UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

November, 20, 2012

Dear ENERGY STAR® Partners and Stakeholders:

The U.S. Environmental Protection Agency (EPA) is pleased to announce final recognition criteria for ENERGY STAR Most Efficient 2013 for 11 product categories. This letter outlines the criteria, highlighting changes from the original proposal.

These final criteria will highlight, for environmentally minded consumers, the most efficient ENERGY STAR products in 2013 across clothes washers, refrigerator-freezers, air-source heat pumps, central air conditioners, boilers, furnaces, geothermal heat pumps, televisions, computer monitors, ventilating fans, ceiling fans, and windows. Products that meet the 2013 criteria will deliver significant savings over a conventional product as noted below:

Estimated Savings for ENERGY STAR Most Efficient 2013 Products by Category

Boilers: 19% energy savings	Furnaces: 20% energy savings	Televisions: 40% energy savings
Central Air and Air Source Heat Pumps: 25-50% energy savings	Geothermal Heat Pumps: 30-60% energy savings	Ventilating Fans: 50% energy savings
Clothes Washers: 45% energy savings and 56% water savings	Computer Monitors: 30% energy savings	Windows: Savings vary by climate, house construction, and number and type of windows replaced.
Ceiling Fans: 60% energy savings	Refrigerator-Freezers: 30% energy savings	

Note: In the case of appliances and HVAC equipment, energy use of a product that meets Most Efficient 2013 criteria is compared to products that just meet the federal standard.

Comments on ENERGY STAR Most Efficient 2013 Proposals

EPA received limited comment on the proposed criteria distributed on September 14, 2012, with the majority related to windows. In general, commenters were supportive of the 2013 proposals. EPA considered each of these comments carefully and has noted responses in the ENERGY STAR Most Efficient 2013 Comment Response documents. To view these documents and the original stakeholder comments, please visit www.energystar.gov/mostefficient and follow the link to "ENERGY STAR Most Efficient 2013 criteria."

ENERGY STAR Most Efficient 2013 Categories and Recognition Criteria

Recognition criteria have been adopted as proposed for all categories except televisions and windows.

Upon consideration of stakeholder comments, the following changes have been made:

Televisions: EPA received feedback that the 2013 proposal for televisions is overly restrictive in the most highly sought after screen sizes, those 35-50 inches. EPA's recognition principles for the ENERGY STAR Most Efficient program have guided product category selection and criteria development to help ensure the program highlights products with truly exceptional energy efficiency performance. As part of those principles, EPA noted it is not the goal of the Most Efficient program to ensure that there are qualifying models in all sizes or configurations. However, in response to stakeholder feedback, EPA has made a modest adjustment to the criteria in an effort to strike a balance between selectivity and availability of recognized products, such that a handful of additional models in the 35-50 inch screen range are eligible.

Windows: EPA received extensive technical feedback on its initial proposal. In response to these comments and further analysis, the final criteria reflect these changes:

- Removal of the Visible Transmittance (VT) minimum for all zones as this criterion did not provide a consistent basis for comparison.
- Addition of a Solar Heat Gain Coefficient (SHGC) minimum of 0.20 in the Northern Zone, as an alternative to VT criterion. This criterion aligns with the Natural Resources Canada ENERGY STAR Most Efficient 2013 program for windows.
- Reduction of the maximum SHGC levels in the Southern and South-Central Zones to 0.25 to harmonize with the 2012 International Energy Conservation Code (IECC) and the Draft 1 Version 6.0 ENERGY STAR Windows, Doors, and Skylights specification
- Clarification of the certification requirements for North America Fenestration Standard/Specification (NAFS) to ensure all certification bodies meet the same standards

Doors, skylights, tubular daylighting devices and dynamic window products are not eligible for recognition in 2013 but may be considered in the future.

In addition, it should be noted that a new Version 6.0 Display specification takes effect on June 1, 2013. After that date, models that fail to meet all elements of the Version 6.0 specification (including new sleep requirements) will be removed from the list of ENERGY STAR Most Efficient 2013 recognized products. Analysis of currently qualified computer monitor product data suggests that nearly all models identified as being eligible for ENERGY STAR Most Efficient 2013 recognition now will continue to be recognized after this change to sleep requirements.

The final criteria for ENERGY STAR Most Efficient 2013 are summarized below. In addition to meeting these performance requirements, products must be certified as ENERGY STAR by an EPA-recognized certification body. Additional detail for each product category is included in the recognition criteria documents available at www.energystar.gov/mostefficient by following the link to “ENERGY STAR Most Efficient 2013 criteria.”

