

One Business

Energy Conservation Program



Essentia Health

Fall 2017

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Jon Nicksich, Maintenance Manager
Essentia Health

Front row from left: Steve Rautio, facilities operations manager, Essentia Health; Jon Nicksich, maintenance manager, Essentia Health; Tanuj Gulati, Energy Insight Inc. Back row: Chad Trebilcock, energy analyst, Minnesota Power; Kris Spenningsby, supervisor of Retail Accounts, Minnesota Power.

Energy Efficiency Leads to Healthier Bottom Line

Hospitals, clinics and other healthcare providers face growing pressures to cut costs and operate more efficiently. Essentia Health, based in Duluth, Minn., is using energy conservation as one way to achieve a healthier bottom line, provide quality care at affordable rates for patients and live out its corporate value of stewardship.

Essentia honored for energy efficiency

Minnesota Power recently honored the integrated health system for its commitment to using less energy and reducing its carbon footprint. The utility presented Essentia with a Certificate of Energy Efficiency for saving 1,267,254 kilowatt hours of electricity through conservation improvement projects completed in 2016 (the last full calendar year to date).

Projects included heating, ventilation and air conditioning (HVAC) upgrades and installation of energy-efficient lighting and lighting controls in multiple facilities. Combined, they qualified for nearly \$74,000 in rebates from Minnesota Power and are saving Essentia around \$66,000 per year on its electric bills. The annual energy savings equate to avoiding 1,042 tons of carbon—the equivalent of powering 140 homes or taking 202 cars off the road for a year!

Longtime partners work to save energy

These numbers represent just a fraction of the total energy and cost savings Essentia has achieved through energy efficiency over many years. Its success reflects organizational leaders committed to sustainable design and construction, a facilities management team that continually looks for creative ways to save energy, and a longstanding partnership with Minnesota Power's Power

(From left) Essentia Health's 1st Street Building is LEED Gold certified. An energy-efficient chiller and pump system is used at Essentia's Miller Dwan building. LED lighting with lighting controls illuminates the ambulance garage.



of One® Business conservation improvement program (CIP). CIP staff and commercial energy consultants help customers like Essentia meet their energy conservation goals and lower costs by providing education, project design assistance, energy- and cost-savings analyses, conservation rebates and other services.

“We got involved in Minnesota Power’s conservation program very early—our relationship goes back at least 20 years,” said John Rice, director of maintenance for Essentia. “It started with lighting, but we quickly learned the value of involving Minnesota Power in all of our facility projects. It has been good for us, not just in rebates, but in ideas.”

Grant helped Essentia take the LEED in building

For example, when Essentia (then SMDC) was constructing its 240,000-square-foot 1st Street Building, completed in 2006, Minnesota Power provided a major research grant to have The Weidt Group, an energy design consulting firm, conduct a comparative analysis that simulated and calculated the impacts of proposed energy design decisions.

“We knew there were a lot of potential energy savings,” Rice said. “The money Minnesota Power put up for that engineering study was very helpful in steering us toward decisions that made sense for the project.”

The integrated design strategies developed through this front-end modeling for the 1st Street Building created a cutting-edge facility that earned Leadership in Energy and Environmental Design (LEED) Gold status from the U.S. Green Building Council.

Essentia has a healthy appetite for energy innovations

“Essentia goes beyond the low-hanging fruit,” said Chad Trebilcock, energy analyst-II for Minnesota Power CIP, noting the variety of projects Essentia has accomplished through the years and a few recent examples of sophisticated energy-saving measures adopted with technical support and rebates from Minnesota Power. “It installed low pressure drop filters in air handling systems to reduce loading on fans and added variable frequency drives (VFDs) to fans on rooftop units, boiler pumps, air handlers and chilled water pumps.”

Trebilcock also pointed to innovative lighting technology used in stairwells at the Duluth Clinic 3rd Street Building, as well at a parking ramp and nearby ambulance garage. The LED lights with lighting controls dim when people are not using the spaces, resulting in significant electrical energy savings.

