



Magnum Machining

PROFILE

Energy Efficiency Helps Company Compete in Global Market

The world looks to the Olympic torch as a symbol of strength and unity. Every component of the pedestal and cauldron must be flawless to keep the flame burning brightly throughout the games. It puts a lot of pressure on companies like Magnum Machining, Inc., of Deerwood, Minn., which machined several metal valve components for the torch of the 2008 Summer Olympics in Beijing, China.

Not every job performed by Magnum Machining is subject to such intense global scrutiny, but perfection is expected when you machine precision parts for major industrial customers and Fortune 500 companies. That's why lighting quality was a real concern when the company began considering a switch to energy-efficient lighting in its production and warehouse areas.

"The critical nature of machined components and the quality demands of our industry require that our operators have good light to operate equipment and inspect products," said Kevin Cook, president of Magnum Machining and

Maquinaria Magnum, a subsidiary in Torreon, Mexico. "I was skeptical of energy-efficient lighting."

Magnum Machining's electrical contractor and plant manager Jay Landree engaged Minnesota Power's Conservation Improvement Program to identify lighting solutions for the 60,000-square-foot Deerwood plant that would improve output, save money and qualify for utility conservation rebates.

Minnesota Power energy consultant Tanuj Gulati, of Matt Haley & Associates, tested 28-Watt and 32-Watt T-8 fluorescent bulbs, measured lumens, analyzed energy and cost savings, calculated potential rebates and assessed paybacks. He persuaded business owners that they could achieve their performance and energy-saving goals with the lower wattage bulbs.

Based on this process, Magnum Machining installed 28-Watt high bay fluorescent bulbs and fixtures. Lighting controls with motion sensors were added throughout the building



(Left to right) 1) Energy-efficient lighting and lighting controls at the Magnum Machining plant will save 368, 230 kWh per year; 2) the new lighting has improved visibility for operators; 3) project partners represented Magnum Machining, Minnesota Power, Matt Haley & Associates, and Denny's Electric; 4) Magnum Machining produces precision components for industrial customers.

Learn more about **POWER Grant**.

Minnesota Power's Conservation Improvement Program
218-722-5642 or toll-free at 800-228-4966, ext. 2909

www.mnpower.com/powergrant/



YOUR POWERFUL PARTNER

POWER *Grants*

“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 POWER *Grant* can help you.

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. **POWER *Grant*** is available for a wide variety of projects employing diverse technologies.

Here are some examples of activities or products that could qualify for Minnesota Power funding under the **POWER *Grant*** 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:

Customer Demand	Maximum Grant
Less than 100 kW	\$10,000
100 to 300 kW	\$25,000
Over 300 kW	\$50,000

Minnesota Power may consider higher rebate levels.

Other Minnesota Power Products and Services

In addition to **POWER *Grants***, Minnesota Power offers commercial, industrial and agricultural 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.

so offices, break rooms, restrooms and warehouse areas would be lit only when occupied.

Converting to energy-efficient lighting with lighting controls will help Magnum Machining conserve an estimated 368,230 kWh of electricity per year, lower monthly demand by 56 kW, and save more than \$15,000

“Improving energy efficiency lowers our costs, satisfies customers and helps us stay competitive.”

Jerry Bowman, CEO, Magnum Machining

in annual energy costs. A **POWER *Grant*** rebate of \$16,298 from Minnesota Power will shorten payback to less than two years.

Magnum Machining also is improving the energy efficiency of its production lines by converting motors on its computer numerical control (CNC) machines from standard to variable frequency drive (VFD) models. Six of its 45 CNC machines have been upgraded to date, qualifying for an additional **POWER *Grant*** rebate of \$4,750 and conserving 135,704 kWh of electricity. In addition, Minnesota Power is helping the company research VFD motors on air compressors.

“Minnesota Power wants to help customers save energy and lower costs,” said Dan Travica, regional account manager, Minnesota Power. “Energy conservation is a responsibility we all share.”

Environmental performance is very important to Magnum Machining’s largest customers, including John Deere and Emerson.

“They want to know we’re doing our best to save energy and minimize negative impacts on the environment,” said Jerry Bowman, CEO, Magnum Machining. “Improving energy efficiency lowers our costs, satisfies customers and helps us stay competitive.”

Every individual business and their employees have the ability to use energy in ways that achieve their desired goals of conservation, cost reduction, productivity, and employee and customer satisfaction. In today’s global economy, that’s a feat of Olympic proportions—and the “Power of One.”