Category	Requirements
Boilers*	Gas Powered Boilers: 95 AFUE or higher; Oil Powered Boilers: 90 AFUE or higher
Ceiling Fans	Efficiency (cubic feet per min/W) ≥170 high speed, ≥270 medium speed, ≥400 low speed

<table>
<tr><th>Category</th><th>Requirements</th></tr>
<tr><td>Clothes Washers</td><td>
<table>
<tr><td>Clothes Washer Volume</td><td>MEF</td><td>WF</td></tr>
<tr><td>≤ 2.5 cubic feet</td><td>≥ 2.4</td><td>≤ 4.5</td></tr>
<tr><td>> 2.5 cubic feet</td><td>≥ 3.2</td><td>≤ 3.0</td></tr>
</table>
</td></tr>
<tr><td>Central Air Conditioners*</td><td>≥18 SEER & 12.5 EER for split CAC, 16 SEER & 12 EER for packaged CAC; communications, system status, and automated configuration</td></tr>
<tr><td>Air-Source Heat Pumps*</td><td>≥18 SEER, 12.5 EER & 9.6 HSPF for split systems; 16 SEER, 12 EER & 8 HSPF for packaged systems; communications, system status, and automated configuration</td></tr>
<tr><td>Ductless AC and Heat Pumps</td><td>≥20 SEER & 12.5 EER and (for heat pumps) 9.6 HSPF; filter check and service needed alerts</td></tr>
<tr><td>Computer Monitors</td><td>Pmax= (6 × r) + (0.032 × A) – 3.800
Where:
Pmax = maximum allowable On Mode Power consumption in watts
r = screen resolution in megapixels
A = viewable screen area of the product in square inches

Note: ENERGY STAR computer monitor sleep requirements change on June 1, 2013 per the Version 6.0 Product Specification for Displays.</td></tr>
<tr><td>Furnaces*</td><td>≥97% AFUE; communications, system status and automated configuration</td></tr>
<tr><td>Geothermal Heat Pumps*</td><td>Equivalent to Tier 3 levels established in the ENERGY STAR Program Requirements; communications, system status and automated configuration</td></tr>
<tr><td>Refrigerator-freezers*</td><td>≤481 kWh per year; at least 30% better than Federal standard</td></tr>
<tr><td>Televisions</td><td>Pmax = 59.5 × TANH(0.00096(A – 160) + 0.067) + 10.5
Where:
Pmax = maximum allowable On Mode Power consumption in watts
A = viewable screen area of the product in square inches
TANH = hyperbolic tangent function</td></tr>
<tr><td>Residential Ventilating Fans</td><td>Bathroom/utility fans only; Efficacy (cubic feet per min/W)
≥7.5 for fans 10 - 89 cfm
≥6.8 for fans 90 cfm or higher</td></tr>
<tr><td>Residential Windows</td><td>U-factor ≤ 0.20
SHGC ≥ 0.20 in the Northern Zone
SHGC ≤ 0.40 in the North-Central Zone
SHGC ≤ 0.25 in the South-Central and Southern Zones
North American Fenestration Standard/Specification (NAFS)
Performance Grade ≥ 15</td></tr>
</table>

**Proposed criteria carried over from 2012 for these categories.*

ENERGY STAR Most Efficient 2013 Recognition

ENERGY STAR certified products meeting these requirements will be highlighted as ENERGY STAR Most Efficient for 2013 at: www.energystar.gov/mostefficient beginning January 1, 2013. EPA will contact partners with certified products that meet the criteria to share the ENERGY STAR Most Efficient 2013 designation and usage guidelines (see marketing graphic shown on the next page), and invite them to augment their product listing with the following:

- A product photo in a jpg file of at least 200 pixels for the ENERGY STAR Most Efficient web page; and

- A product description for use on the web page (i.e., key features and functionalities, MSRP). The first 50 words will be displayed beside the product photo on the web page; additional text will link to a separate web page.

For all HVAC product categories ***except boilers,*** partners must continue to apply for recognition in order for the Agency to verify the communications/system status requirements. To this end, partners must submit installation and maintenance manuals for the system confirming operation of the system controller, communications, system status and automated configuration capability. Documentation associated with the controller is acceptable if it can be associated with the HVAC equipment model numbers that are submitted for recognition. Since the recognition criteria have not changed, HVAC products recognized in 2012 need not be resubmitted.

For window products, partners will need to apply for recognition in order for the Agency to verify that a product meets the recognition criteria outlined above. At a minimum, partners will need to submit the product's National Fenestration Rating Council (NFRC) Certified Products Directory Number, evidence of NAFS certification, and test reports indicating a Performance Grade of 15 or better. Detailed application instructions will be provided shortly.

For HVAC and window products, once EPA has confirmed product eligibility for recognition, the ENERGY STAR Most Efficient 2013 designation will be provided along with usage guidelines.

The ENERGY STAR Most Efficient 2013 designation is intended for use at point-of-sale on point-of-purchase materials, product literature and websites. It may not be factory-applied to products or product packaging. Failure to abide by these guidelines may result in loss of recognition. EPA will highlight recognized products on the ENERGY STAR Most Efficient 2013 web page through December 30, 2013.

We look forward to working with you to market products recognized as ENERGY STAR Most Efficient in 2013. Please e-mail mostefficient@energystar.gov with any questions.

Thank you for your support of the ENERGY STAR program.

Sincerely,

Ann Bailey, Director
ENERGY STAR Product Labeling