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NYSERDA

Kyndryl maintains IBM's commitment to energy efficiency

Case Study

Company Name:
Kyndryl (formerly IBM)

Industry:
Data Center

Location:
Tuxedo Park, New York

Annual Electric Savings:
1,744,957 kWh

Annual Fossil Fuel Savings:
595.2 mmBtu

Overview

IBM Sterling Forest, a 68-acre campus, is a data center hosting facility that provides various levels of off-site IT back-up and redundancy to customers. The campus, started in 1972 and expanded in both 1983 and 1994, includes two main buildings totaling 433,700 SF. The technology space is 174,000 SF and houses a Level 3 reliability N+1 Data Center.

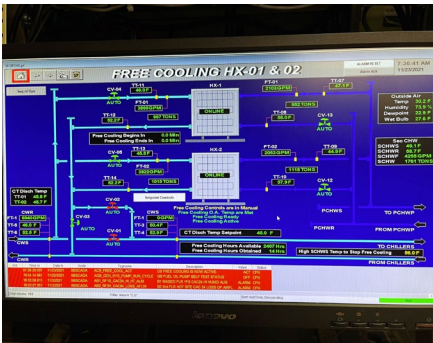
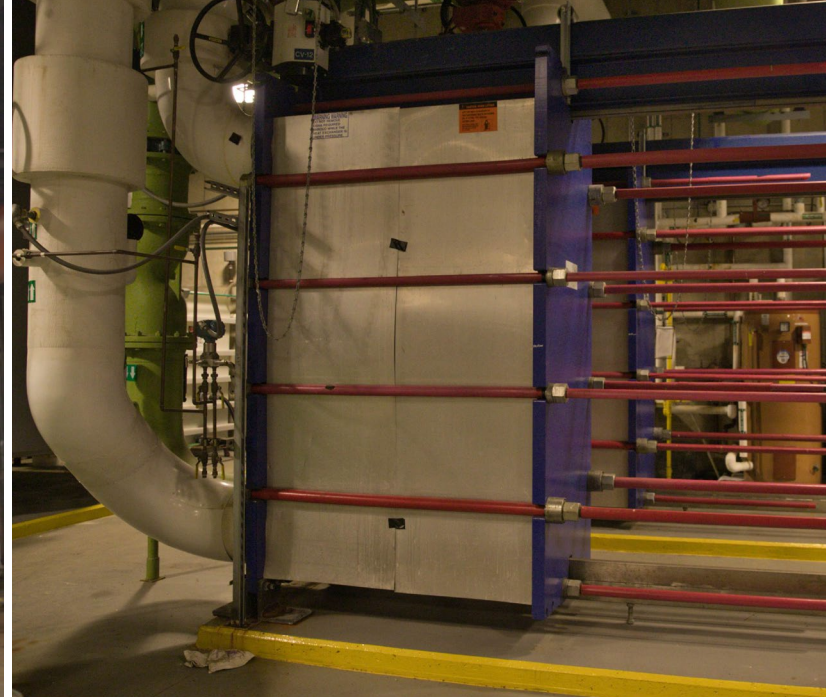
In February 2021, the global COVID-19 pandemic was affecting the world, and IBM was preparing to relaunch the data center business as Kyndryl. Despite these challenges, Sterling Forest began participation in NYSERDA's OsEM program and brought on CBRE as an On-site Energy Manager (OsEM). The site spends approximately \$4.4M on utilities per year, which is a combination electrical energy and #2 fuel oil. CBRE projected exceeding IBM's corporate goal of savings 4% per year. The effort to increase the savings while the facility is transferred from IBM to Kyndryl was a key factor in the decision to engage in this NYSERDA program.

Goals

The corporate target for the Sterling Forest site was 4% annual energy reduction, but it was accelerated by onboarding an experienced energy manager under the OsEM program and increased to 8%. This goal is a blended rate calculation that includes historical energy consumption, cost, and energy reduction.

Measures Taken

CBRE dedicated one of its most experienced energy leads to the Sterling Forest site to work with the site team, launch and operational energy efficiency program, identify and implement energy projects, and report of the goals and savings achieved. The OsEM worked hand-in-hand with facility engineering, facilities management, technicians, and project execution teams at Sterling Forest to implement and identify energy capital projects, energy savings measures, and report on program performance. CBRE's proposed energy manager plan helped drive energy savings for the Sterling Forest site while also laying the foundation for a much larger on-site energy manager program at several other IBM sites. The proposed program is consistent with many programs CBRE has launched in recent years with great success.



A variety of measures were identified and proposed to IBM. Some involved equipment upgrades such as LED lighting retrofits and repair of systems that had been functional in the past but had fallen into disrepair. Examples include replacing failed parking lot lighting fixtures with LEDs, updating the Free Cooling system for use in cooler weather and offsetting the operation of mechanical chillers for 3,700 hours per year.

The OsEM also helped identify low- or no-cost measures including identification of the optimum pair of chillers to run for the most hours, turning off the bubbler drinking fountain compressors (as the building was mostly unoccupied), and raising the chilled water set point to ease the chiller load. Reduction of diesel fuel burned during the generator testing was achieved by a scaled-back testing schedule that did not introduce unnecessary risk.

Results

Projects noted above were implemented and the savings reflect actual to-date savings as well as the remainder of the 12-month period. Larger projects such as lighting were not implemented at the time due to the occupancy level of the building and the debt servicing needed (which could not be transferred to the spin off, Kyndryl).

Next Steps

Due to the low occupancy and uncertainty of this facility Kyndryl has shared the OsEM role across several Kyndryl sites. The identified project list developed under the OsEM program will continue to help prioritize and implement projects.

A reduction in air conditioning load will be realized when Kyndryl returns to pre-pandemic levels of outside air. The Free Cooling system (currently being optimized for continuous 24/7 operation) will yield additional savings. Additional savings opportunity exists with an RCx project, boiler controls, and continued BMS maintenance.

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.

Discover how to bring energy costs under control and maximize profitability with NYSERDA.

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