

PowerGrant Profiles



Upper Lakes Foods: New Lighting Consumes Less Energy and Saves Money

Lighting has been a challenge for Upper Lakes Foods, Inc., ever since the full-line, full-service wholesale food distributor moved into its Cloquet facility in 1980. The 1960s-era warehouse was designed for manufacturing cardboard boxes, not as a wholesale food warehouse and distribution center. The two have very different lighting requirements.

"When you're manufacturing cardboard boxes, uniform lighting and color rendition are not big issues," said Dave Lindemann, maintenance supervisor at Upper Lakes Foods. "In our industry, they are critical to quality control. We need consistent lighting that renders correct colors so workers can determine the condition of produce and tell if the lettuce is fresh or the tomatoes are ripe."



Minnesota Power regional account manager Craig Kedrowski and Dave Lindemann in one of Upper Lakes Foods well-lit produce coolers.

Eager to improve operations, ensure high quality products and strengthen customer relations, the company began to explore new lighting for the facility. It also hoped to address another lighting issue related to backup generators, originally installed as a dual fuel source to reduce electric rates. Whenever the power

sources switched, the metal halide and high-pressure sodium bulbs went out, leaving the plant in darkness for several minutes while they cooled, relit and regained brightness.

"A production facility can't afford interruptions like the lights going out," Lindemann said. "We needed a system with instant-on bulbs so that picking and packing could continue during power transitions."

As a corporate citizen concerned with conservation, Upper Lakes Foods had a third criterion in mind—energy efficiency. But any new lighting system would have to make economic sense. It would have to save money as well as energy.

Lindemann searched the Internet for lighting systems that met these three requirements: uniform light and color rendering, instant-on bulbs, and energy efficiency. Among the options he identified was T-5 fluorescent lighting from Paragon Lighting of Hudson, Wisconsin. The concentrated white light bulbs boasted more brightness per watt and less lumen depreciation over time than any of the plant's preexisting lighting. Paragon recommended adding motion-sensitive technology to fixtures for further energy savings.

Upper Lakes Foods applied to Minnesota Power's Conservation Improvement Program for a PowerGrant to test the technology by removing

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 CIP Products & 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.



New fluorescent lighting makes it easier to monitor and sort produce.

Upper Lakes Foods goes into project with clear goals

(cont. from page 1) sodium lights and installing fluorescent lighting with assorted fixtures and features in a small pilot project. A Minnesota Power consultant monitored the project and calculated short- and long-term energy savings if Upper Lakes Foods converted all of its lighting to T-5 fluorescents. The projected savings of 435,341 kWh per year and 36.6 kW of demand per month translated to an annual cost savings of \$15,290. Minnesota Power provided the company with a \$12,540 PowerGrant rebate to help offset the total project cost of \$75,288.

"Minnesota Power analyzed the costs and benefits and helped demonstrate to decision makers that an investment in new lighting would pay for itself in four years through energy savings," Lindemann said. That didn't even include improved quality control and production gains.

"I have not seen a downside," Lindemann said. "The project has met all of our criteria, plus more." One unexpected benefit has been less radiated heat from the new bulbs. The warehouse is cooler, especially in the summer, so produce stays fresh longer.

"Upper Lakes Foods went into this project with clear goals, did its homework and looked at a number of options to find the most suitable one," said Craig Kedrowski, regional account manager at Minnesota Power. "The result is a system that works well for its operations."

"It is important for business owners to realize that energy-saving technologies exist that can save them money," Lindemann said. "A partner like Minnesota Power makes it easier for companies to put these technologies to work."