



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

OFFICE OF  
AIR AND RADIATION

November 5, 2013

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 2014. This letter outlines the criteria, highlighting changes from the original proposal.

These final criteria will recognize, for environmentally minded consumers, the most efficient ENERGY STAR products in 2014 across 11 product categories: Central Air Conditioners and Air Source Heat Pumps, Boilers, Ceiling Fans, Clothes Washers, Computer Monitors, Furnaces, Geothermal Heat Pumps, Refrigerator-Freezers, Televisions, Ventilation Fans, and Residential Windows. Products that meet the 2014 criteria will deliver significant savings over a conventional product as noted below:

**Estimated Savings for ENERGY STAR Most Efficient 2014 Products by Category**

Boilers: 19% energy savings	Furnaces: 20% energy savings	Televisions: 50% energy savings
Central Air Conditioners 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	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 ENERGY STAR Most Efficient 2014 criteria is compared to the federal standard.*

In 2014, EPA will work to raise awareness and promote recognized products through a geo-targeted, spot marketing campaign in partnership with interested retailers, manufacturers and energy efficiency program sponsors. The objective of this campaign will be to educate target consumers about the value of ENERGY STAR Most Efficient and drive sales. The campaign will raise awareness among a relevant consumer segment at key touch points with positioning that addresses their core values and tells them what to buy and where to buy.

**Comments on ENERGY STAR Most Efficient 2014 Proposals**

EPA received a small set of comments on the proposed criteria distributed on July 26, 2013. Commenters offered program management feedback specific to maximizing collaborations with retailers and energy efficiency program sponsors as well as enhancing web tools such that they better assist consumers. Multiple commenters supported maintaining 2013 requirements into 2014 especially for Windows and HVAC product categories. EPA received competing

comments on proposed changes to the TV requirements with one comment in support of the EPA proposal and one requesting a less stringent requirement. In the interest of ensuring recognition of the most efficient products in the market in 2014 after the release of new TV models early in the calendar year, EPA has maintained the criteria as proposed.

EPA received numerous comments regarding proposed changes to the communications and system status requirements associated with much of the HVAC suite. Having considered this feedback carefully, as well as additional input on the status of the HVAC market, EPA believes that it is premature to change these criteria. EPA will engage stakeholders on the content and timing of more specific requirements over the coming year but will retain the current qualitative requirements for ENERGY STAR Most Efficient 2014. In addition, in light of strong encouragement from stakeholders to align ENERGY STAR Most Efficient criteria for Central A/C with CEE Tier 3 requirements, EPA explored the implications of shifting from a 12.5 EER to 13 EER. Since all currently recognized models have an EER of 13 or higher, the Agency has concluded that such a change can be made without adversely impacting the objectives of the program. CEE has also discussed in recent meetings a proposal to adjust its Tier 3 requirement for SEER consistent with that for ENERGY STAR Most Efficient, an update that would allow for complete alignment. Lastly, this level also aligns with federal tax credits that require 13 EER.

Stakeholders suggested expansion of ENERGY STAR Most Efficient categories to include skylights and doors, room air conditioners, computers, and screw-based lighting. In 2014, EPA will focus on raising awareness of and support for ENERGY STAR Most Efficient and will consider additional product categories as resources allow in future years. EPA has responded more specifically to comments in the attached ENERGY STAR Most Efficient 2014 Comment Response document. You may view this and comments received at [www.energystar.gov/mostefficient](http://www.energystar.gov/mostefficient) by following the link to “ENERGY STAR Most Efficient 2014 criteria.”

### ENERGY STAR Most Efficient 2014 Categories and Recognition Criteria

Recognition criteria have been adopted as proposed for all categories except, as noted above, for Air Source Heat Pumps, Central Air Conditioners, Ductless AC and Heat Pumps, Furnaces, and Geothermal Heat Pumps.

