Xerox capitalizes on energy management solutions

Case Study

Company Name:
Xerox

Business Type:
Office Technology

Location:
Webster, NY

A reduction goal of 6%, equates to a savings of 9.9 million kWh, 435,000 therms, and $1,000,000

Overview

Xerox, a global corporation that sells document solutions and office technology products, operates an industrial complex with approximately 55 buildings across 1,100 acres. Located in Webster, New York, the campus houses manufacturing, research, laboratory and testing, warehouse, and office areas with an estimated 6,500 employees.

Xerox consumes approximately 7,250,000 therms of natural gas and 165 million kWh of electricity, which costs a combined $17.5 million annually. Additionally, there are large energy consuming systems that include steam, compressed air, chilled water, air handling and exhaust, and manufacturing systems.

Course of Action

Xerox partnered with the New York State Energy Research and Development Authority (NYSERDA) and Bergmann Associates, an engineering firm, to a conduct a 15-month energy study across the entire campus. A dedicated full-time equivalent energy manager was placed on site to identify energy saving opportunities and advance the energy culture. The manager became acquainted with the facility by connecting with personnel and learning the facility layout and management structure. With a more thorough understanding of the company's operations, the manager Xerox set the reduction goal at 6%, which equates to a savings of 9.9 million kWh, 435,000 therms, and $1,000,000. Using current utility rates, the goal cost savings is equivalent to $830,890.

By having an energy manager on site, the on-going challenges to implementing energy reduction measures, especially with companies as large as Xerox, can be mitigated. The manager has the expertise to facilitate the process and is responsible for bringing together decision-makers, communicating company-wide changes, and handling unexpected issues or costs that may arise. There is often a large quantity of cost-saving opportunities—the manager will identify the projects with favorable paybacks as well as balance time spent, especially for urgent or time-sensitive projects.

Recommendations

The savings target was first addressed by looking into the “low hanging fruit” such as failed steam traps and compressed air leaks, which are a large contributor to energy consumption and have low up-front renovation costs. Efforts were focused on the heavy manufacturing areas such as the Salt Rd Toner plant first, which consumes a large portion of the energy on campus. Other projects included compressor replacement, lighting upgrades, and chilled water system upgrades.

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Results

All projects completed during study are projected to save 6,510,640 kWh and 19,887 MMBtus per year, reducing annual operating costs by $519,753. Additionally, there are several projects either in progress, scheduled, or in the pipeline for future consideration. The projected savings from these measures are 2,717,663 kWh, 25,124 MMBtus, and $268,413 annually.

When taking the projects planned for completion in the future into consideration, total savings for gas, electric, and project costs increases exponentially.

The NYSERDA On-site Energy Manager Program

Through the On-site Energy Manager (OsEM) Pilot Program, NYSERDA cost-shares up to 75% of the cost to hire an OsEM. OsEMs work with companies to develop and implement successful energy and productivity projects. Projects may include operation and maintenance improvements, behavioral changes, energy efficiency upgrades, process improvements, throughput and scrap reduction improvements, and cost management.

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