

Saving energy through staff training

Case Study

Company Name:
Weill Cornell Medicine
Engineering and
Maintenance Department

Training Improvements Success:

- 28 trainings attended
- 709 hours spent actively in training
- In addition to 13 staff members trained previously, 11 are now new GPRO O&M certificate holders
- Staff participation increased by 90-95% annually, from approximately 50% two years ago

Annual Water Consumption:
10% reduction across
all buildings

Annual Electricity Consumption:
5% reduction in five buildings

Annual Natural Gas Consumption:
8% reduction in one building

Background

Since 1898, Weill Cornell Medicine has been among the nation's top-ranked medical and graduate schools, striving for excellence in its education of the world's future healthcare leaders. Their Engineering and Maintenance Department is responsible for a multitude of buildings, all with diverse energy needs. These research, patient care, and educational spaces are highly energy-intensive due to process loads, high ventilation rates, and special pressurization needs.

Recognizing the Need for Assistance

Understanding the need to reduce energy usage and costs, Weill Cornell Medicine reached out to the New York State Energy Research and Development Authority (NYSERDA) for assistance. With funding from NYSERDA and assistance from Urban Green Council, Weill Cornell Medicine completed GPRO@Work—a customized coaching program focused on improving operations and maintenance practices that increase energy savings. The Weill Cornell Medicine Engineering and Maintenance team developed a robust training culture and a plan for continual facility improvement.

Building Effective Communication

The maintenance team expressed interest in energy efficiency training but felt their overwhelming amount of daily tasks would not allow the time. Working alongside the engineering and maintenance director and department supervisors, the GPRO@Work Coach focused on increasing training, skill-building, and efficiency in daily operations. They worked on:

- Improving staff communication
- Creating outlines for one-on-one meetings to focus on training progress
- Developing and prioritizing staff training goals within annual reviews
- Improving feedback from the work order management system for users to recognize and reduce frequent issues



Creating a Training Culture

The GPRO@Work Coach developed a Master Training Menu that listed all required, available, and planned trainings. This helped to establish and track specific onboarding training for new hires and overall staff goals.

The series of building management system trainings provide consistent building automation introductions for all new employees and serve as an opportunity to share best practices, reinforcing energy-efficient operational concepts. Staff now has the opportunity to attend external controls, electrical, and HVAC trainings, based on their desired areas for professional development and improvement.



Hands-on Experience

The maintenance team created peer trainings on a range of topics, including how to communicate temperature standards with occupants, proper tool use and maintenance, and troubleshooting HVAC systems. In fall 2019, the team opened a learning lab to hold staff trainings on specific equipment and sample building management systems that simulate real-life conditions.

Features include:

- Flexible seating and projection equipment for trainings
- A fume hood ventilation device that removes hazardous substances from laboratory spaces, identical to real laboratory environments
- A lighting control system representing the types of automatic window shade and daylight and occupancy sensors that often need adjusting



Lessons Learned

After completing GPRO@Work, the maintenance team effectively communicates and is much more efficient at managing work orders, allowing more time to focus on energy efficiency projects. Since the program's implementation, many buildings across campus have significantly reduced energy usage.

Learn more about clean energy workforce development opportunities with NYSERDA

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