“We were looking for ways to balance the need to have stairwells (and parking lots) well lit for security with the cost of lighting space when it wasn’t in use,” Rice said. “The fixtures we installed maintain a low light level until they sense movement, then another lighting element comes on to make it brighter.”

A similar system was used in the St. Louis County Government Services Center. Essentia facility personnel learned of it through a peer group convened by Minnesota Power that brings representatives of large, multifacility organizations together to share experiences and insights related to energy efficiency. That group includes Essentia, St. Louis County, the City of Duluth, the University of Minnesota Duluth and the Minnesota Air National Guard.

“We are all fighting the same battles,” said Steve Rautio, facilities operations manager, Essentia. “And we are looking for solutions to the same problems.”

“Minnesota Power believes in the value of long-term partnerships. Meeting regularly, talking about things and having a track record of success helps move new projects along—you can see the impact at Essentia.”

Kris Spenningsby, Supervisor—Retail Accounts
Minnesota Power

Minnesota Power is a trusted resource

Minnesota Power’s experience helping large multifacility customers save energy makes the utility a trusted resource for complex organizations like Essentia with millions of square feet of facilities that include dozens of hospitals, clinics and support buildings.

“We consult with Minnesota Power whenever we are considering a facility project,” said Jon Nicksich, maintenance manager, Essentia. “It usually equates to energy and dollars saved.”

“Essentia’s people come to us for ideas, listen to recommendations and evaluate them fairly,” said Minnesota Power CIP commercial energy consultant Tanuj Gulati of Energy Insight Inc., who recently coordinated a

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project that allowed Essentia to test LED fixtures from multiple vendors for a lighting upgrade in a West Duluth warehouse and distribution center. “If an idea is right, they make it happen.”

“We do a lot of testing and trials as we look for the right solutions,” Rautio said. “In the West Duluth Annex, we decided on multilevel LEDs with controls.”

Efficiency spreads and savings grow

Many of the ideas incorporated into Duluth facilities are now being used at Essentia sites across the region. From 2012 to 2016, Minnesota Power helped advance energy efficiency upgrades at Essentia facilities in Sandstone, Aurora, Hermantown and Deer River, as well as Duluth.

The five-year totals are staggering. Lighting, HVAC and energy management upgrades implemented during this time period are saving Essentia nearly 5 million kWh of electricity and almost \$242,000 per year on electric bills. They qualified for nearly \$233,000 in conservation rebates from Minnesota Power. Essentia participates in the utility’s Energy Savings Account program. In exchange for higher rebates, the healthcare system agrees to explore additional energy efficiency measures.

“Every dollar saved in energy is equivalent to generating \$20 in revenue through new patient care,” said Niksich

referencing a U.S. Environmental Protection Agency study on energy conservation in healthcare facilities. “It goes directly to the bottom line.”

BOC training keeps buildings operating smoothly

To keep facilities and building systems operating efficiently, Essentia has now begun to enroll interested maintenance personnel in Building Operator Certification (BOC) training, hosted by Minnesota Power. BOC is the leading training and certification program for building engineers and maintenance personnel. Graduates of this course are prepared to make their buildings more comfortable and energy efficient.

“We’ve had some retirements and a new generation of engineers is moving in that wants to do more and learn more,” Rice said. “BOC training opens their eyes to things they might not be exposed to in the field without years of experience.”

Relationships are positively powerful

“Minnesota Power believes in the value of long-term partnerships and healthy relationships with customers,” said Kris Spenningsby, supervisor-retail accounts, Minnesota Power. “Meeting regularly, talking about things and having a track record of success helps move new projects along—you can see the impact at Essentia.”

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Essentia Health-St. Mary's Medical Center
in Duluth

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Learn more about Power of One® Business, Minnesota Power’s commercial, agricultural and industrial energy conservation program, by calling **218-355-2909** or visiting mnpower.com/OneBusiness