

IBM incorporates energy-efficient solutions with On-site Energy Manager

Case Study

Company Name:
IBM

Industry:
Technology

Location:
Armonk, New York

Total Electric Savings:
1,978,382 kWh

Total Fossil Fuel Savings:
3,937 MMBtu

Overview

For more than a century, many of IBM's corporate flagship sites have been in New York State. There are three sites located in Armonk, NY—IBM's global headquarters, North Castle, and Gerstner Center for Learning. In addition, IBM maintains a hangar at a nearby airport as well as two offices in Manhattan. The six sites total 1.15 million square feet.

IBM prioritizes energy efficiency, carbon emission reduction, and clean energy development with the goal of reaching net zero by 2030.

In 2018, Jones Lang LaSalle Inc. (JLL) was providing portfolio level energy management services as part of a larger service program but had no dedicated energy management services to specific sites. With an ambitious corporate energy conservation program and certification to global standard ISO50001 International Organization for Standardization – Energy Management, there was a need for an onsite energy manager (OsEM) to work closely with the onsite facilities and operations teams to implement operational improvements, comply with all standard requirements of ISO50001, and save as much energy and carbon as possible with operational excellence and energy projects. With support from the New York State Energy Research and Development Authority's (NYSERDA) On-site Energy Manager (OsEM) program, a full-time OsEM was brought in to work closely with individual facilities and operations teams to identify and implement efficiency improvements over a two-year period.

Goals

The six sites have an annual energy conservation target of 2.5%. This goal is a blended rate calculation that includes historical energy consumption, cost, and energy reduction. Additional objectives are to exceed the ISO 50001 International Organization requirements for Standardization Energy Management certification and regularly conduct internal analysis to ensure site preparedness for external audits and certification.

In addition, JLL set a goal as a service provider to attain a higher level of overall savings and services across all IBM sites managed by the company.



Measures Taken

A variety of energy conservation measures were implemented over the course of the two-year program.

In partnership with the JLL facilities teams, the OsEM ensured no-cost measures were regularly identified, implemented, and analyzed. Projects included setpoint adjustments, improved control system sequencing, and turning off unused lights and equipment.

Additional measures taken included installing variable frequency drives, insulating hot water piping, converting the constant air volume system to a variable air volume unit system, upgrading small motors, and large-scale lighting retrofits.

Results

Although the COVID pandemic limited on-site visits, the OsEM continued working diligently with essential facilities teams to recommend and implement projects, ultimately exceeding energy reduction goals.

At the portfolio level, JLL found sites with dedicated OsEMs were more likely to meet their energy and carbon reduction goals. Further, the OsEM shared best practices developed during the engagement to assist other JLL Energy Managers in successfully implementing energy conservation measures.

Next Steps

Due to the program's success in Armonk, the JLL team continues to provide dedicated energy management services and plans to engage OsEMs for additional IBM sites.

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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