

July 30, 2010

Ms. Brenda Edwards
U.S. Department of Energy
Building Technologies Program
Mailstop EE-2J
1000 Independence Avenue, SW
Washington, DC 20585-0121

Re: Docket No. EERE–2010–BT–STD–0003: Energy Efficiency Program for Consumer Products: Public Meeting and Availability of the Framework Document for Commercial Refrigeration Equipment

Dear Ms. Edwards,

These comments of the Appliance Standards Awareness Project (ASAP) are in support of previous comments submitted by Earthjustice and California IOUs to this docket regarding the issue of separate product classes for commercial refrigerators, freezers, and refrigerator/freezers with and without doors. We believe that DOE is not required to maintain separate product classes given the results of the referenced studies below. Elimination of separate product classes is important because significant national energy savings could be achieved if all products met the efficiency performance achieved by doored units. Therefore, we strongly urge DOE to combine products with and without doors into a single product class.

Impact of doored display cases on product sales

As the Earthjustice and California IOU comments point out, since the principal consumers of commercial refrigeration equipment are retailers, unless replacing an open display case with a doored display case would have a significant negative impact on sales, there is no “feature” of open display cases that would justify a separate product class. The ASHRAE study titled “Comparison of Vertical Display Cases: Energy and Productivity Impacts of Glass Doors Versus Open Vertical Display Cases”¹ found that replacing an open refrigerated display case line-up with a doored display case line-up did not appear to hinder product sales. Specifically, the study found that:

- The rate of increase in beer sales was essentially the same after installation of both a new open and a new doored display case line-up where there had previously been open display case line-ups
- There was no significant difference in dairy product sales before and after installation of a new doored display case line-up

Impact of doored display cases on customer experience and food safety

The study titled “Supermarkets, indoor climate, and energy efficiency—field measurements before and after installation of doors on refrigerated cases”² included an analysis of the impact of

¹ May be purchased at the ASHRAE Bookstore website for \$30 at http://www.techstreet.com/cgi-bin/detail?product_id=1724326.

² In International Refrigeration and Air Conditioning Conference at Purdue Proceedings, 2008. May be purchased for \$130 at <https://engineering.purdue.edu/Herrick/Events/orderlit.html>.

installing doors on open display cases on customer experience in the supermarket. The study found that customers judged the indoor environment overall to be more comfortable after the doors were installed. The ASHRAE study notes that in addition to reducing cold air spillage into shopping aisles, doored cases also improve food safety by reducing the large variations in product temperatures commonly observed in open cases. These study results and observations indicate that, if anything, product utility may actually be increased by replacing an open display case with a doored display case.

Potential national energy savings

Combining products with and without doors into a single product class could result in significant national energy savings. According to the ASHRAE study, open refrigerated display cases make up almost 50% of the total display refrigerators. The ASHRAE study found that the open display case line-up consumed approximately 1.2 times more energy than the doored display case line-up. The study also notes that a significant portion of the energy savings achieved by reducing the infiltration load through the use of doors was offset by substantial anti-sweat heater energy use, but that the doored display case energy use could be significantly reduced through the use of “no heat” doors and LED lighting.

Conclusion

The two referenced studies show that product sales were not negatively impacted by replacing an open display case with a doored display case and that customers found the indoor environment of a supermarket to be more comfortable after the installation of doors on open display cases. These results suggest that there is no “feature” of open display cases that justifies separate product classes. Combining products with and without doors into a single product class could provide important benefits to the nation due to the significant potential energy savings that could be achieved by requiring all display cases to attain the same level of energy efficiency.

Thank you for considering our comments.

Sincerely,

A handwritten signature in cursive script that reads "Joanna Mauer".

Joanna Mauer
Technical Advocacy Coordinator
Appliance Standards Awareness Project