

change the measured energy efficiency or measured energy use of a covered product, DOE must amend the applicable energy conservation standard during the rulemaking that establishes the new test procedure. In determining the amended energy conservation standard, DOE is required to measure the energy efficiency or energy use of a representative sample of covered products that minimally comply with the existing standard. The average energy efficiency or energy use of these representative samples, tested using the amended test procedure, shall constitute the amended energy conservation or energy use standard for the applicable covered products. (42 U.S.C. 6293(e)(2)).

Beginning 180 days after an amended or new test procedure for a covered product is prescribed or established under section 323(b) of EPCA, no manufacturer, distributor, retailer, or private labeler may make any representation with respect to the energy use, efficiency, or cost of energy consumed by such product, unless such product has been tested in accordance with such amended or new DOE procedure and such representation fully discloses the results of such testing. (42 U.S.C. 6293(c)(2)).

B. Background

On November 21, 2000, Electrolux filed an application for interim waiver and a petition for waiver regarding the calculation of the long-time automatic defrost test time period in refrigerators and refrigerator-freezers having a variable defrost control function. The Department granted the interim waiver on July 30, 2001, and published its decision in the **Federal Register** on August 3, 2001. (66 FR 40689). In the same **Federal Register** notice, the Department published Electrolux's petition for waiver, and solicited comments, data, and information respecting the petition. On March 29, 2002, DOE published a notice in the **Federal Register** extending the interim waiver for 180 days, or until July 25, 2002, because it determined that it would seek to amend the refrigerator and refrigerator-freezer test procedure and the planned amendment would eliminate any need for continuation of the waiver. (67 FR 15192). Furthermore, amendment of the test procedure would allow all manufacturers to use the amended test procedure if they have a product with a long-time automatic defrost function.

Electrolux's petition requested that the calculation of the test time period for long-time automatic defrost models be modified for its variable defrost control models. This modification

would allow for the existence of a control that is capable of timing defrost to occur other than during a compressor "on" cycle, thereby taking advantage of the natural warming of the evaporator during an "off" cycle, and saving energy as a result. Technology has advanced sufficiently that it is feasible to design and build a system that no longer has to initiate defrost during a compressor run period, as did the old mechanical defrost timers. Electrolux asked to have the time before the heaters turn "on" be included in the defrost period. The evaporator is warming up during this time, with no use of electrical energy. The current test procedure does not properly account for the energy savings produced by Electrolux's timing of the defrost heater activation.

The Department received three written comments concerning the petition for waiver. All the comments supported granting the waiver, with one modification.

Maytag supported Electrolux's proposal provided that it is applicable on an industry-wide basis to all manufacturers. The Department's waiver process allows for granting of waivers for a "particular basic model," so the waiver requested and granted applies only to the Electrolux basic models that include variable defrost control. Without a test procedure change, any manufacturer desiring to use this modification to the test procedure could do so only by petitioning the Department for its own waiver.

Fisher & Paykel, a major manufacturer of refrigerators in New Zealand, generally approved of Electrolux's petition, but argued for a somewhat different modification. It proposed that the third sentence of section 4.1.2.1 of the test procedure (which is the only sentence Electrolux sought to modify) read as follows:

"The second part would start at the last compressor off that is part of steady state operation (or at a point still within stable operation if there are no temperature swings) before a defrost is initiated. It would terminate at the [second] [third] turn "on" of the compressor or after four hours, whichever comes first. If there are compressor swings without compressor cycling, the start point shall be at the last temperature peak in stable operation and the end point shall be at the [second] [third] temperature peak after the defrost."

Finally, the Association of Home Appliance Manufacturers (AHAM), representing the manufacturers who produce over 90% of the household refrigerators and refrigerator-freezers in the U.S., agreed in principle with Electrolux's petition, but requested a

change in the wording. AHAM suggested that the four hour limitation of the test commence when the defrost heater is initiated, rather than at the beginning of the second part of the two-part test period. It stated that this change would alleviate concerns about "the possibility of being able to modify the performance of a refrigerator to such an extent that it would not recover from defrost in the four hour time period allotted within the proposed waiver."

AHAM recommended that Electrolux's proposed language be changed so that revised section 4.1.2.1 of the test procedure would read as follows:

"Long-time Automatic Defrost. If the model being tested has a long-time automatic defrost system, the test period may consist of two parts. A first part would be the same as the test for a unit having no defrost provisions (section 4.1.1). The second part would start when a defrost is initiated when the compressor "on" cycle is terminated prior to start of the defrost heater and terminates at the second turn "on" of the compressor or four hours from the initiation of the defrost heater, whichever comes first."

AHAM stated that it discussed this change with its members, and was not aware of any member who disagreed with its position. It specifically listed the following members as having participated in and concurred in its proposal: GE Appliances, Electrolux Home Products, Fisher & Paykel, Maytag, Sub-Zero, and Whirlpool. In summary, AHAM asserted that all commenters on Electrolux's Petition were in agreement with AHAM's proposal.

II. Discussion

The Department consulted with the National Institute of Standards & Technology (NIST), which agreed that the current test procedure for refrigerators and refrigerator-freezers is not clear with regard to the initiation of the defrost cycle test time period in Electrolux's new product. (The current test procedure states: "The second period would start when a defrost period is initiated during a compressor "on" cycle * * *") Electrolux's new product initiates the defrost period when the compressor is "off".) NIST informed the Department that the change proposed in the Electrolux Petition would clarify the defrost cycle initiation and more accurately measure the energy consumption of Electrolux's new product. NIST endorsed the revised language proposed by AHAM. As stated above, all commenters on the test procedure change apparently support AHAM's proposal. This proposed change has widespread support and will