

ENERGYwise

FOR YOUR BUSINESS



Agricultural Energy:

Your farm is your business. We treat it that way as well. The commercial programs at Agralite Electric Cooperative can be applied at your farm just like any other business. The least expensive, quickest, and easiest way to save money on your farm (including the home residence) is by using energy efficiently.

Rebates and incentives for agricultural customers are available for the installation of various types of equipment including, but not limited to:

- Milking vacuum pump ASD
- Milk transfer pump ASD
- Scroll compressors for bulk tank
- Waste heat exchangers and frame type milk pre-coolers (well water pre-cooler)
- Energy efficient lighting
- NEMA premium efficient motors
- Microzone control systems



Dairy farms are a great candidate for motor energy efficiency programs due to their large use of pumps. Upgrading motors can have a significant impact on the energy efficiency of the farm and provide significant savings.

Value for Your Business

Water Heating Systems

One step a farmer can take to create the most energy efficient building is an evaluation of their water heating systems. This should be done both for the home and farm buildings. Data in the residential and commercial sectors indicate a potential savings of approximately 20 percent in the agriculture sector.

Energy Efficient Fans

High volume, low speed fans are an efficient way to move large amounts of air and make less noise than standard low volume fans.

Dairy Farming

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A great way to improve energy efficiency is through the refrigeration system. As a farmer, you should address refrigeration system efficiency measures in a logical, step-by-step manner. These measures, in order of priority, include:

1. Refrigeration Heat Recovery (RHR) units
2. Scroll compressors
3. Plate-coolers
4. Variable speed milk pumps

The least expensive, quickest, and easiest way to save money on your farm is by using energy efficiently

These measures can reduce refrigeration related energy costs substantially and maintain, or even improve, milk quality.

How does it work?

Meet with Agralite Electric Cooperative's energy expert to set up a plan and they will recommend the best actions to make your farm more energy efficient.

Who can participate?

Any agricultural cooperative member can participate.

What you'll receive

Besides a lifetime of savings on energy efficiency, you could qualify for a rebate depending on what changes you are making.

Contact us and start saving today

If you have any questions or need assistance in making these savings a reality for your business; please contact your local energy expert at Agralite Electric Cooperative.

Success Story:

Variable Frequency Drives For Dairy Farms

From the Center for Ecological Technology

Vacuum pumps on dairy farms are typically sized to have sufficient capacity for the largest possible anticipated demand. Even though this demand occurs less than 1% of the time, the pump always operates at full speed. This condition wastes energy and is noisy. Now a new vacuum control system, using state-of-the-art electro-technology sensors with feedback control to adjustable frequency drives, changes the pump capacity to match the need. The energy savings are 50-80%.

The amount of energy savings a dairy farm will realize using the new vacuum pump control system varies, but in every test case, energy savings were more than 50 percent. One farm with 825 cows reduced its

kWh/cow-year-milking from 41 to 17, resulting in an energy savings of 59,400 kWh/yr.

Savings range from 50 to 80 percent depending upon the degree to which the pump is oversized and the hours the pump operates per day. Payback periods can be less than one year or as long as four years. Cost for a control system ranges from \$1,800 for a 5 hp (3.7 kW) up to \$7,400 for a 30 hp (22.4 kW) unit.

Keep in Mind: Variable Speed Drives that are designed for dairy milking are as reliable as regular vacuum drives. Research has shown that they do not increase milking time, nor do they have any adverse impacts on cow health.

Agralite Electric Cooperative provides incentives for the installation of variable frequency drives on vacuum pump motors and ventilation systems.

Source: U.S. Department of Energy



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