Energy Management Controls Power Community & Conservation

Control systems upgrade helps drive improved energy management, greater operational efficiency, and long-term sustainability for Urban Ecology Center.

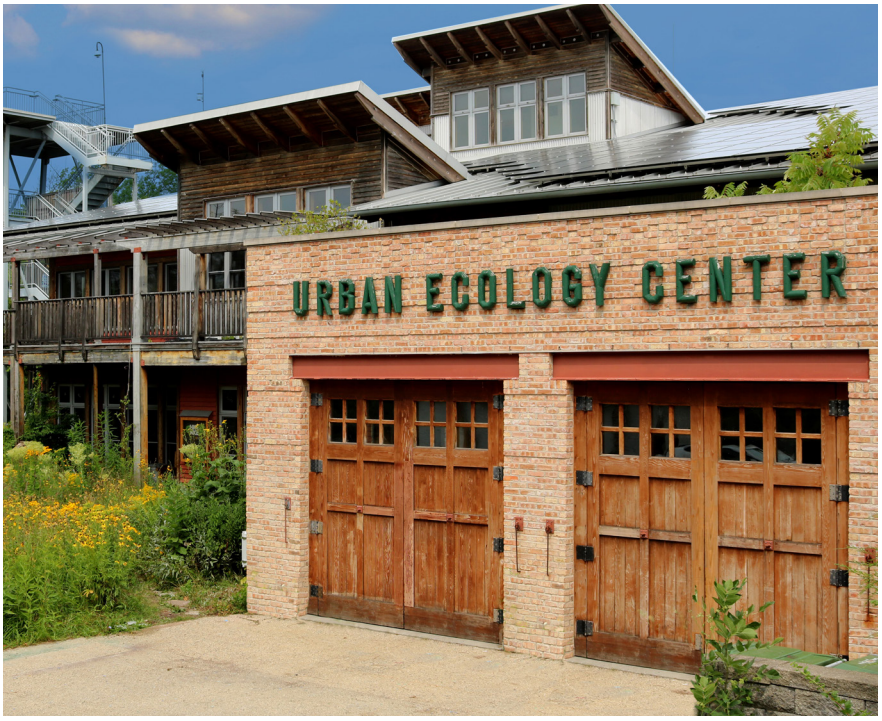
Quick Facts

Location: Milwaukee, WI
Industry: Non-Profit
Products: Tracer® SC+
Topics: Sustainability | Energy Efficiency | STEM | Funding
Services: Building Automation System | Controls | Electrification | Connected Services | STEM Programs | Funding

Results

$285K
In Funding Proposals For Grant Support

1st
Two All-Electric Buildings In Milwaukee County



Highlights

- Upgraded to Tracer® SC+ energy management control system.
- Achieved consistency and visibility across three campuses with Building Automation System (BAS).
- Advancing toward grid independence, beginning with multiple all-electric campuses.
- Transformed buildings into STEM teaching tools through the high school internship program.
- Submitted applications for $285,000 in grant support for energy audits and energy management upgrades.

The Challenge

For more than 30 years, the Urban Ecology Center (UEC) has transformed Milwaukee's urban parks into vibrant spaces where children explore nature, families connect and neighborhoods thrive. What began as a grassroots effort in Riverside Park has grown into a multi-site organization serving 60 urban schools through its cornerstone Neighborhood Environmental Education Project.

As the organization expanded from one to three locations, so did the complexity of its facilities. Managing buildings with aging infrastructure in addition to limited staff and technical resources made even routine operations difficult. Most critically, the UEC needed building systems that supported their educational mission while advancing their momentum toward net-zero operations and community resilience.

The Solution

Although the Trane team had not worked with the Urban Ecology Center for several years, they had made a focused effort to re-establish the relationship. UEC soon recognized in Trane a team that shared their values around sustainability and community impact. As a company committed to ambitious 2030 sustainability goals and a 2050 Net-Zero carbon target, Trane brought both technical expertise and a like-minded approach to environmental responsibility. This shared purpose helped drive a collaborative and innovative approach across multiple UEC projects.

