

## **ENERGY STAR® Product Development Update Fall 2008**

Provided below are updates on product categories that are currently part of the ENERGY STAR program or are under evaluation by the Environmental Protection Agency (EPA) and the Department of Energy (DOE) for future inclusion. For more information on the status of EPA and DOE's activities, visit the ENERGY STAR Specifications in Development Web site at [www.energystar.gov/productdevelopment](http://www.energystar.gov/productdevelopment). Click on "Revisions to Existing Specifications" or "New Product Specifications in Development" for a list of product-specific Web pages. Contacts are also provided at the end of each update for those parties interested in finding out more about a particular product.

### **Advanced Technology Water Heaters**

On April 1, 2008, DOE released the final criteria for several classes of high efficiency water heaters, including solar, electric heat pump, gas condensing, high-performance gas storage, and gas tankless. The effective date for the new criteria is January 1, 2009.

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### **Audio/Video**

On November 21, 2008, EPA announced the start of the revision process for the Audio/Video product category. EPA will be revising the existing ENERGY STAR specification for Audio/DVD products. In the months ahead, EPA will work with stakeholders to assess both new opportunities for increased product efficiency and the potential to address new product categories and technologies now available in the audio/video marketplace. EPA plans to host a Webinar in mid-December, 2008 to welcome new stakeholders, discuss the revision process and timeline, review candidate audio/video products for inclusion, and review possible approaches for setting test criteria and qualification requirements. Stakeholders will have an opportunity to comment on the topics discussed in the Webinar and guide the development of the Draft 1 specification.

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### **Clothes Washers**

On March 7, 2008, DOE released final criteria for residential and residential-style commercial clothes washers. The new criteria have two effective dates. On July 1, 2009, the criteria change to a minimum Modified Energy Factor (MEF) of 1.8 (from the current minimum MEF of 1.72) and a maximum Water Factor (WF) of 7.5 (from the current maximum WF of 8.0). On January 1, 2011, the criteria change to a minimum MEF of 2.0 and a maximum WF of 6.0.

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### **Compact Fluorescent Light Bulbs (CFLs)**

On March 7, 2008, DOE released final ENERGY STAR criteria for compact fluorescent light bulbs (CFLs). The new criteria address Elevated Temperature Testing procedures, efficacy requirements, and lifetime requirements for ENERGY STAR qualified CFL reflectors. The new specification also initiates the CFL Third Party Testing and Verification Program. The new criteria take effect on December 2, 2008.

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## **Computers**

EPA finalized the Version 5.0 ENERGY STAR program requirements for computer products on November 14, 2008. The revised specification now includes Total Energy Consumption (TEC) ENERGY STAR qualification criteria for notebook and desktop computers. Data from stakeholders and other sources were used to define standard usage patterns in off-, sleep-, and idle-modes for these products. For small-scale servers and workstations, the Version 5.0 specification defines new, more stringent energy efficiency requirements. Version 5.0 also defines qualification criteria for thin clients, a new product type in the computers category. EPA has extended the timeline for developing requirements for game consoles through the end of the 2008 to allow for additional development work with stakeholders. ENERGY STAR criteria for game consoles will be added to the Version 5.0 computers specification when finalized.

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## **Dishwashers: Residential**

On November 14, 2008, DOE announced new ENERGY STAR dishwasher criteria. The new criteria have two effective dates. The first criteria take effect on August 11, 2009 and require ENERGY STAR qualified dishwashers to have a maximum energy use of 324 kWh per year and a maximum water use of 5.8 gallons per cycle. Compact models will be required to have a maximum energy use of 234 kWh per year and a maximum water use of 4.0 gallons per cycle. The second criteria take effect on July 1, 2011 and require ENERGY STAR qualified dishwashers to have a maximum energy use of 307 kWh per year and a maximum water use of 5.0 gallons per cycle. Compact models will be required to have a maximum energy use of 222 kWh per year and a maximum water use of 3.5 gallons per cycle.

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## **Displays / Monitors**

EPA distributed a Draft 2 Version 5.0 specification for displays on October 22, 2008. Draft 2 incorporates a number of updates received from stakeholders after the release of the Draft 1 specification in July, 2008. The proposed revisions in Draft 2 include new on-, sleep-, and off-mode power requirements for displays of a wide variety of sizes, resolutions, and end-use applications. Draft 2 also updates the proposed test methodology to test all displays at a specified luminance level. Stakeholder comments on the Draft 2 specification are due on November 17, 2008. EPA will be hosting a Webinar on December 2, 2008 to discuss these comments, and will be publishing a Draft Final document on December 10, 2008. The Version 5.0 specification is scheduled to be released on January 21, 2009, with an effective date of October 21, 2009.

