

# One Business

## Energy Conservation Program



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**Kerry Juntunen**, Superintendent  
Hermantown Community Schools

## Managing Energy Use Saves Taxpayer Dollars at Hermantown Schools

Imagine being able to harness and direct all of the energy that flows through a middle school. Steve Stupak, director of buildings and grounds for Hermantown Community Schools (ISD 700), has that power—thanks to a new energy management system that came online in summer 2019. It is linked to controls in the connected high school facility, so now he can program, monitor and manage lighting, airflow and room temperatures in both facilities from his office computer.

This has been one of Stupak's goals for years. He took the position in 2016, just as a \$48.9 million district-wide facilities upgrade was nearing completion. The multi-year overhaul expanded and remodeled the district's elementary school, converted the former high school facility into a middle school, and built a new high school that shares multiple common spaces with the middle school. Syncing energy controls for those two connected buildings is a crowning achievement.

"I have been working for two years to blend these two buildings as one, not only in physical appearance and curbside setting but also with energy management," Stupak said. "This will save tons of energy and money and also improve comfort."

Minnesota Power's conservation improvement program (CIP) was at the table throughout ISD 700's major school construction and renovation program. It continues to work closely with Hermantown school officials as the district looks to the future.

### **New and updated schools get high marks for efficiency**

This longtime relationship and high level of mutual trust resulted in numerous energy-efficiency measures being incorporated into Hermantown's K-12 facilities in recent years, qualifying for more than \$155,000 in Minnesota Power CIP rebates and saving taxpayers roughly \$210,000 per year in avoided electricity costs.

The remodeled and expanded elementary school features energy-efficient LED lighting fixtures, bi-level and occupancy lighting controls, variable frequency drive (VFD) motors on fans and pumps, a control system for heating, ventilation and air conditioning (HVAC) equipment, and ENERGY STAR®-qualified commercial kitchen appliances.

Hermantown's middle school relocation project replaced lighting in the former high school with energy-efficient fixtures and bulbs, added occupancy sensors to lights throughout the building and incorporated a new air handler equipped with VFDs.

The new high school features energy-efficient lighting, high performance HVAC equipment, ENERGY STAR transformers, ENERGY STAR kitchen equipment and appliances, and building-wide energy controls (recently linked to those in the middle school).

Hermantown Middle-High School officially opened in fall 2016. In recognition, Minnesota Power presented ISD 700 with a Certificate of Energy Efficiency, noting that the District saved 3,2881,412 kWh in 2016-17 through the measures noted above. Those electric savings are the equivalent of powering 362 homes for a year, taking 522 cars off the road (saving 7,039,326 driving miles) and saving 2,701 tons of carbon.

"I really enjoy presenting these Energy Certificates, because, when you are in the middle of multiple projects, the significance of what is being accomplished can become lost," said Chad Trebilcock, energy analyst, Minnesota Power. "The Energy Certificate does a nice job of summarizing the savings and recognizes the customer for its thoughtful approach to managing energy."

### **Energy efficiency revolving fund spurs more projects**

Savings continue to build, year after year, as more energy-efficiency upgrades are worked into the budget. This is helped by



(Above) Variable frequency drives (white boxes over green motors) adjust speed depending on demand for heat. They slow down when there is not a lot of demand and speed up on cold days. (Right) The gymnasium is illuminated with LED lighting and lighting controls.



the fact that ISD 700 established an energy efficiency revolving fund, where CIP rebates are deposited to use for future projects. Minnesota Power provides Hermantown Community Schools with slightly higher rebates because of this fund and helps identify projects that save energy and qualify for additional incentives.

“Energy efficiency is an important aspect to how the Hermantown School District does business,” Trebilcock said. “Minnesota Power is committed to being a resource for them.”

“The District has a long-term facility maintenance plan in place, and the funds are fixed through the levy process. We can save money by doing it properly and by upgrading things,” said Stupak, who learned the value of energy efficiency over 34 years in a similar position with the School District of Superior, Wis. “I like to put rebates back into our buildings, so we are on a constant gain.”

## Savings help improve quality of education

Money freed up through energy savings is then used for projects that directly impact the quality of education.

“Fiscal responsibility is a central mission for the Hermantown Board of Education,” said Superintendent of Hermantown Community Schools Kerry Juntunen. “We prioritize academic needs which are then examined under the lens of budgetary realities. Any opportunity we have to save money in any given area may allow us to add programs and people to enhance our students’ educational experience.”

“Energy efficiency is one of the best things we can do for all of the stakeholders involved,” said Stupak, adding that having data

and documentation from Minnesota Power ensures administrators and board members will have the information they need in order to make informed decisions. “We are in the education business, and there are very few areas in which a school district can actually save money. Superintendent Juntunen has a solid understanding of reinvestment programs and has backed me 100 percent on energy-efficient choices.”

“There has been continuous progress ever since Steve (Stupak) came on board; he makes things happen,” said Minnesota Power CIP consultant Matt Haley, Energy Insight, Inc. “We provide information and documentation, and Steve gets it to the right people. He is always forward thinking—looking ahead to the next items that need to get done.”

## The future looks bright for energy efficiency

Several large projects are now on the boards, and Minnesota Power is positioned to help. Minnesota Power is reviewing plans for lighting and mechanical systems in a new pre-K facility that will open in 2020. Another planned project will replace the refrigeration system in the Hermantown Hawks’ ice arena.

“That is a big one, and we will be working hand-in-hand with Minnesota Power,” Stupak said. “We always get Minnesota Power in on the front end of projects, so changes can be made before it is too late.”

“The folks at ISD 700 are a pleasure to work with, and Steve is always excited to make energy-efficient facility improvements,” Trebilcock said. “He is a strong advocate for the schools and for energy efficiency.”



Minnesota Power CIP consultant Matt Haley with Steve Stupak, director of building and grounds for Hermantown Community Schools.

## For more information:

Take the first steps toward managing energy use and costs at your business. Get started by filling out our free online pre-application at [www.mnpower.com/BusinessPreApp](http://www.mnpower.com/BusinessPreApp)

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