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SUBJECT: Energy Star® Program Requirements for Commercial Refrigerators and Freezers

Following is the requested stakeholder written comments on the Draft 3 Version 2.0 Commercial Refrigerators and Freezers specification.

The American Beverage Association (ABA) welcomes the opportunity to submit comments on Draft 3, Version 2.0 of the Commercial Refrigerators and Freezers Specification.

The ABA is the national trade organization representing the broad spectrum of companies that manufacture and distribute non-alcoholic beverages in the United States. Our members are producers, marketers and distributors of virtually every non-alcoholic refreshment beverage, including bottled waters, teas, sports drinks, energy drinks, water beverages, fruit juices, fruit drinks, milk-based beverages, full-calorie carbonated soft drinks, mid-calorie carbonated soft drinks, and diet carbonated soft drinks. Our members also purchase and provide commercial refrigerators to their retail customers. It is on behalf of our members that we submit these comments.

Issue of Concern

In Draft 3 of the Version 2.0 ENERGY STAR® specification for Commercial Refrigerators and Freezers, there is supposed clarification stating “energy management devices that are hardwired and cannot be adjusted by the operator may be operational during testing provided they meet the requirements outlined in the official interpretation on ANSI/ASHRAE 72-2005 (Interpretation IC 72-2005-01).” However, it is uncommon of energy management devices for commercial refrigerators to operate within the behavioral limits of the ASHRAE Interpretation. The ASHRAE Interpretation mandates that the commercial refrigerator control be nonchangeable during operation, and maintain a steady state average temperature. This is not how many energy management controls function. If, in fact, an energy management device never changes the machine after the test is concluded, it is not an energy management device; it is simply a standard control.

The current ASHRAE protocol discourages the use of energy-saving devices. These devices carry additional cost and by not allowing their use during the test, they provide no benefit to cooler manufacturers. They may provide a benefit to the end-user, but without the Energy Star certification, how will manufacturers be able to demonstrate to the consumer that the unit is, in fact, energy efficient?

Background

New energy management devices are now marketed so that when installed into a commercial refrigerator, the operator will not be able to adjust the operational settings. These devices respond to external conditions, such as product sales and temperature, to control the refrigeration cycle of the machine. In this way, these devices seek opportunities for the commercial refrigerator to shut-off powered elements and save energy. Commercial refrigerators with these devices use less energy than commercial refrigerators that operate in accordance with the ASHRAE 72 Standard. When ASHRAE was asked for clarification on whether new commercial refrigerators with energy saving control devices meet the criteria of testing for the standard, ASHRAE indicated the test results would be invalid, essentially saying “no.” According to the ASHRAE interpretation, new energy efficient coolers adapt to a different mode of operation to save energy, regulating the product (test package) temperatures, and thereby cannot ever be considered to operate in steady-state condition. As such, the test results are invalid. The ASHRAE interpretation states: "If an adaptive energy management device will shift to a different AT (average temperature) during or after the test, then the steady state condition has not been established and the test is not valid." Since virtually every energy management device shifts the machine out of steady-state to save energy, the ASHRAE Interpretation is essentially saying they cannot be used for the ASHRAE 72 tested machine.

ABA Position

If a commercial refrigerator with an energy management control device is artificially forced to operate in a steady state condition per ASHRAE 72 and tested (with the energy device deactivated), then the test results should be accepted by the Energy Star® reporting requirement. The resulting energy level (test results) would represent the highest amount maximum energy usage. When the equipment is installed, the energy consumption would always be lower than the level reported (because of the energy management control). The energy management device would provide additional energy reduction from the reported test results.

Other authorities, such as the California Energy Commission (CEC Appliance Efficiency Regulations Section 1606 - Filing of Statements) allows manufacturers to report numbers higher than operating values, where the consumer would, all other things being equal, prefer lower values. In this case, the number reported (which meets the efficiency requirement) will always be higher than the actual value when the equipment is in use. Energy Star® should allow the same thing. Energy Star® should accept the results, with a statement from the manufacturer that the energy management device was deactivated for the test result. And the test result represents the largest energy consumption achievable under the test conditions, and that actual field results will be lower.

Recommended Language

Lines 240 – 244 of the Draft 3 Version 2.0 ENERGY STAR® specification should be revised as follows:

Note: Equipment with energy management devices permanently installed such that the operator is not able to adjust the settings may be a functional part of the machine, provided that during the testing, the energy management device is addressed so that the testing temperature stays within the specified range, and the results represent the largest energy consumption possible under the test conditions.

Please confirm that this type of language change is acceptable. Not allowing ASHRAE test results with the energy management device appropriately treated would discourage the use of these beneficial energy saving controls in commercial refrigerators, resulting in a missed opportunity to save energy.

Sincerely,
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