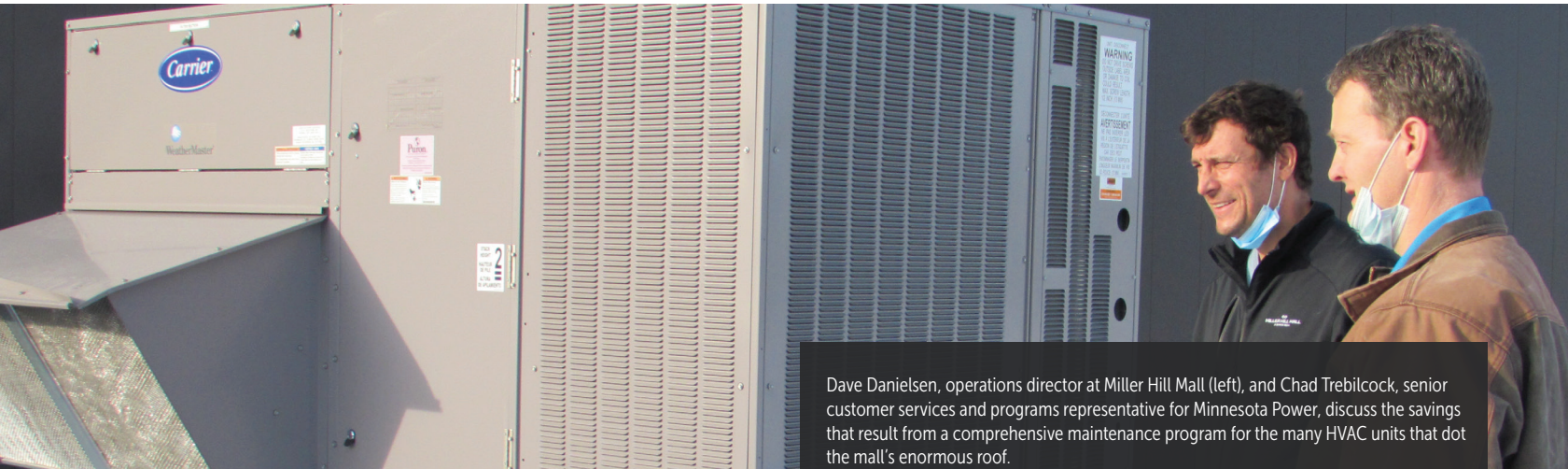


# Energy Efficiency Is an Easy Sell at Miller Hill Mall



Dave Danielsen, operations director at Miller Hill Mall (left), and Chad Trebilcock, senior customer services and programs representative for Minnesota Power, discuss the savings that result from a comprehensive maintenance program for the many HVAC units that dot the mall's enormous roof.

The 2021 holiday season at Duluth's Miller Hill Mall was dazzling with LED lights and a warm, cozy shopping environment. Energy-efficient lighting upgrades and recent improvements to the mall's heating, ventilation and air conditioning (HVAC) equipment contributed to the holiday cheer.

## LED Lighting Conversion Nears Completion

Simon Property Group, which owns and manages Miller Hill Mall, is committed to energy-efficiency year-round. Since 2005, the mall's building and operations personnel have worked closely with Minnesota Power's commercial energy conservation team to identify energy-saving projects that qualify for the utility's rebates and incentives.

In the past five years, nearly 95 percent of the mall's interior and exterior lights have been converted to bright, energy-efficient LED lighting. This progress has been achieved with significant help from Minnesota Power, which furnished numerous LED lighting samples, analyzed energy and cost savings to calculate payback, and provided substantial rebates that mall officials could reinvest in additional conservation measures.

## Rooftop Units Are a Top Priority

LED lighting upgrades continued in 2020-2021 as the total conversion inched closer to completion. But HVAC efficiency was another major focus.

Heating and cooling a facility the size of Miller Hill Mall can be very expensive. The mall is a regional shopping hub with roughly one million square feet of space that includes some 100 retail stores and restaurants, plus common areas and offices. Its massive rooftop is dotted with dozens of HVAC units that deliver climate-controlled comfort to those who work and shop there. Ensuring that roof top units (RTUs) run as efficiently as possible is one way to significantly cut operating costs for Miller Hill Mall and its tenants.

"Mall officials do a great job of purchasing RTUs that are more efficient than code and that use variable frequency drives on fans," said Chad Trebilcock, senior customer services and programs representative for Minnesota Power, noting that a number of new units have been purchased and installed

in the past two years. "In 2021, they also implemented a comprehensive RTU tune-up and maintenance program where they cleaned coils, replaced filters and checked refrigerant to restore units to optimal efficiency."

