

Training for facilities managers delivers big results



Rainy Lake Medical Center (RLMC) in International Falls has made significant advances in recent years, updating and remodeling its surgery center, emergency room, therapy and wellness center, patient wing and administrative services area.

Originally built in the 1960s and 1970s, the community hospital and clinic complex has transformed itself into a 21st century healthcare facility—complete with a new high performance mechanical system, redesigned electrical distribution system and a growing number of LED lights with controls.

“We advanced rapidly to a modern facility with complex building automated systems and controls,” said Brock Morrison, facilities director for RLMC. “The changes in technology were so dramatic, we needed training to fully understand how to utilize our systems.”

Morrison was among 11 building operators and maintenance professionals who recently completed Building Operator Certification (BOC) training in International Falls, sponsored by the Northeast Minnesota Office of Job Training (NEMOJT) in

“BOC training provides participants with the knowledge and tools to identify energy-saving opportunities and optimize system performance.”

Craig Kedrowski, Energy Efficiency Analyst-Lead
Minnesota Power

partnership with Minnesota Power. BOC is a nationally recognized training program designed to help participants understand how systems such as heating, ventilation and air conditioning (HVAC); electrical; and lighting work together so they can operate facilities more energy efficiently. It is increasingly important as building and energy management systems become more integrated and complex.

“Many organizations are choosing to invest in high performance, energy-saving technologies when they construct new buildings or remodel facilities, but, if today’s building systems are not monitored and maintained properly, they might not meet expectations for energy and cost savings,” said Craig Kedrowski,



“Everyone brought their own knowledge to the table, and everyone shared. A lot of time, we would discuss or troubleshoot problems right in the class.”

Joe Hackenmueller, Facilities and Environmental Services Director
Good Samaritan Society

energy efficiency analyst-lead for Minnesota Power’s Power of One® Business conservation improvement program (CIP). “BOC training provides participants with the knowledge and tools to identify energy-saving opportunities and optimize system performance.”

Strong advocate and job training resources helped bring BOC to ‘The Falls’

Ted Brokaw, street and water commissioner for the city of International Falls, was a driving force in bringing BOC training to the Borderland community. Brokaw attended BOC Level I training sponsored by Minnesota Power a few years ago at Camp Ripley in Central Minnesota. He found it extremely beneficial but inconvenient for building operators in the International Falls region to participate.

“Having to drive four hours to Little Falls once a month to take a class was a challenge,” said Brokaw, who was the city’s buildings and grounds director at the time and remains passionate about energy efficiency. “My employer saw the value and paid for my travel expenses, but not everyone is so fortunate—that was why I pushed to have BOC training offered up here.”

Brokaw facilitated a meeting between Alysa Hackenmueller of NEMOJT and members of Minnesota Power’s CIP team, including Kedrowski and commercial energy consultant Tanuj Gulati of Energy Insight Inc., who also is a BOC Level I instructor. NEMOJT’s Talent Development Program covered tuition for 10 of the participants.

“Our Talent Development Program specifically provides funding so employers can have efficiently trained employees in a variety of departments that will help offset costs or improve their business processes,” Hackenmueller said. “The whole premise of BOC training

is to help organizations save money from energy-efficient operations, so, to me, it was a no-brainer.”

Six local employers enrolled facility and maintenance staff in the program: RLMC, the city of International Falls, Falls High School, Good Samaritan Society, Rainy River Community College and Backus Community Center.

Minnesota Power CIP connections engaged participants

Monthly classes began in October 2017 and wrapped up in April 2018. BOC Level I training includes 74 hours of classroom and project work in building systems operation and maintenance. The curriculum centers on energy efficiency and includes topics such as operation of heating, ventilation and air conditioning systems; measuring and benchmarking energy performance; efficient lighting fundamentals; and HVAC controls. In order to graduate, participants must attend classes and develop scoping projects to improve energy efficiency in their own facilities.

One of the greatest benefits for participants in International Falls was that many already knew BOC instructor Tanuj Gulati through his longtime work with Minnesota Power’s CIP program. His rapport with the students and familiarity with facilities they managed made it easier to incorporate real local examples into class discussions and to follow up with CIP resources.

“Having Tanuj embedded as a BOC instructor helps solidify the relationship between Minnesota Power and our customers,” Kedrowski said. “The final assignment is to complete an actual energy conservation project, and he helps participants succeed by connecting them to the resources and incentives we offer.”



“BOC students are facility people that we work with daily on a professional basis,” Gulati said. “In class they get to interact with me and ask questions about their current projects and projects that are in the planning stages.”

“Everyone brought their own knowledge to the table, and everyone shared,” said Joe Hackenmueller, facilities and environmental services director for Good Samaritan Society, an organization with more than 250,000 square feet of residential care facilities. “A lot of time, we would discuss or troubleshoot problems right in the class.”

BOC training leads to real energy-saving projects

During the course, Falls High School was planning a project to replace outdated T12 fluorescent lights with LEDs, and contractors had proposed a light-for-light replacement. After discussing the project in class, Gulati followed up as a representative of Minnesota Power’s CIP team and found LEDs could meet the school’s lighting requirements with one-third of the bulbs, while qualifying for rebates from Minnesota Power.

“We are using the savings to replace the lights in three additional rooms, and we are still spending less than what we had planned,” said Tom Holt, facilities and transportation director for International Falls Public Schools – ISD 361. “I cannot say enough about how Minnesota Power has helped us out, and Tanuj especially goes out of his way. We have only limited funds, and, if it wasn’t for him, in this case, we definitely could not have done those extra three rooms.”

Other BOC graduates also are in the process of implementing their scoping projects or making changes based on what they learned in the BOC course.

“I found the class on lighting efficiency to be particularly helpful,” Morrison said, mentioning one of the sessions taught by Gulati. “As a 24/7 hospital, we need lights and access, but I learned about opportunities to gain efficiencies. After the class, (Minnesota Power) conducted a lighting study, and they are going to give me a report to change out some of our lights and to control usage with timers or motion sensors. It will be a big energy saver and money saver for us, and there are potential rebates and incentives available.”



“It was huge for local maintenance professionals to meet face-to-face with engineers and industry experts ... Plus there was the value of networking with others in the community who have similar jobs. That is priceless.”

Alysa Hackenmueller, Career Counselor
Northeast Minnesota Office of Job Training

“(Thanks to BOC training) we already have cut costs on contractors coming in to troubleshoot some of our problems, and we are implementing things we learned in class about running our systems more efficiently,” Joe Hackenmueller said. “Now we’re programming schedules and using variable drives properly so HVAC units don’t come on full board when we only need 25 percent of that power to do the job. We have other projects planned, waiting for capital to put them in place.”

Networking provides additional benefits

In addition to providing local facilities and maintenance personnel with valuable insights and resources to optimize their buildings’ energy performance, BOC training strengthened participants’ ties with Minnesota Power and with each other.

“It is nice to get out there and talk shop with someone who deals with the same things you do,” Brokaw said. “Building operators are unsung heroes, who only get called when people are uncomfortable.”

“It was huge for local maintenance professionals to meet face-to-face with engineers and industry experts like Tanuj, Craig, and some of the other trainers who came to town,” said Alysa Hackenmueller, noting that International Falls often is overlooked as a training site because of its remote location. “Plus there was the value of networking with others in the community who have similar jobs. That is priceless.”

Nearly all of the participants are interested in BOC Level II training down the road.

“Two months in, people were pushing for BOC Level II, and I think it is going to happen,” Brokaw said. “I’d also like to bring BOC I back in a couple of years, because organizations get new employees. This is a good thing—everyone benefits.”