



## Refrigeration Optimization & Leak Prevention<sup>1</sup>

Food retailers, such as grocery stores and convenience stores, can save money and lessen environmental impacts by ensuring that commercial refrigeration equipment is properly maintained. Did you know that a typical food retail store leaks an estimated 25% of refrigerant, or approximately 1,000 pounds, annually? Due to their greenhouse gases and, in some cases, ozone-depleting substances, leaks can be costly and have significant impacts on the environment. It is important for business owners to understand the benefits of conducting regular maintenance to reduce the likelihood of refrigerant leaks in food retail stores and to ensure they can act quickly to remediate.

<sup>1</sup> U.S. Environmental Protection Agency

### Why is Routine Preventive Maintenance Important?

**Leaks are expensive.** Performing regular preventive maintenance can often save money because preventing refrigerant leaks is typically less expensive than repairing them.

**Leaks harm the ozone layer, contribute to climate change or both.** When leaked, refrigerants can contribute to ozone depletion and emit large amounts of carbon dioxide. Fact: Emitting one pound of the most commonly used HFC refrigerant has the same climate change effects as emitting nearly 4,000 pounds of carbon dioxide.<sup>1</sup>

**If leaks aren't addressed immediately, waiting can make the problem bigger.** Leaks in refrigeration equipment will increase in size if left unaddressed. The larger the size of the leak, the more refrigerant is wasted.

**Regular preventive maintenance can help reduce other costs associated with equipment operation.**

Equipment wear and tear reduces energy efficiency, and a system that is low on refrigerant must work harder for temperature control.



# How to Optimize Your Refrigeration<sup>2</sup>

- Floating head pressure
- Ambient and mechanical subcooling
- Evaporative condensers
- Heat-recovery systems
- Display-case shields
- Evaporator-fan motors
- Antisweat heater controls
- Smart defrost controllers
- Automatic doors for walk-in coolers

## QUICK OPTIMIZATION UPGRADE:

Updating to ECM cooler and freezer motors can decrease energy usage by **70% or more** per motor. Not to mention, they are easy to install!

<sup>2</sup> [ouc.bizenergyadvisor.com/article/grocery-stores#toc-6](http://ouc.bizenergyadvisor.com/article/grocery-stores#toc-6)

## Electric Prescriptive Refrigeration Incentives

Efficient Equipment Replacement	Unit	Incentive
LED Freezer Display Case Lighting <i>(Replacing Fluorescent Case Lighting)</i>	4FT Lamp	\$10.00
LED Refrigerated Display Case Lighting <i>(Replacing Fluorescent Case Lighting)</i>		\$8.00
Evaporator Fan Controls	Controller	\$90.00
Walk-In Cooler Strip Curtains – Supermarket	Cooler	\$70.00
Walk-In Cooler Strip Curtains – Convenience Store/Restaurant		\$50.00
Anti-Sweat Heater Controls – Cooler	Door	\$45.00
Anti-Sweat Heater Controls – Freezer		\$50.00
Auto Door Closers – Walk-In Cooler		\$110.00
Auto Door Closers – Walk-In Freezer		\$130.00
Motion Sensors on LED Cases		\$10.00
Walk-In Freezer Strip Curtains – Convenience Store/Restaurant	Freezer	\$125.00
Walk-In Freezer Strip Curtains – Supermarket		\$175.00
Variable Speed Drives for Condenser Fans ≤ 1.5 HP	HP	\$125.00
Night Covers for Open Refrigerated Display Cases	Linear Ft	\$10.00
ECM Cooler Motors <i>(Replacing Shaded Pole or PSC Motors)</i>	Motor	\$125.00
ECM Freezer Motors <i>(Replacing Shaded Pole or PSC Motors)</i>		\$150.00
ECM Motor w/ Evaporator Fan Controls <i>(Replacing Shaded Pole or PSC Motors)</i>	Motor/Controller	\$300.00
Automatic High Speed Doors – Cooler to Dock <i>(Replacing Strip Curtain)</i>	Square Feet	\$25.00
Automatic High Speed Doors – Freezer to Cooler <i>(Replacing Strip Curtain)</i>		\$25.00
Automatic High Speed Doors – Freezer to Dock <i>(Replacing Strip Curtain)</i>		\$40.00
ENERGY STAR® Commercial Glass Door Freezers < 15 ft³	Unit	\$15.00
ENERGY STAR® Commercial Glass Door Freezers 15-30 ft³		\$50.00
ENERGY STAR® Commercial Glass Door Freezers 30-50 ft³		\$110.00
ENERGY STAR® Commercial Glass Door Freezers > 50 ft³		\$175.00
ENERGY STAR® Commercial Glass Door Refrigerators < 15 ft³		\$25.00
ENERGY STAR® Commercial Glass Door Refrigerators 15-30 ft³		\$41.00
ENERGY STAR® Commercial Glass Door Refrigerators 30-50 ft³		\$65.00
ENERGY STAR® Commercial Glass Door Refrigerators > 50 ft³		\$70.00
ENERGY STAR® Commercial Solid Door Freezers < 15 ft³		\$25.00
ENERGY STAR® Commercial Solid Door Freezers 15-30 ft³		\$45.00
ENERGY STAR® Commercial Solid Door Freezers 30-50 ft³		\$58.00
ENERGY STAR® Commercial Solid Door Freezers > 50 ft³		\$82.50
ENERGY STAR® Commercial Solid Door Refrigerators < 15 ft³		\$29.00
ENERGY STAR® Commercial Solid Door Refrigerators 15-30 ft³		\$31.00
ENERGY STAR® Commercial Solid Door Refrigerators 30-50 ft³		\$33.00
ENERGY STAR® Commercial Solid Door Refrigerators > 50 ft³		\$46.50

*Incentivized measures must replace costly, less efficient systems or equipment on a one-for-one basis. If the customer participates in the Midstream Channel by purchasing qualifying equipment from a participating distributor, they are not eligible to participate in the Custom, Prescriptive, SBDI, New Construction or any other NIPSCO programs for an incentive on the same piece of equipment.*