

HEALTH SYSTEMS COOPERATIVE LAUNDRIES CLEANING UP ON ENERGY SAVINGS

CASE STUDY
MINNESOTA



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Cort Naab,
Project Engineer at Health Systems
Cooperative Laundries (HSCL)

Doing the laundry for 28 Twin Cities hospitals is a full time job for Health Systems Cooperative Laundries.

They launder 40 million pounds of hospital linens per year from their St. Paul facility.

At that volume, using the least amount of water and energy to get the work done is a priority.

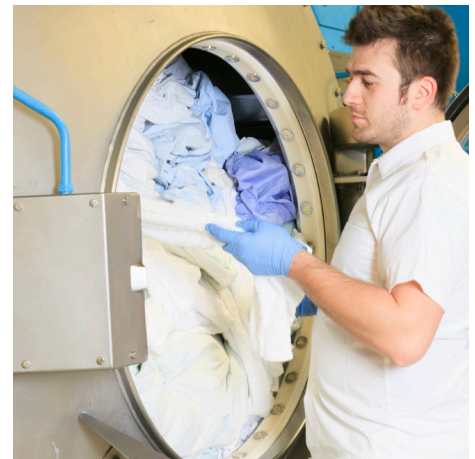
They decided to install two new ozone and ultraviolet water sterilizer systems in their commercial washers, which are the most energy efficient systems on the market. When they realized that an Xcel Energy rebate would help offset the cost, they knew they would make it happen.

A smarter way to clean

Ozone Laundry is a term generally used to describe a type of laundry that uses electricity and oxygen to replace many of the chemicals normally used in a traditional washing process. Oxygen and electricity are used to create ozone. Ozone is dissolved into water and applied to the wash wheel in place of the chemicals. This fundamental change improves the efficiency of the process, while also reducing operating costs for a laundry facility. In addition, ozone systems greatly reduce the environmental impact of traditional laundry operations.

Part of the reduction in water use comes from re-used water. In simplest terms, the rinse cycle water goes through three tubes where ultraviolet light kills the bacteria in the water, before returning it to the re-use tank. That cleaned, re-used water is used to begin the next load.

Cort Naab, Project Engineer at Health Systems Cooperative Laundries (HSCL) compares commercial continuous batch systems to a home laundry system as an example.



PROJECT SNAPSHOT

Estimated project cost	\$256,000
Xcel Energy rebate	\$ 71,258
Payback term	Average payback of 7.6 years for the two units
Dekatherms saved	14,016.3

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"Your home washing machine uses anywhere from 10 gallons to 40 gallons per load, and that's to wash two to six pounds of laundry," Naab explains. "The re-used water in an ozone system reduces that amount to less than a half a gallon per pound of laundry."

They began looking at the new systems and realized that the new units would qualify for Xcel Energy rebates of \$71,200, which was just under 30 percent of the overall cost. The rebate and long term energy savings made the investment worthwhile.

Big time savings

Armed with knowledge and rebate money, Naab's team installed a new ozone system in each of two washers.

He estimates they're saving 20 million gallons of water per year by using the ozone and ultraviolet sterilizing system. He says that's 90 percent less water than they were using four years ago.

"We've been able to get water consumption down to .4 gallons per pound and 80 percent of our linen goes through this system," he says. "We are seeing significant savings."

And that's just the water. There's also natural gas savings. Less water used means less water to heat.

"At our plant we take the cold water coming in and run it through a heat exchanger to recapture hot water," Naab explains. "We warm up the city water and use an economizer above the boilers to further heat the water."

Savings on gas means fewer carbon emissions and reduced dependency on fossil fuels.

"This system has made for a very green laundry," Naab says.



New or retrofit ozone laundry systems qualify for rebates, including:

- **Penitentiaries / jails**
- **Hospitality /hotels**
- **Hospitals**
- **Nursing Homes/Assisted Living facilities**
- **Health clubs and other facilities**

Rebates \$35 per pound of laundry and are capped at 60% of the project costs not to exceed \$17,500 per ozone unit.

For more information regarding the prescriptive ozone laundry rebate please contact your account manager, or one of our energy efficiency specialists at **855.839.8862** or **energyefficiency@xcelenergy.com**.