec/enterprise_servers_specification_version_2_1_pdf).

⁴ For the purposes of this document, the most current SERT version is listed in the most recently published Servers 3.0 Clarification Memo, located on the Enterprise Servers Specification Version 3.0 website (https://www.energystar.gov/products/spec/enterprise_servers_specification_version_3_0_pdf).
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| - Ventilating Fans with a light source | **Airflow Rating**  
- Option 1) ANSI/AMCA 210-07 Laboratory Methods of Testing Fans for Aerodynamic Performance Rating 
- Option 2) HVI Publication 916 Airflow Test Procedure® (2013)  
**Sound Rating**  
- Option 2) HVI Publication 915 Procedure for Loudness Rating of Residential Fan Products® (2013)  
**Lighting**  
- Please see the “ENERGY STAR Guide to EPA Laboratory Recognition by Lighting Category” on the Laboratory Resources web page for the relevant lighting category. |
| Decorative Light Strings | **ENERGY STAR Program Requirements Product Specification for Decorative Light Strings Version 1.5**  
- Please see the “ENERGY STAR Guide to EPA Laboratory Recognition by Lighting Category” on the Laboratory Resources web page. |
<p>| Lamps | - Please see the “ENERGY STAR Guide to EPA Laboratory Recognition by Lighting Category” on the Laboratory Resources web page. |
| Luminaires | - Please see the “ENERGY STAR Guide to EPA Laboratory Recognition by Lighting Category” on the Laboratory Resources web page. |
| <strong>Home Building Materials</strong> |</p>
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OR  
OR  
| Maintenance of Solar Reflectance:  
- ENERGY STAR Test Method for Roof Products: Maintenance of Solar Reflectance, Dec-2013 | Emissivity:  
| **Storm Windows**           |                      |
| ENERGY STAR Program Requirements for Residential Storm Windows Version 1.0 |  
- Emissivity and Solar Transmission – v1.0 Storm Windows spec, section 5  
- Air Leakage – Attachments Energy Rating Council (AERC) 1.2 in accordance with ASTM E283 |
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<td>- Air Leakage – ASTM E283 in accordance with NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440-11</td>
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<td>Other</td>
<td>See Below</td>
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<tr>
<td>Electric Vehicle Supply Equipment</td>
<td>- All Electric Vehicle Supply Equipment</td>
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<td>- Electric Vehicle Supply Equipment with Display</td>
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<td>- Electric Vehicle Supply Equipment with Full Network Connectivity</td>
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<td>- Section 6.7.5.2 of Consumer Electronics Association (CEA) 2037 A, Determination of Television Set Power Consumption</td>
</tr>
<tr>
<td>Laboratory Grade Refrigerators &amp; Freezers</td>
<td>- ENERGY STAR Test Method for Laboratory Grade Refrigerators, Freezers, and Ultra-Low Temperature Freezers, Rev. July 2014</td>
</tr>
<tr>
<td>ENERGY STAR Product Category</td>
<td>Test Method/Standard</td>
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<tr>
<td><strong>Pool Pumps</strong></td>
<td>- DOE Test Procedure for Dedicated Purpose Pool Pumps (See 10 CFR 431.464(b))</td>
</tr>
<tr>
<td><strong>Demand Response Capability for Pool Pumps</strong></td>
<td>- ENERGY STAR Pool Pumps Test Method to Validate Demand Response, Rev. March-2015 (Optional)</td>
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<tr>
<td>ENERGY STAR Program Requirements Product Specification for Pool Pumps Version 1.1 and 2.0</td>
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<tr>
<td><strong>Vending Machines</strong></td>
<td>- Appendix A to 10 CFR 431, Subpart Q (Electronic Code of Federal Regulations)</td>
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<tr>
<td><strong>Water Coolers</strong></td>
<td>- ENERGY STAR Test Method for Water Coolers (Rev. May - 2013)</td>
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<tr>
<td>ENERGY STAR Program Requirements Product Specification for Water Coolers Version 2.0</td>
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