



Farm Energy News

Summer 2026

Farm safety starts with electricity:

Protecting people, livestock and operations

Electricity is essential to modern agriculture. From powering dairy and livestock operations to running grain farms, it keeps farms operating efficiently. But when not handled properly, it can pose serious risks.

In livestock facilities, milking parlors and grain operations, excessive moisture, dust, pests and corrosive gases are a normal part of your work environment. Unfortunately, these conditions can cause constant wear on your electrical system — and eventual system failure.

A moist and corrosive environment can cause electrical connections to rust. These rusty connections can lead to circuits failing. In some situations, the connections can get hot enough to cause fire, shocks or electrocution. Short circuits also can be caused by rodents, which tend to chew on unprotected electrical wires.

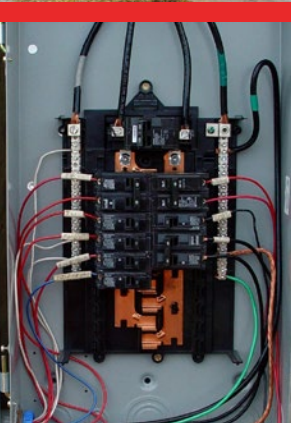
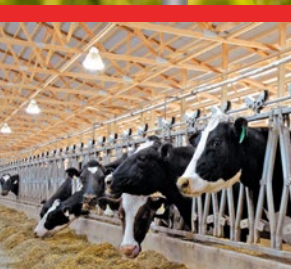
It's important to have ground fault circuit interrupters and breakers to shut off electrical power when they detect ground faults to keep your family, employees and livestock safe.

Excessive dust in grain operations and feed areas present another electrical hazard. Fine dust is highly combustible. If a fire starts, the fine dust can act as "fuel" to that fire, causing it to spread rapidly. Something as simple as operating a worn electrical switch could create a brief spark that could ignite this dust. Add seasonal equipment, like augers, dryers and fans, and an unsafe condition can quickly be created.

Here are some tips to help reduce the risks of electrical fires, shock and electrocution:

1. Regularly inspect wiring, outlets and equipment for wear, corrosion or rodent damage.
2. When making wiring upgrades, use nonmetallic electrical conduit for wiring. It won't rust and prevents rodents from chewing on insulated wires.
3. Install and maintain ground fault circuit interrupters (GFCIs) in wet or damp areas.
4. Ensure that all electrical systems are bonded and grounded correctly. This is imperative to keep you, your employees and your facilities safe in the event of a fault.
5. If your equipment is in a dusty environment, take time to keep dust buildup to a minimum. The less dust, the less fuel available to start a fire.
6. Avoid overloading circuits, especially during harvest time when multiple systems are running simultaneously.
7. De-energize and lock out equipment before performing maintenance. It's simple and highly effective in preventing shocks or electrocution.

Farmers work in a demanding profession. Long hours and hard work can often allow electrical system care to be overlooked or put off for another day. Take time for routine inspections and proper maintenance. By staying proactive, you can ensure your operations are a safe environment for your family, employees and livestock.





RECIPE CORNER

HAM AND COLBY *Crustless Quiche*

INGREDIENTS

- 8 large eggs
- ¾ cup heavy whipping cream
- ¾ cup milk
- ½ teaspoon each salt and pepper
- 6 ounces Colby Longhorn cheese, shredded (1 ½ cups)
- 1 cup diced fully cooked ham
- ½ cup chopped green onions
- ½ cup thinly sliced sweet mini bell peppers

INSTRUCTIONS

Heat oven to 350°F.

Whisk the eggs, cream, milk, salt and pepper in a large bowl. Stir in the Colby, ham and green onions.

Pour into a greased 9-inch deep-dish pie plate. Top with bell peppers.

Bake for 40-45 minutes or until center is set and a knife inserted near the center comes out clean. Let stand for 10 minutes before serving.

Focus on Energy

Advancing energy efficiency on Wisconsin dairy farms

Across the state, dairy farms are adopting practices that save energy, manage resources and reduce environmental impacts. These efforts benefit the farms themselves and contribute to their local communities.

Operational improvements

Starting in 2024, Focus on Energy worked with Farmers for Sustainable Food (FSF), Edge Dairy Farmer Cooperative and Vybe Energy to help 12 Wisconsin dairy farms find ways to be more energy efficient. Focus on Energy's technical staff visited each farm to identify opportunities and strategies to improve operations, while reducing energy use and saving money. At the same time, Vybe Energy helped estimate the long-term value of renewable energy and storage projects.

During these assessments, Focus on Energy reviewed each farm's existing equipment, including:

- Building envelope and insulation.
- Milking and cooling equipment.
- Lighting and controls.
- Compressed air systems.
- Livestock waterers and fans.
- Variable frequency drives.
- Space heating systems.
- Grain drying and irrigation.
- Manure handling systems.

By upgrading to more efficient equipment and fine tuning controls, farms can reduce energy use, improve cow comfort and keep operations running smoothly.





- 1 Upgrading to LED barn lighting improves visibility and safety for employees.
- 2 Adding variable speed controls to the milk pump can also reduce energy use during milking.

Brey Cycle Farm LLC

One participant was Brey Cycle Farm LLC, a 1,300-cow dairy in northeastern Wisconsin. The farm also manages 1,700 acres of crops and raises heifers. The Brey family is deeply involved in conservation leadership through the Door-Kewaunee Demonstration Farm Network and partnerships with state and federal agencies. Their work includes testing low-disturbance manure injection, no-till cropping and other innovative practices.

Over the years, the Breys have upgraded lighting, ventilation, milking equipment, including a variable speed vacuum pump, and installed an electronically commutated fan motor condenser. These improvements have reduced energy use and positioned the farm for continued progress.

The recent energy assessment conducted at Brey Cycle Farm included the office, parlor, milkhouse, barns and maintenance shop. Overall, the farm's equipment is modern and well-maintained. However, the study identified opportunities to further reduce energy use, particularly during the summer months when circulation fans run continuously. Installing a fan control system could optimize the ventilation and reduce unnecessary energy use during cooler time periods.

"As a farm that prioritizes sustainability and innovation, participating in this study has advanced these goals," said Jacob Brey, co-owner of Brey Cycle Farm. "The energy assessments and support are motivating us to continue making decisions that lower our environmental impact and enhance operational efficiency."

Agriculture resilience

The assessments were part of a larger effort led by FSF and the Edge Dairy Farmer Cooperative to support farmer-led solutions to environmental challenges. The mission is to provide farmers with the data they need to make informed, long-term decisions. Funding for the assessments was made possible by BMO Harris and Compeer Financial.

Seven farms pursued upgrades, including installing LED lighting, adding variable frequency drives, improving ventilation and upgrading milking equipment. Together, these improvements will produce:

Energy savings: Over 1.3 million kWh of electricity and 4,500 therms of natural gas annually — about the same amount of energy used by 129 homes for a full year.

Financial savings: \$176,526 in yearly energy costs.

Environmental impact: 1.64 million pounds of carbon dioxide reduced in the first year — equal to taking 220 cars off the road.

Note: Savings are estimated using average statewide rates and may vary by site.

Energy assessments paired with financial incentives and technical support can empower farmers to adopt best practices to strengthen both their business and the environment.