

# COOLING SYSTEM CHANGES LEAD TO QUICK ENERGY PAYBACK

As Gundersen Health System staff began looking for low-cost or no-cost ways to reduce the health system's energy consumption, one of the areas they considered first was their cooling system. A process called chiller/tower optimization led to quick paybacks for the health system.

During this effort, staff reprogrammed the electrical system controls that monitor the temperature in the building. By doing so, the fan in the cooling tower interacts with the chiller. The two components run at the setting that is the most efficient based on outside conditions at the time, such as temperature and humidity.

When Gundersen reprogrammed the chillers and towers in one building, they saw approximately \$13,500 in annual savings and reduced their energy use by about 225,000 kW

hours. Once Gundersen determined chiller/tower optimization worked, the system was replicated in all Gundersen campus buildings with chilled water systems. The change reduced electricity consumption for cooling the campus by about 1.1 million kW hours per year, reducing costs by approximately \$65,000 annually.

Chiller/tower optimization at Gundersen is part of the health system's larger efforts to improve efficiency and reduce energy demand.

Gundersen Health System is headquartered in La Crosse, Wis., with hospitals and clinics in Wisconsin, Minnesota and Iowa. For more information on their retrocommissioning efforts and other energy projects, call (855) 669-1653 (toll free), email [envision@gundersenhealth.org](mailto:envision@gundersenhealth.org) or go to [gundersenenvision.org](http://gundersenenvision.org).



Gundersen Health System's John Schleifer, supervisor, Facility Operations; Corey Zarecki, director, Envision Engineering and Operations; and Jeff Rich, executive director, Envision, review the controls on one of Gundersen's centrifugal chillers. As part of Gundersen's energy conservation program, changes were made to the chiller's system programs to optimize cooling tower fan utilization with the chiller compressor. The adjustments were copied for all Gundersen campus buildings with chilled water systems. The change reduced costs by approximately \$65,000 a year and reduced energy consumption by about 1.1 million kW hours annually.