The final criteria for ENERGY STAR Most Efficient 2014 are summarized below. In addition to meeting these performance requirements, products must be certified as ENERGY STAR by an EPA-recognized certification body. Additional details for each product category are included in the recognition criteria documents available at [www.energystar.gov/mostefficient](http://www.energystar.gov/mostefficient) by following the link to “ENERGY STAR Most Efficient 2014 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		
Clothes Washers	Clothes Washer Volume	MEF	WF
	≤ 2.5 cubic feet	≥ 2.4	≤ 4.5
	> 2.5 cubic feet	≥ 3.2	≤ 3.0
Central Air Conditioners	≥18 SEER & 13 EER for split CAC, 16 SEER & 12 EER for packaged CAC; communications, system status, and automated configuration		
Air-Source Heat Pumps	≥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		

Category	Requirements
Ductless AC and Heat Pumps	≥20 SEER & 12.5 EER and (for heat pumps) 9.6 HSPF; filter check and service needed alerts
Computer Monitors	$P_{max} = (6 \cdot r) + (0.032 \cdot A) - 3.800$ Where: $P_{max}$ = maximum allowable On Mode Power consumption in watts $r$ = screen resolution in megapixels $A$ = viewable screen area of the product in square inches
Furnaces	≥97% AFUE; communications, system status, and automated configuration
Geothermal Heat Pumps	Equivalent to Tier 3 levels established in the ENERGY STAR Program Requirements; communications, system status, and automated configuration
Refrigerator-Freezers	V4.1: ≤481 kWh per year; at least 30% better than Federal standard V5.0: ≤637 kWh per year; at least 15% better than the amended Sept 15, 2014 Federal standard
Televisions	$P_{max} = 60 \times \text{TANH}(0.00075(A - 140) + 0.01) + 11$ Where: $P_{max}$ = maximum allowable On Mode Power consumption in W $A$ = viewable screen area of the product in square inches TANH = hyperbolic tangent function
Ventilating Fans	Bathroom/utility fans only; Efficacy(cubic feet per min/W) 7.5 cfm/W high speed for 10-89 cfm fans 6.8 cfm/W high speed for ≥90 cfm fans
Residential Windows	U-factor ≤ 0.20 in all Zones SHGC in Northern Zone ≥ 0.20 SHGC in North-Central Zone ≤ 0.40 SHGC in South-Central and Southern Zones ≤ 0.25 North American Fenestration Standard/Specification (NAFS) Performance Grade ≥15

### ENERGY STAR Most Efficient 2014 Recognition

ENERGY STAR certified products meeting these requirements will be highlighted as ENERGY STAR Most Efficient for 2014 at: [www.energystar.gov/mostefficient](http://www.energystar.gov/mostefficient) beginning January 1, 2014. EPA will shortly begin distributing the ENERGY STAR Most Efficient 2014 designation to manufacturers of eligible products. As a reminder, usage guidelines are available at [http://www.energystar.gov/index.cfm?c=partners.most\\_efficient\\_criteria](http://www.energystar.gov/index.cfm?c=partners.most_efficient_criteria). As new products are certified that meet the criteria, EPA will contact partners 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 ventilating fans, ceiling fans, and boilers**, partners must apply for recognition for all products new to ENERGY STAR Most Efficient 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 communications/system status requirements have not changed, HVAC products recognized in 2013 need not be resubmitted.

For window products, partners will need to apply for recognition for all products new to ENERGY STAR Most Efficient in order for EPA 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. Since the recognition criteria have not changed, window products recognized in 2013 need not be resubmitted. Detailed instructions can be found on this website:  
[http://www.energystar.gov/index.cfm?c=partners.most\\_efficient\\_instructions](http://www.energystar.gov/index.cfm?c=partners.most_efficient_instructions).

For HVAC and window products, once EPA has confirmed product eligibility for recognition, the ENERGY STAR Most Efficient 2014 designation will be provided along with usage guidelines.

The ENERGY STAR Most Efficient 2014 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 2014 web page through December 30, 2014.



We look forward to working with you to market ENERGY STAR Most Efficient products in 2014. Please e-mail [mostefficient@energystar.gov](mailto:mostefficient@energystar.gov) with any questions.

Thank you for your support of the ENERGY STAR program.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ann Bailey'.

Ann Bailey, Director  
ENERGY STAR Product Labeling