

COMMERCIAL REFRIGERATORS AND FREEZERS



Overview: CEE launched an initiative for commercial reach-in, solid-door commercial refrigerators and freezers in December of 2002. This initiative seeks to maximize the energy savings opportunity available through increased and sustained market share of efficient commercial refrigeration equipment. In 2006, the CEE commercial refrigeration specifications were incorporated into the Commercial Kitchens Initiative due to their direct relevance to this market.

About This Market: Reach-in refrigerators and freezers are used in the food service industry by restaurants and institutional organizations, accounting for approximately 17 percent of all commercial refrigeration energy use. In 1996, the inventory of refrigerators and freezers in place was 2.1 million units. Estimated annual sales were 233,000 units, 60 percent of which were reach-in refrigerators; the rest were reach-in freezers.

The major barriers that hinder more rapid market penetration of highly efficient commercial reach-ins include a market with multiple market players, a high emphasis on first cost, and a large used equipment market. CEE is currently working with member organizations to encourage the adoption of the specifications for promotion.

How CEE's Commercial Refrigerators and Freezers Initiative Works:

The long-term objectives of this initiative are to increase:

- End-user understanding and valuation of the benefits of energy-efficient commercial refrigeration equipment
- Retail/distributor promotion and marketing of energy-efficient commercial refrigeration
- Manufacturer production and promotion of energy-efficient commercial refrigeration products

CEE's strategies to accomplish these objectives include:

- Encouraging the adoption and promotion of a common specification for commercial reach-ins (see next page)
- Continued support of the Commercial Refrigeration Committee
- Development of effective program approaches to increase market share of high-efficiency commercial refrigeration

Expected Energy Savings: In 1996, the average energy use of a reach-in freezer was 7,500 kWh per year, with a potential increase in efficiency of 30 percent (less than a two-year payback). The average energy use of a reach-in refrigerator was 3,800 kWh per year, with a potential increase in efficiency of 35 percent (also less than a two-year payback).

FACT SHEET

Commercial Refrigeration Specifications

Solid-door Reach-in Refrigerators and Freezers

NOTE: CEE's specifications are updated periodically. See the CEE Web site (www.cee1.org) for the most recent version. For terms and usage of this specification, see the CEE Web site.

Equipment	Tier	Corresponding Base Specification	Maximum Energy Use/Day (kWh/day)
Refrigerator	1	ENERGY STAR	$0.10V + 2.04$
	2	ENERGY STAR + 40%	$.06V + 1.22$
Freezer	1	ENERGY STAR	$0.40V + 1.38$
	2	ENERGY STAR + 30%	$0.28V + 0.97$

V = Internal Volume ASHRAE Standard 117-2002 / 38 deg. F

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