

PowerGrant Profiles



Herbert Service Center Is a Model of Energy Efficiency

Viewed from the outside, Minnesota Power's Herbert Service Center (HSC) in Duluth is a typical, 1970s-era office and garage complex. Open its doors, however, and you'll quickly learn that this unassuming structure houses some of the most cutting-edge, energy-saving technology on the market.

Recent remodeling has transformed the engineering and customer service offices in the HSC facility to a demonstration site for high-performance fluorescent



Prior to ceiling tile installation, it is easy to see how Vellux Sun Tunnel™ skylights draw natural light from the roof into windowless interior rooms using reflective tubes.

lighting, passive solar energy and resource-efficient heating, ventilation and cooling (HVAC) systems that reduce electrical demand and usage. Minnesota Power is monitoring, measuring and tracking the savings generated by the various technologies and strategies, hoping results will encourage customers to make similar energy improvements.

"Leading by example sends a powerful message," said Timothy Gallagher, program manager for Minnesota Power's Conservation Improvement Program (CIP). Through CIP, Minnesota Power distributes hundreds of thousands of dollars in PowerGrants each year to commercial and industrial customers who install energy-saving equipment or implement conservation measures in their operations. "CIP dollars also helped us

convert our own facility into a demonstration site where we can test resource-efficient products and systems in practical applications and share results with customers," Gallagher added.

Lighting is a good place to start for companies seeking energy improvements. The HSC remodeling project replaced bulky, T-12 fluorescent lights

with high-output T-5s and electronic ballasts. Using one-third fewer fixtures, these new lights provide more lumens at the workspace level than their predecessors. They also are positioned in zones and equipped with occupancy and photocell daylight sensors so that lights are automatically dimmed or brightened based on room use and time of day. Lighting in each zone also can be controlled manually.

Two unique passive solar energy technologies help bring natural light to dark or windowless parts of building. In one room, a LightLouver™ Daylighting System installed at the top of several nine-foot windows harvests light and reflects it deep into the room. Traditional blinds cover the window bottoms to reduce glare and harsh lighting. Vellux Sun Tunnel™ technology brings natural light to a



MP's newly remodeled Herbert Service Center in Duluth is a demonstration site for energy efficient technologies.

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.



The upper sections of east-facing exterior windows are fitted with LightLowers™. They reflect incoming light off the ceiling so it reaches deeper into rooms.

HSC demonstrates energy-efficient products in a real-world setting.

windowless work area through a tubular skylight.

Another innovation in the HSC building is a rooftop-mounted HVAC system with economizers to draw outside air when appropriate conditions exist. New galvanized ductwork distributes conditioned air more efficiently, and carbon dioxide sensors in the dampers override minimal settings so the system automatically brings in more fresh air when spaces are occupied. HVAC equipment is tied into an Energy Management System (EMS) that automatically controls space conditions so equipment is turned off when it is not needed.

The combined lighting, HVAC and EMS improvements are expected to reduce electric demand at the facility by 53.6 kW. They also will save 431,956 kWh per year, which would translate to a cost savings of

\$12,138 for a Minnesota Power customer employing similar measures.

Minnesota Power personnel and consultants who work with the CIP program are excited to have this model facility. "It is an opportunity to show off energy-saving technology that we discuss with customers in the field," said Craig Kedrowski, a regional account manager for Minnesota Power. "From a credibility standpoint, it is important for us to 'walk the talk.'"

Gary Olson, an energy consultant with Matt Haley and Associates, agreed. "We're out there pushing these technologies, now we can physically show contractors and customers how we are putting them to work and provide compelling data about their performance."