

Case Study

May 2016



Fergus Falls Area Family YMCA

Controls system reconfiguration results in 40 percent annual energy savings, enables budget reallocation for capital improvements • Fergus Falls, MN

The Fergus Falls Area Family YMCA has served the community for over forty years. Beginning as a one-man operation, in an old bowling alley with a jukebox and a pool table, the YMCA has grown to a 96,000 sq ft facility with over 3,300 members. The facility boasts a sixty-five person staff and numerous volunteers, working daily to fulfill its mission of developing programs that build a healthy spirit, mind and body.

Challenge

High energy costs were putting a strain on Fergus Falls Area Family YMCA's budget, and comfort issues were jeopardizing the quality of the facility's indoor environment. With dollars for discretionary spending hard to come by, the new facility manager sought to improve operation of the building's couple dozen HVAC rooftop units, as well as increase the facility's energy efficiency. "We had HVAC units fighting each other and our equipment was not working properly," said Steve Nelson, facilities manager, Fergus Falls Area Family YMCA. "Our energy costs were also much higher than they should have been."

Solution

Displeased with the performance of their existing controls service contractor, when a Trane representative contacted the Fergus Falls YMCA, the facilities manager was open to entertaining a controls service proposal from the original equipment manufacturer (OEM). "I had Trane come out," said Nelson. "I told them how we wanted things to operate, and we discussed what we might need."



Fergus Falls Area Family YMCA was able to refurbish its parking lot using dollars saved by improving the efficiency of its HVAC systems.

The team explained the benefits of Trane controls service, examined the building's Trane® Tracer Summit™ building automation system to uncover any potential issues, and presented a proposal for optimizing the facility's controls system. The Trane service proposal complemented the engaged facility manager by providing OEM controls expertise, resulting in the two entities entering into a service agreement.

Reducing energy use

During its evaluation, Trane discovered the controls system had been improperly configured. Schedules were not being used, and as a result, the building's rooftop units were running 24/7, rather than only during the facility's regular hours of operation. To reduce energy use and improve comfort, the Trane Service team reviewed the proper use of overrides, implemented schedules, adjusted set points, and reconfigured equipment controls sequences. "We lowered the gym temperature, so it would be more comfortable for our members when they were working out," said Nelson. "We also found that all of our units didn't need to be running all of the time, and some didn't even need to be running at all."

Optimizing system operation

Trane Service provided training for the facility manager on operation of the building automation system. Armed with knowledge obtained in the training, facility operators actively manage the building's systems, making adjustments as needed to accommodate changes in climate conditions or facility use. The training included information regarding what to do, and what not to do, to help ensure optimal operation of the building's HVAC system.

Maintaining optimal performance

The Trane Scheduled Agreement includes an annual check of the building automation system by a factory-authorized service professional to ensure proper operation, reset schedules if appropriate and change settings if needed. Regularly scheduled maintenance helps the YMCA increase the life of its equipment and is less costly than ad hoc service calls.



With knowledge gained during Trane provided training, facility managers use a Trane BAS to actively manage their systems to reduce energy use.

Results

A controls service agreement with Trane has resulted in the proper configuration of the controls system at Fergus Falls Area Family YMCA and a significant reduction in energy costs. The recreational facility estimates a 40 percent annual energy savings, allowing the YMCA to repurpose its budget to pay off debt and implement capital improvements.

"Things have improved significantly," said Nelson. "Our Trane controls technician is top-notch and the temperature is where it needs to be. We are saving energy costs and that savings is being used for other improvements to our facility. Recently, we used some of the savings to re-pave our parking lot."



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