This preventive maintenance is important because, over time, coils on roof top units get dirty, filters get clogged, refrigerant levels get low and it takes much more energy for units to simply do their jobs. While Miller Hill Mall tenant businesses have long been required to clean and maintain their HVAC equipment, this was the first time Minnesota Power energy consultants worked with mall officials to inventory rooftop units, verify maintenance work completed, quantify energy-saving impacts, and secure Powergrant energy conservation rebates for the work.

"They took care of almost everything; our in-house time commitment was about five hours total," said Dave Danielsen, operations director at Miller Hill Mall. "Working with Minnesota Power is like hitting the 'Easy' button."

## Energy Savings Add Up

HVAC upgrades and preventive maintenance completed in 2020-2021 alone resulted in annual electric savings of nearly 77,000 kWh, lowered demand by around 90 kW and will help the mall avoid some \$7,300 per year on its electric bill. Combined with upgrades to energy-efficient lighting, appliances and refrigeration also done during that time, Miller Hill Mall will enjoy ongoing annual energy savings of 153,000 kWh and 106 kW in reduced demand. Total rebates from Minnesota Power in 2021 exceeded \$24,000.

Energy and cost savings derived from participating in Minnesota Power's Custom Business Efficiency Program really add up. In the five years from 2016-2021, the ongoing relationship between Miller Hill Mall and Minnesota Power yielded staggering results. Combined annual electric savings achieved through projects total more than 1,257,000 kWh. They also are helping the mall avoid additional demand of nearly 350 kW. The electric savings translate to an annual reduction in greenhouse gas and carbon emissions equivalent to removing 194 passenger vehicles from the road or avoiding the amount of energy used to power 104 homes for a year.

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**Dave Danielsen**, Operations Director at Miller Hill Mall

Minnesota Power's Chad Trebilcock (left) worked with Miller Hill Mall's Dave Danielsen on energy-efficient lighting upgrades and improvements to the mall's heating, ventilation and air conditioning equipment.



"Simon Property Group is trying to lead the industry in sustainability and cutting-edge technology to reduce environmental impact," said Danielsen. "Obviously, there are other drivers for energy efficiency as well. For example, installing LED lights saves dollars and cents plus it brightens up the mall to better showcase tenant businesses."

## Energy Efficiency Has Bottom Line Benefits for Tenants

There are definite bottom line benefits to tenants. The mall has a main electric meter and submeters tenants for their individual usage. Energy-saving choices in build outs or remodels within the mall lower operating costs for businesses.

Simon Property Group must approve onsite construction projects or facility improvements initiated by tenants to help ensure they achieve corporate conservation goals. Minnesota Power is a key resource. Mall officials forward plans to Minnesota Power to assess proposed projects and identify energy-saving opportunities.

For example, the space occupied by Pizza Ranch underwent a major remodel in 2021. Minnesota Power worked with the restaurant's design team to achieve energy-efficiency goals through measures such as ENERGY STAR® appliances, door strips and fan controls on walk-in freezers and coolers, and demand control kitchen ventilation.

"We strongly encourage tenants to follow Minnesota Power's recommendations," Danielsen said, applauding choices made in the Pizza Ranch project and others completed in the past year. "It is good for us from an environmental standpoint, and tenants appreciate saving money."

## Energy Efficiency Gives Back All Year Round

Miller Hill Mall draws visitors from across northern Minnesota, Wisconsin and Michigan as well as parts of Canada. While Internet shopping is popular, retail customers continue to value the mall experience as they browse for clothing, sporting goods, books and other merchandise in a bright, comfortable setting powered by energy-efficient choices. For folks at Miller Hill Mall, it's an easy sell.



New LED lights brought even more cheer to the mall during the holidays. Nearly 95% of the mall's interior and exterior lights have been converted to LEDs with help from Minnesota Power.

## For more information:

Minnesota Power's Conservation Improvement Program helps business and commercial customers identify and complete energy-efficiency upgrades and renewable energy projects that benefit the environment and make business sense. Minnesota Power is the first utility in Minnesota to deliver 50% renewable energy and envisions delivering 100% carbon-free energy by 2050. Learn more about how Minnesota Power is moving EnergyForward at [mnpower.com/CarbonFreeEnergyVision](https://mnpower.com/CarbonFreeEnergyVision).

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