

# Heat Recovery



# Fans



# TOGETHER WESAVE

## Scroll Refrigeration Compressors

Most standard refrigeration equipment is supplied with reciprocating compressors. However, scroll compressors have fewer moving parts and consume 15 to 20 percent less energy. The best time to consider scroll compressors is when purchasing new equipment or replacing a failed compressor. Your cooperative provides incentives\* to offset the additional cost of scroll compressors.

## Electric Water Heaters

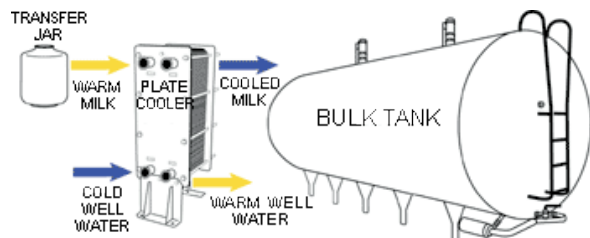
Electric water heaters typically have energy factor (energy efficiency) ratings of over 90 percent. Your cooperative provides incentives\* for the installation of electric water heaters.

## Refrigeration Heat Recovery

In operations that require refrigeration and heated water, waste heat energy expelled by the refrigeration system can be used to preheat water. This saves energy for both refrigeration and water heating. Your cooperative provides incentives\* to offset the cost of this additional equipment.

## Heat Exchanger and Pre-Cooler

As cold well water is drawn into a facility, it can be used to precool milk and other refrigerated fluids. At the same time, the waste heat preheats the water for washing or watering. This saves energy for both milk cooling and water heating. Your cooperative provides incentives\* to offset the cost of heat exchangers for this purpose.



## Exhaust Fans

Exhaust fans remove air from a building. High efficiency models are available that use less energy to expel the same air volume. Your cooperative provides incentives\* for installing exhaust fans that meet minimum performance standards.

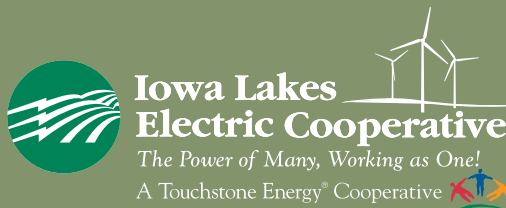
## High-Speed Circulating Fans

High-speed (basket or box) circulating fans move and mix the air to reduce stagnation and heat stress. High efficiency models are available in sizes from 12" to 52" and can be used in almost any building. Your cooperative provides incentives\* for implementing high-speed circulation fans that meet minimum performance standards.

## High-Volume Low-Speed Circulating Fans

High-volume low-speed (HVLS) circulating fans also move and mix the air to reduce stagnation and heat stress. HVLS fans range in size from 8 to 24 feet in diameter and are ceiling mounted in open housing systems with 16-foot to 18-foot ceilings. The HVLS fans can move large amounts of air with less power than the most efficient high-speed fans. Your cooperative provides incentives\* for implementing HVLS circulation fans that meet minimum performance.

**\*Contact Iowa Lakes Electric Cooperative for more information about services, incentives and equipment eligibility.**



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# Agricultural Incentives

Your Touchstone Energy Cooperative

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Improving your energy efficiency not only saves energy, but can make your farm or agriculture processing facility more financially efficient by reducing energy costs, maintenance expenditures and process interruptions.

Becoming energy efficient is a team effort. Begin developing an energy efficiency implementation plan by contacting your farm equipment distributor or electrical contractor to learn about the latest energy efficient equipment and techniques. **\*Contact Iowa Lakes Electric Cooperative for more information about services, incentives and equipment eligibility.** Minimum equipment performance standards, limits and exclusions apply, so partner with your cooperative early in the selection process in order to ensure that the equipment qualifies and to obtain the maximum rebate. See the Energy Self-Assessment Website sponsored by the U.S. Department of Agriculture - Natural Resources Conservation Service for more details and ideas about energy conservation for your farm.

[www.ruralenergy.wisc.edu/conservation/default.aspx](http://www.ruralenergy.wisc.edu/conservation/default.aspx)

## Heat Lamps & Pads

### Heat Lamps

Low-wattage heat lamps and direct contact heat pads provide a suitable environment for young animals while reducing energy consumption. Your cooperative provides incentives\* for installing them.

## Lighting

Installing advanced lighting technology in your existing facility can provide an attractive return on your investment, improve production, and, in many cases, reduce maintenance. Depending on the equipment being replaced and the new lighting installed, energy savings can pay the investment back in 1 to 6 years.

**Your cooperative provides incentives\* to further reduce the payback time for:**

- Replacing incandescent bulbs with light emitting diode (LED) bulbs
- Retrofitting fluorescent fixtures with LED lamps
- Replacing high-bay fixtures with LED fixtures
- Installing LED fixtures in exterior applications

## Technical services offered

- Thermography
- Energy audits
- Lighting audits
- Compressed air leak audits
- Power quality services
- Rate analysis
- Sales tax exemption evaluations
- Bill consolidation
- Demand/load management tools
- Electric vehicle charging consultation

## Variable Frequency Drives

Mechanical systems (such as air, vacuum or fluid pumps) are designed for the peak output required by the system. Most systems are only required to run at full capacity for a short time each year.

A variable frequency drive (VFD) allows the speed of a motor to be reduced when the system is at partial load. A VFD can also be programmed to start slowly in order to reduce wear and tear on the equipment.

Typically, the energy savings from a properly implemented VFD is 25 percent. The energy savings from a VFD often pays the investment back in 2 to 4 years.

Your cooperative offers incentives\* to further reduce your payback time.



## Livestock Waterers

### Low-Energy Livestock Waterers

By covering the water surface and thoroughly insulating the tank, low energy waterers can significantly reduce, and sometimes eliminate, the energy used to provide livestock with water in the cold winter months. Your cooperative provides incentives\* to offset the additional cost of these waterers.