Upgraded Energy Management Controls

The journey with the Urban Ecology Center began at the Menomonee Valley location, which was remodeled and expanded in 2012 with Trane controls integrated from the design phase. More than a decade later, the team built on that foundation by upgrading to Tracer® SC+ controls, a 2024 BUILDINGS Product Innovation Award winner. Tracer® SC+ connects building systems through a single platform, making it easier for staff to manage daily operations. Built on open, industry standard protocols, the system offers flexibility to support a wide range of equipment. With enhanced cybersecurity, including stronger data protection and secure access, the UEC team can operate with greater confidence that their systems and information are protected. For a small team managing three locations, the upgrade delivered both peace of mind and a strong foundation for future improvements.

> **Now we can begin the conversations around future upgrades in ways we couldn't before.**
>
> Marcos Guevara
> Facilities Lead at
> Urban Ecology Center

Comprehensive Building Automation System & Connectivity

Building on that success, Trane deployed comprehensive building automation system (BAS) upgrades at Washington Park and Riverside Park, providing the team with visibility and consistency across all campuses. The upgrades introduced five-minute diagnostics, cloud-based monitoring and clearer insight into occupant comfort and building behavior.

The system's connective building service capabilities have proved transformative for day-to-day operations. Artificial intelligence helps support continuous monitoring, optimization, and predictive maintenance, which are each contributing to smart energy management across UEC locations. Additionally, when the staff needs to prepare for special events, they can implement adjustments remotely, in minutes, ensuring optimal comfort for large groups of visitors.

Educational Integration and STEM Learning

The building automation systems became teaching tools themselves. The Green Career Pathways program offers high school interns the opportunity to learn about energy efficiency, indoor air quality, and sustainable building operations while gaining hands-on experience with energy management control systems.

Many of these students return to school to further their education in environmentalism and sustainability, eventually securing careers in green fields throughout the city.

Strategic Collaboration and Community Impact

Recognizing the UEC's need for energy expertise, Trane helped facilitate a collaboration with the University of Wisconsin-Milwaukee Industrial Training and Assessment Center (UWM-ITAC). Graduate students now conduct energy audits across UEC sites, offering fresh insight while gaining valuable hands-on experience.

"The University of Wisconsin-Milwaukee recently received a grant to expand their training programs for energy engineers, including those in technical colleges," said Ashley Henderson, Energy Solutions and Controls Leader at Trane. "This has enabled one of UWM-ITAC's students with a strong interest in geothermal systems to help evaluate the performance of a UEC building where we suspect inefficiencies, and to recommend strategies for improvement."

Separately, but also in the spirit of collaboration, Trane helped prepare funding proposals totaling $285,000 for energy audits and system upgrades, providing technical expertise to strengthen grant applications.

The Results

The Urban Ecology Center's transformation has enabled the small facilities team to effectively manage three locations through remote monitoring, with equipment issues resolved in minutes rather than requiring individual site visits. Washington Park became the first all-electric building in Milwaukee County, and this winter Prairie Springs followed as the second. Both sites are now in the process of adding solar and battery storage systems.

With greater visibility into performance through advanced data analytics and insights from the UWM-ITAC collaboration, the UEC is better equipped to make informed long-term decisions. These include pursuing grid independence at their all-electric sites, which are positioned to serve as community safe havens during blackouts or extreme weather. "Now we can begin conversations around future upgrades in ways we couldn't before," said Marcos Guevara, Facilities Lead at Urban Ecology Center, noting how the collaboration with Trane has laid the foundation for additional eco-friendly infrastructure enhancements in coming years.

Most importantly, smart energy management is helping strengthen the UEC's core mission. Educational programs continue reaching underserved populations across all locations, while building efficiency improvements are helping ensure the UEC will be able to keep showing up for the communities they serve. "When I see people enjoying themselves in these spaces...awakening an awareness of nature... I know we've done good work," said Guevara. The trust built through this collaboration led the UEC to invite Trane to join their construction advisory board for future building projects, demonstrating the depth of the relationship and shared commitment to community impact.

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