

Efficiency Solutions for Supermarkets

Most supermarkets have opportunities to reduce their energy consumption by as much as 50% through fairly simple and inexpensive refrigeration equipment and light fixture retrofits.

New Edison Energy will help you evaluate opportunities to employ specific solutions using four products to reduce energy consumption. New Edison Energy also takes the hassle out of collecting generous energy incentives available through most utilities.

Technologies have long existed to reduce the amount of energy consumed by lighting. However, refrigeration, air conditioning, and ventilating systems have been largely ignored until recently because of a scarcity of viable add-on components. Supermarkets, convenience stores and other consumers that use refrigeration equipment will benefit from these new energy-saving technologies.

Night Curtains

Benefits

- Decrease energy use during unoccupied hours
- Extend product life by maintaining case temperatures during unoccupied hours
- Lower early morning heating costs that arise from cold air spilling over into aisles
- Lengthen compressor life by reducing run times
- Eliminate the need to tape plastic sheets over case openings during power outages

Application and Savings

Historically, reach-in refrigerated cases (without glass doors) have been left open to the atmosphere during unoccupied hours increasing heat infiltration and allowing supply air to spill over into the aisles. This practice unnecessarily consumes energy and shortens compressor life.

In recent years, food store operators have begun to install retractable night curtains on these cases. Typically concealed behind metal housings during occupied hours, these curtains are drawn down after the store is closed, and are raised in the morning just prior to opening. Night curtains reduce energy use in these cases during unoccupied hours by as much as 90%.



Special Features

The woven aluminum night curtains used by New Edison Energy are treated with a patented colloidal-silver, anti-bacterial coating. Magnetic mounting hardware and handles are far more durable than the plastic handles and cleats used in competitors' products.

The combination of these features extends the useful life of our night curtains well beyond the five-year life expectancy of our competitors' products.

As an added service to our customers, New Edison Energy can paint the night curtain housings to match the store décor, thereby enhancing the visual impact of the installation.

ECM Fans

Benefits

- Decrease electrical demand (kW) and energy usage by 65% or more
- Increase net cooling capacity in refrigerated cases and walk-in boxes by reducing the heat given off by fan motors

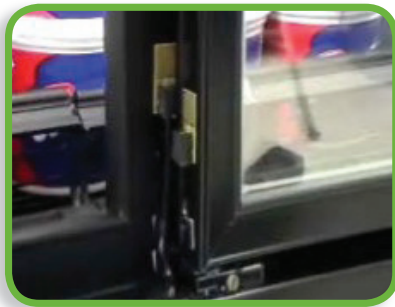


Application and Savings

Traditional fans used to move air across the evaporator and condenser coils typically utilize shaded pole (SP) or permanent split capacitor (PSC) motors, which tend to be extremely inefficient. The trend in recent years has been to replace these with **EC (Electronically Commutated) motors** that can **reduce energy usage by 65% or more**. New Edison Energy retrofits these motors into existing refrigeration, air conditioning and ventilation systems.

EC motors are available in sizes up to 2 horsepower for a wide range of applications including:

- Walk-in box and reach-in case evaporator fans
- HVAC evaporator & air-cooled condenser fans
- Supply and exhaust air ventilation fans



Anti-Sweat Heater Controls

Benefits

- Reduce energy usage (kWh) by cycling off heaters when they are not needed
- Decrease electrical demand (kW), particularly during cold, low-humidity winter months
- Minimize the heat added to the case by reducing heater run time
- Extend compressor life by reducing the load on the case

Operation and Savings

Most glass doors on refrigerated cases are equipped with anti-sweat heaters to prevent moisture from forming on the glass when the indoor relative humidity is too high (usually above 60%). While **anti-sweat heaters** have been quite effective at the intended purpose, to prevent the doors from fogging up, they **consume as much as \$200/door/year in energy costs**. That is because **in the absence of controls the heaters are set to run 24 hours, 365 days per year**.

Anti-sweat heater controls can reduce heater run time by upwards of 70% depending on indoor air conditions. This reduces energy use and demand while lowering compressor run time by minimizing the heat being added to the cases. Anti-sweat heater controls are among the most cost effective energy conservation measures at the disposal of food store operators.