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## **External Power Supplies**

The Version 2.0 ENERGY STAR program requirements for single-voltage AC-DC and AC-AC external power supplies took effect on November 1, 2008. The revised specification defines minimum energy efficiency criteria for external power supplies in both Active and No-Load modes. Additionally, power supplies with greater than or equal to 100 W input power are required to have a true power factor of 0.9 or greater at 100% of rated load when tested at 115V/60Hz.

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### **Furnaces**

The new Tier 2 ENERGY STAR program requirements for oil furnaces – raising the minimum Annual Fuel Utilization Efficiency (AFUE) from 83% to 85% - went into effect on October 1, 2008. The AFUE for gas furnaces continues to be at 90% AFUE. EPA may pursue a more challenging AFUE for gas furnaces in the near future and continues to be interested in motor efficiency metrics.

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### **Griddles**

EPA released a Draft 1 specification for commercial griddles on September 8, 2008 and held a stakeholder Webinar on October 7 to discuss the program and proposed ENERGY STAR criteria. The comment period closed on October 17, 2008. Based on several concerns brought up by stakeholders regarding the size of the data set, EPA intends to conduct additional research, with the goal of releasing a Draft 2 specification in January, 2009. EPA will then host a stakeholder meeting at the North American Association of Food Equipment Manufacturers (NAFEM) show on February 4, 2009 and hopes to finalize and launch the new specification at the National Restaurant Association Show in May.

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### **Ice Machines**

The ARI 810 standard, which references ASHRAE 29, has been revised to specifically address flake and nugget ice machines. Once an ARI certification program has been developed, EPA will revisit the ENERGY STAR specification to determine whether levels can be developed for these product types.

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### **Imaging Equipment**

EPA hosted a stakeholder meeting for the Draft 1 Version 1.1 of the ENERGY STAR specification for imaging equipment in Washington, D.C. on May 7, 2008. The EPA detailed proposed specification revisions and the results of data analysis, and addressed stakeholder questions and concerns regarding the proposed changes. Based on the discussion, EPA determined the total number of imaging equipment models available for sale in the United States by recording model information directly from manufacturers' Web sites. Based on this market study, EPA distributed Draft 2 on July 16, 2008 and a Final Draft on August 28, 2008. The Final Version 1.1 ENERGY STAR specification was distributed to stakeholders on October 1, 2008 and has an effective date of July 1, 2009.

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### **Ovens: Commercial**

On October 13, 2008, EPA announced its intentions to develop an ENERGY STAR specification for commercial ovens. EPA plans to release a Draft 1 specification in early December and work toward finalizing and launching the new specification at the National Restaurant Association show in May 2009.

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### **Programmable Thermostats**

EPA distributed the final Version 1.2 ENERGY STAR specification for programmable thermostats to stakeholders on February 1, 2008, with an immediate effective date. This new specification includes requirements for participation in a consumer education campaign and a sunset date of December 31, 2009 for the current performance requirements. In early 2009, EPA will host a workshop with NEMA to discuss the next generation ENERGY STAR specification for programmable thermostats. EPA intends to expand participation to include ergonomic and user interface specialists in addition to manufacturers. EPA is considering future workshops to discuss methods to measure functionality and usability and the development of next-generation test plans. It is EPA's intent to work with industry prior to this date to develop innovative collaborative proposals for new performance requirements for programmable thermostats to ensure savings for consumers.

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### **Refrigerators and Freezers: Commercial**

EPA released a Draft 2 Version 2.0 ENERGY STAR specification for commercial refrigerators and freezers on August 26, 2008. EPA used the Natural Resources Canada (NRCan) data set in this latest version because the data has been third-party certified and represents product performance with all accessories enabled. Draft 2 includes proposed requirements for glass- and solid-door refrigerators and freezers, in both chest and vertical configurations. Requirements for vertically configured glass- and solid-door refrigerators and freezers are further categorized by product interior volume. EPA will be distributing a Draft 3 of the specification in early December based on stakeholder comments received on Draft 2. A Draft Final document is scheduled to be distributed in January/February 2009. The specification is expected to be finalized by March 2009.

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### **Refrigerators and Freezers: Laboratory Grade**

Over the next several months, EPA will be working with stakeholders to evaluate potential revisions to the current ASHRAE 72 test procedure so that it can be made more appropriate for measuring energy consumption during typical operation of laboratory grade refrigerators and freezers. Several manufacturers have expressed concerns about using ASHRAE 72, as written. These revisions will need to be resolved before EPA can move forward with gathering data and drafting ENERGY STAR criteria for these products. Once the Version 2.0 ENERGY STAR specification for commercial refrigerators and freezers becomes effective, laboratory grade products will no longer be eligible for the program unless new levels specific to laboratory grade products can be determined.

