System upgrades result in improved comfort and control; a 55 percent reduction in energy costs during first six months. Tulsa, Oklahoma

Challenge

The Center struggled to maintain consistent temperatures throughout the building since the opening of its new 35,000 sq. ft. state-of-the-art facility ten years earlier. Calls to the two separate vendors, who serviced its HVAC equipment and building controls, often ended in frustration, with the vendors unable to identify the cause of the comfort issues.

And while for some the inconsistent temperatures were a mere inconvenience, for others a controlled environment was vital. “We tie everything we do back to the people we serve,” said Lori Long, executive director, The Center. “Due to their disabilities, some members can’t regulate their own body temperature. So, it’s about more than being comfortable; it’s about our members’ health.”

With its controls being managed offsite, The Center was unable to quickly adjust temperatures to accommodate special events or address hot/cold spots. The Center was also unable to create occupied/unoccupied set points, resulting in its equipment operating 24/7, consuming excessive energy. The Center sought to increase efficiency and improve daily comfort.

Solution

After receiving a referral from a former Trane employee, The Center met with Trane to discuss their challenges. Knowing that the existing third-party HVAC system had not reached the end of its useful life, Trane performed a full system evaluation to ensure its proper operation. Trane then focused on the offsite controls management, which was preventing simple temperature adjustments, as well as the identification of potential issues. To enable The Center to cost-effectively manage its infrastructure, Trane developed an asset plan with a step-by-step approach to resolving issues, and became the single point of accountability for equipment service and controls. “We were very skeptical at first,” said Long. “We put Trane through multiple interviews, making them justify their proposed solutions. They got it. They knew we wanted more than just a service provider. We wanted a partner who understands our needs and the unique situations we have.”

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Improving efficiency and effectiveness
After discovering that six of the facility’s twenty-four variable air volume (VAV) units were not working, Trane immediately replaced the units and integrated them into The Center’s controls system. Continuous monitoring uncovered seventeen additional VAVs not operating properly and plans were made to replace them to further improve efficiency and effectiveness.

Gaining in-house control, reducing energy use
A new Trane® Tracer™ building automation system (BAS) enables The Center to access and control its systems in-house. Built on an open standards platform, the Tracer SC enabled the existing third-party unit controllers to be integrated with the new BAS to optimize building operations. The Web-based interface of the Tracer™ SC gives building operators remote access to manage the facility from virtually anywhere using a Web-connected device. The Center uses the BAS to monitor equipment, respond to hot/cold calls and address alarms. Custom graphics and dashboards show equipment and floor plans, enabling operators to easily navigate the facility and its systems. With the Tracer SC, The Center has implemented an occupied/unoccupied schedule to better manage energy use and costs. “The BAS is easy to use and the training that Trane provided was amazing. They explained it in my language,” said Long. “Now I don’t need to walk over to the other side of the building or call a technician to make an adjustment. I just log in and make a couple of clicks.”

Results
Working with Trane, The Center has made significant improvements in overall building comfort and energy efficiency, with the replacement of improperly operating VAV units, and the addition of controls and a Trane Tracer BAS. The Center is now able to monitor and control its systems in-house to address temperature issues, and provide reliable, comfortable spaces for member activities. With systems running on an occupied/unoccupied schedule, The Center has significantly lowered its energy consumption, realizing a 55 percent reduction in gas bills and a 3 percent electricity savings, just six months after the upgrades.

“The Center is 100 percent supported by community donations, and the Trane solutions demonstrate that we use those contributions wisely,” said Long. “Never in a million years did we think that we would be where we are now. It is so much better; a 180 degree turnaround.”

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About The Center
Founded in 1957 by the National Council of Jewish Women, The Center is dedicated to providing rehabilitative and recreational activities, as well as enriching life experiences, for children and adults with mobility, dexterity, or sensory disabilities. In 2005, The Center built a 35,000 square foot state-of-the-art facility to accommodate their growing needs, and serve their approximately 1,000 members.