

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



OFFICE OF
AIR AND RADIATION

November 20, 2008

Dear Laboratory Grade Refrigerator and Freezer Manufacturer or Other Interested Party,

The purpose of this memo is to provide an update on the ENERGY STAR[®] specification development process, outline outstanding issues regarding application of the ASHRAE 72 Standard "*Method of Testing Commercial Refrigerators and Freezers*" to laboratory grade refrigerators and freezers, and **request feedback by December 1** on possible dates for a half-day stakeholder meeting.

On May 1, 2008, the U.S. Environmental Protection Agency (EPA) held an online stakeholder meeting to provide an overview of the ENERGY STAR program and begin more in-depth discussions regarding laboratory grade refrigerator and freezer technologies, applications, and test procedure considerations. Based on feedback provided during the meeting, and subsequent discussions with several manufacturers, EPA has identified the following issues that need to be addressed regarding the ASHRAE 72 test procedure so that the test method is more applicable to laboratory grade refrigerators and freezers:

- **Door Openings:** The current requirement in ASHRAE 72 may not be representative of the typical usage pattern of laboratory equipment, which could vary based on application. For example, openings may not be applicable at all for ultra low freezers since these are designed for longer term storage.
- **Manual Switches/Accessories:** The new Version 2.0 ENERGY STAR commercial refrigerator and freezer specification will require that all manual switches/accessories shipped with the equipment be turned to the "ON" position during testing for ENERGY STAR qualification. There has been some concern about applying this same principle to all laboratory grade refrigerator and freezer accessories.
- **Required Defrost Cycles:** ASHRAE 72 requires that a defrost cycle be captured during energy consumption testing. While this is applicable to food grade refrigerators and freezers, it may not be applicable to all laboratory applications. Based on manufacturer discussions, there are some products that do not use a typical automatic defrost and others may never go into a defrost cycle. There was also a suggestion to extend the required test duration from 24 hours to 7 days to capture all defrost cycles and provide more accurate results.
- **Temperature Uniformity:** EPA understands that end users consider this the most important characteristic when purchasing a laboratory grade refrigerator or freezer. Temperature uniformity is currently not addressed in the ASHRAE 72 test method. It is also our

understanding that there is no standard, industry accepted temperature uniformity test procedure available. EPA is very interested in including temperature uniformity in an ENERGY STAR laboratory grade refrigerator and freezer specification to ensure that product quality is maintained with greater energy efficiency. Conditions specific to laboratory grade refrigerators and freezers could be dictated as an addendum to ASHRAE 72 within the ENERGY STAR specification; however, decisions need to be made regarding the parameters of temperature uniformity testing.

- **Product Loading/Shelf Placement:** The product loading specified in ASHRAE 72 may not be representative of typical laboratory grade storage. EPA understands that typically manufacturers test these products empty, which represents the worst case scenario in terms of energy consumption. While this would allow for a fair comparison it does not emulate real world performance. In addition, it was brought to EPA's attention that required placement of shelves is not specified in ASHRAE 72, which could affect air flow and thus, temperature uniformity.

ENERGY STAR Stakeholder Meeting: Proposed Dates

Finalizing an industry accepted test method is a critical first step toward drafting an ENERGY STAR specification proposal. Given the number and complexity of the test procedure issues listed above, EPA would like to hold a half-day stakeholder meeting within the next two months in Washington, DC in order to discuss and potentially resolve each issue. The following options are being proposed:

December 17 or 18

January 5, 6, 22, 26, 27, 28, or 29

Interested stakeholders are encouraged to provide their availability to Rebecca Duff, ICF International, at rduff@icfi.com by Monday, December 1. A call-in number will be provided to those stakeholders that cannot attend in person but would like to participate in the discussion. Please indicate in your response whether you are available to attend in person or via conference call. EPA will send an email to all stakeholders with the chosen date by December 3.

Thank you for your support of ENERGY STAR and participation in this effort. If you have any questions or concerns, please feel free to contact me at schmeltz.rachel@epa.gov or (202) 343-9124.

Sincerely,



Rachel Schmeltz
ENERGY STAR Product Manager