

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



OFFICE OF  
AIR AND RADIATION

May 31, 2013

Dear ENERGY STAR® Residential Refrigerator and Freezer Manufacturers and Other Interested Parties:

The U.S. Environmental Protection Agency (EPA) is pleased to share the final Version 5.0 ENERGY STAR Residential Refrigerators and Freezers Product Specification and the Department of Energy's (DOE) final ENERGY STAR Test Method to Validate Demand Response. This letter describes the final decisions regarding the new specification and test method, and outlines the process for certifying products under the new specification.

**Final Version 5.0 Specification:**

This specification establishes new energy use requirements for refrigerators and freezers. Under the ENERGY STAR Version 5.0 specification, all ENERGY STAR refrigerators and freezers will use at least 10% less energy than required by minimum efficiency standards effective in 2014. If all refrigerators and freezers sold in the United States met these new requirements, the energy cost savings would grow to more than \$890 million each year and 11.8 billion pounds of annual greenhouse gas emissions would be prevented, equivalent to the emissions from more than one million vehicles.

This specification also establishes the first set of optional "connected" criteria for refrigerators and freezers. ENERGY STAR refrigerators and freezers with connected functionality will offer consumers new convenience and energy-saving features, while facilitating broader electric power system efficiency. These features include energy-related messages, such as an alert that the door has been left open or real-time insight into the product's energy consumption. Consumers will also have the ability to manage settings from afar, such as using a computer or smart phone to remotely put the refrigerator into an energy-saving vacation mode.

ENERGY STAR refrigerators and freezers with connected functionality will be "smart grid" ready, meaning they will give consumers the option to connect their refrigerator/freezer with their local utility to save more on their energy bills, where those services are offered. Once connected, a product will be able to intelligently adjust its consumption to reduce demand on the grid or use energy at times when it is better for the environment -- all the while ensuring the refrigerator continues to meet consumer expectations for keeping food fresh. Importantly, connected products will also ensure consumers remain in control at all times by having the option to override utility commands when needed. ENERGY STAR refrigerators and freezers with connected functionality will use open standards, helping to assure these products are compatible with both the smart grid and with different energy management systems and apps.

EPA plans to identify models with connected functionality on the ENERGY STAR consumer website. The Agency will also play a role in consumer education to increase understanding of additional savings and convenience benefits associated with ENERGY STAR products with connected functionality, as well as how to take advantage of these new features.

In light of complexities associated with the minimum standard and test procedure change next year, the effective date for the ENERGY STAR Residential Refrigerators and Freezers Version 5.0 specification

has been changed to September 15, 2014. EPA is not making any additional substantive modifications to the final Version 5.0 specification from the Final Draft. The final specification includes the following minor clarifications:

- In Table 1, Annual Energy Consumption Base Allowances were corrected for a number of product classes with through-the-door ice (5A, 5A-BI, 6, 7, and 7-BI).
- Several product class descriptions in Table 1 were edited to be identical to the DOE in CFR §430.32(a).
- The title of the specification was corrected to read “Product Specification for Residential Refrigerators *and Freezers*”, consistent with EPA’s decision to continue to cover residential freezers in Version 5.0.

#### **Test Method to Validate Demand Response:**

DOE is not making any substantive modifications to the final Test Method to Validate Demand Response from the Final Draft. The final test method includes the following technical clarifications:

- Subsections A and B reference units in kWh instead of Wh.
- Lines 94 and 103 from the Final Draft were clarified to specify units as kWh.

The Version 5.0 Refrigerator and Freezer specification was developed through extensive engagement with stakeholders including numerous draft specifications and meetings. Stakeholder comments, previous draft versions of the specification, including the Final Draft, and related materials can be found on the ENERGY STAR website at [www.energystar.gov/RevisedSpecs](http://www.energystar.gov/RevisedSpecs) under the link for “Refrigerators & Freezers.”

#### **Version 5.0 Transition Timeline:**

EPA shares its ENERGY STAR Partners’ desire for a smooth transition from one ENERGY STAR specification version to the next. To meet consumer expectations that ENERGY STAR labeled products meet the requirements in effect upon their date of manufacture, EPA has established the following timeline for the refrigerators and freezers specification transition:

- Effective immediately and consistent with applicable Department of Energy and Federal Trade Commission rules and guidance for early use of the amended refrigerator and freezer test methods, manufacturers may elect to have their Certification Body (CB) certify eligible products to the Version 5.0 requirements.
- After January 1, 2014, CBs will be instructed to stop certifying new product submittals to Version 4.1. Note, however, that existing products certificated to Version 4.1 will remain valid for the purposes of ENERGY STAR qualification until September 15, 2014.
- Any refrigerator or freezer manufactured as of September 15, 2014 must meet the Version 5.0 requirements to bear the ENERGY STAR mark. All certifications of products to the Version 4.1 specification will be invalid for purposes of ENERGY STAR qualification and CBs will only submit product models certified to Version 5.0 to EPA.

#### **Third-party Certification:**

As a reminder, all new products must be certified by an EPA recognized CB before being labeled and marketed as ENERGY STAR. Upon satisfactory completion of all certification requirements, a CB will notify the partner that the product is ENERGY STAR qualified and will submit qualified product data to EPA for listing on the ENERGY STAR website. For more information on the Third-party Certification program please visit [www.energystar.gov/3rdPartyCert](http://www.energystar.gov/3rdPartyCert).

EPA thanks all stakeholders who provided feedback during this specification revision process and looks forward to working with you as you qualify and market your ENERGY STAR Refrigerators and Freezers.

Please direct any specific questions to Amanda Stevens, EPA at [Stevens.Amanda@epa.gov](mailto:Stevens.Amanda@epa.gov) or (202) 343-9106. Questions on test methods should be directed to Ashley Armstrong, DOE at [Ashley.Armstrong@ee.doe.gov](mailto:Ashley.Armstrong@ee.doe.gov) or (202) 586-6590.

Thank you for your continued support of ENERGY STAR.

Sincerely,

A handwritten signature in cursive script that reads "Amanda Stevens". The ink is a dark grey or black color.

Amanda Stevens  
Product Manager  
ENERGY STAR Appliances