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### **Residential Ceiling Fans**

On November 14, 2008, EPA released an amendment to the ENERGY STAR residential ceiling fan specification (Version 2.3) to remove the requirement that manufacturers include airflow efficiency performance results on product packaging. This change was implemented in light of new Federal Trade Commission (FTC) labeling requirements that go into effect on January 1, 2009. No other substantive changes were made to the specification requirements. The Version 2.3 specification will go into effect on January 1, 2009.

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### **Residential Light Fixtures**

Finalized Version 4.2 ENERGY STAR requirements for Residential Light Fixtures became effective on June 2, 2008. In addition to the inclusion of fixtures using LED light engines added to the program during the summer, Version 4.2 allows GU24 integrated lamps to qualify as an ENERGY STAR product for the first time.

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### **Servers**

EPA released a Draft 3 specification on November 4, 2008. The Draft 3 proposal includes: minimum power supply efficiency (AC-DC and DC-DC) levels; maximum Idle power levels categorized by the number of processors, power supply redundancy, and amount of memory; and various performance reporting requirements. Performance requirements for power supply efficiency and Idle power were based on analyses of data submitted by manufacturers. Shortly following release of the Draft 3, EPA put out a call for data on four processor systems, underpopulated systems (e.g., 4 socket/2 processor), and smaller power supply designs (e.g.,  $\leq$  450 Watts). The Draft 3 comment period ends December 4, 2008. EPA is working toward a finalization and effective date of February 1, 2009.

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### **Set-top Boxes**

EPA released the final ENERGY STAR Program Requirements for set-top boxes and set-top box service providers on April 23, 2008. The documents contain proposed energy-efficiency criteria, detailed guidance on labeling qualified products, and requirements for service providers to commit to purchasing and deploying ENERGY STAR qualified set-top boxes. Service providers may partner with ENERGY STAR immediately, while the effective date for the technical specification is January 1, 2009.

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### **Solid State Lighting Luminaires**

On September 12, 2007, DOE released the final criteria for Solid State Lighting Luminaires, intended for general illumination. Solid-state lighting differs fundamentally from traditional lighting technologies in terms of materials, drivers, system architecture, controls, and photometric properties. A host of new test procedures and industry standards have been developed to accommodate these technical differences. The ENERGY STAR SSL program went into effect on September 30, 2008. To date, 39 companies have become ENERGY STAR Partners under the SSL program and 4 products have been qualified.

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### **Telephony**

EPA worked with stakeholders to update the ENERGY STAR program requirements for Telephony products in response to the inception of new requirements for External Power Supplies. The Version 2.1 Telephony specification was revised to include an exception to the no-load power consumption requirements for EPS devices, since the no-load condition is not directly applicable to Telephony products. The Version 2.1 ENERGY STAR specification for Telephony products took effect on November 1, 2008.

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### **Televisions**

The Version 3.0 ENERGY STAR program requirements for Televisions took effect on November 1, 2008. Starting in late May 2008, EPA allowed manufacturers interested in testing and qualifying their products under Version 3.0 to submit product data to ENERGY STAR. As of November 10, 2008, 362 TV products were qualified under the new specification. EPA is working with retail, utility, and other partners to promote these more efficient products. EPA intends to initiate the Tier 2 specification development process by January 2009.

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### **VCRs**

EPA suspended the ENERGY STAR specification for VCRs on November 1, 2008. This action was taken due to the sharp decline in the number of VCR models submitted for qualification in recent years and the recent decline in VCR sales in the U.S.

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### **Vent Fans**

Based on concerns regarding the existing Home Ventilating Institute (HVI) certification requirement, EPA is revising the ventilating fan specification to allow for more flexibility in testing and certification. A Draft 1 Version 2.1 ENERGY STAR specification for ventilation fans was released in early September 2008 for stakeholder review and comment. Based on comments received EPA released a Draft 2 specification on November 12, 2008. The latest version includes new third party laboratory accreditation requirements and outlines certification program requirements, for participating in the ENERGY STAR program. Essentially, the new specification will allow manufacturers to utilize HVI and Air Movement & Control Association (AMCA) certification programs to qualify for ENERGY STAR as well as any third-party program that meet the criteria laid out in the specification. The new Version 2.1 requirements are scheduled to take effect on December 12, 2008.

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### **Windows, Doors, and Skylights**

Due to changes in building codes and the increased market share of ENERGY STAR qualified windows, doors and skylights, DOE conducted a criteria analysis process for windows, doors, and skylights between September 2007 and November 2008. Following the end of the public comment period on November 14, 2008, DOE will announce the final criteria in 2009.

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