Gundersen Lutheran HEALTH SYSTEM

New lighting leads to many benefits

When Gundersen Lutheran began taking low-cost measures to improve efficiency and reduce energy demand, one of the first places it looked was up. Health system staff found that by simply retrofitting the light fixtures in six buildings on two of their campuses, they would see an energy cost savings of approximately $245,000 a year.

The retrofitting of the light fixtures involved changing light bulbs, ballasts (the component that controls the electrical current powering the fluorescent bulb) and reflectors. The new light technology has several benefits. The light fixtures produce more light per lamp, so the number of lamps per fixture can be reduced from four lamps to two in most circumstances. By itself, this is a 50 percent energy reduction. They're also more energy efficient, so Gundersen Lutheran's energy use will drop by 1.5 million kilowatt hours annually. That's enough energy to power approximately 150 homes.

While the lights are more energy efficient, there are also other benefits to patients and staff. Fluorescent lighting produces a flicker that is imperceptible to most people's eyes, but can trigger headaches or other discomforts in some people. The ballasts on the new lights cycle much faster, which eliminates virtually all detectable flicker and should prevent headaches and other conditions caused by old lighting. The light produced by the new bulbs is also closer to the spectrum of natural daylight—a big benefit to employees and patients during the shorter days of fall and winter.

Gundersen Lutheran began installing the lights in November 2008 and the work will be completed in 2009.

The lighting changes at Gundersen Lutheran are part of the health system's larger retrocommissioning efforts, which examine systems and use low-cost or no-cost measures to improve efficiency and reduce energy demand. By the end of 2008, Gundersen Lutheran achieved more than $400,000 in annualized benefits through retro-commissioning and expects to see $800,000 in annual savings by the end of 2009.

Gundersen Lutheran Health System is headquartered in La Crosse, Wis., with hospitals and clinics in Wisconsin, Minnesota and Iowa. For more information on its retrocommissioning efforts and other energy projects, call (608) 775-1400 or go to gundluth.org/green.

By retrofitting light fixtures with new light bulbs, ballasts and reflectors, Gundersen Lutheran's energy use will drop by 1.5 million kilowatt hours a year. The health system expects to see an energy cost savings of approximately $245,000 through this retrocommissioning effort alone.

Gundersen Lutheran retrofitted the light fixtures in six buildings on its campuses. This side-by-side comparison of identical rooms shows the difference in lighting between the energy efficient bulbs (right) and original lighting (left). The more efficient fixtures produce the same intensity light with more natural color and half the energy.