

PowerGrant Profiles



Agriculture:

Farms Reap Savings through Energy Efficiency

A healthy agricultural industry is critical to Minnesota's economy. Yet small family farms and large commercial operations, alike, struggle with volatile markets, unpredictable weather and slim margins. Cost-conscious farmers always are looking for ways to cut expenses and reap a profit from their hard work.



Milking 870 cows is an energy intensive operation for Dairy Ridge in Long Prairie, but new technology is reducing costs.

Electricity is one of their biggest expenses, and they aggressively pursue ways to conserve energy. They recently installed a plate cooler that draws cold water from the ground and uses it to chill milk on its way to the storage tanks. The warmed water is reclaimed for cleaning equipment and stalls. The system takes load off of their compressor, saving energy and money.

In another building at Oak Hill Dairy, cows cooled by high-volume/low-speed overhead fans contentedly chew on hay. The quiet, energy-efficient fans run continuously, circulating the air and blowing away flies, allowing the animals to eat in peace.

"Comfortable cows eat more and produce more milk," Capko said.

Larry Capko and his brother have owned the Oak Hill Dairy near Swanville, Minn., since the late 1970s. With the help of family members and neighbors, they farm around 600 acres and milk 120 dairy cows, twice daily.

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PowerGrant rebates from Minnesota Power helped offset the costs of the plate cooler and the variable frequency drive (VFD) motor that powers the fans. Combined, they will save Oak Hill Dairy a projected 45,288 kWh per year, which translates to an annual cost savings of \$2,225. The projects will pay for themselves in less than seven years.



Larry Capko of Oak Hill Dairy explains an energy efficient plate cooler that chills milk using well water drawn from the ground.

"These rebates help us install newer technologies and reduce operating costs in the long run," Capko said.

Fifteen miles away, in the rural community of Long Prairie, there is a larger commercial farm called Dairy Ridge. This round-the-clock business milks 870 holsteins, three times daily. It is an energy-intensive operation that uses electricity to run pumps, chill milk, and light and ventilate large milking parlors and barns.

"Cost is a big thing," said Mark Buntjer, a partner in Dairy Ridge. "We were looking at updating equipment and called on Minnesota Power to give us advice on energy efficient options."

Dairy Ridge's changeover to a VFD vacuum pump and

PowerGrant Contact Information

For more information, please call Minnesota Power's Conservation Improvement Program toll-free at 800-228-4966 ext. 2902.

"Energizing Our Region" through Conservation Improvement

Minnesota Power's Conservation Improvement Program (CIP) works with local leaders, businesses, community groups, other energy providers and government entities to help customers reap the economic and environmental benefits of sustainable energy savings. Minnesota Power and its partners accomplish this through research, education, evaluation and direct impact initiatives.

Find out how you could get a PowerGrant

Minnesota Power awards grants to commercial/industrial customers who use innovative technologies, improve manufacturing processes, undertake renewable electric energy projects, or who need project design assistance. PowerGrant awards are available for a wide variety of projects employing diverse technologies.

Here are some examples of activities or products that could qualify for MP funding under the PowerGrant Program:

- New electro-technologies that lower energy costs per unit of production in a manufacturing process
- Innovative technologies that are new and underutilized in our regional marketplace
- Inclusion of energy-efficient options in the design phase of a project

Maximum annual grants are determined by a customer's average billing demand:

<i>Customer Demand</i>	<i>Maximum Rebate</i>
0 to 100 kW	\$10,000
101 to 300 kW	\$25,000
Over 300 kW	\$50,000

Customers may submit multiple grant requests.

Other MP Products and Services

In addition to PowerGrants, MP CIP offers commercial and industrial customers other energy efficiency products and services. These include energy audits, rebates, dual fuel, storage/off-peak services, outdoor and area lighting and economic development assistance.



Enormous overhead fans powered by a VFD motor efficiently circulate air and keep cows at Oak Hill Dairy comfortable while eating.

New technology saves farm nearly \$3,000 in energy costs.

scroll compressor qualified for a PowerGrant rebate of \$2,136. The new technology will save the farm an estimated 61,039 kWh per year, or nearly \$3,000 in energy costs.

Mary Bindewald, a regional account manager for Minnesota Power, who is based in Little Falls, often gets inquiries from central Minnesota farmers, looking for ways to reduce their energy bills.

"There is great potential within the agricultural industry to implement energy improvements," Bindewald said. She and MP energy consultants from Matt Haley and Associates work with individuals and suppliers to educate farmers about new and emerging technologies.

"We have a good relationship with Minnesota Power," Buntjer said. "They always are happy to help us out and work with us to answer questions.

"Our electric bill at Dairy Ridge is very substantial, and the savings will make a big difference," Buntjer added. "In this business, every penny you can save or get back definitely helps."

Back at Oak Hill Dairy, Larry Capko agreed, "If you're not a good manager, it will catch up with you."

Managing energy usage and conserving resources are good places to start, especially in an industry so dependent on a healthy and sustainable environment.