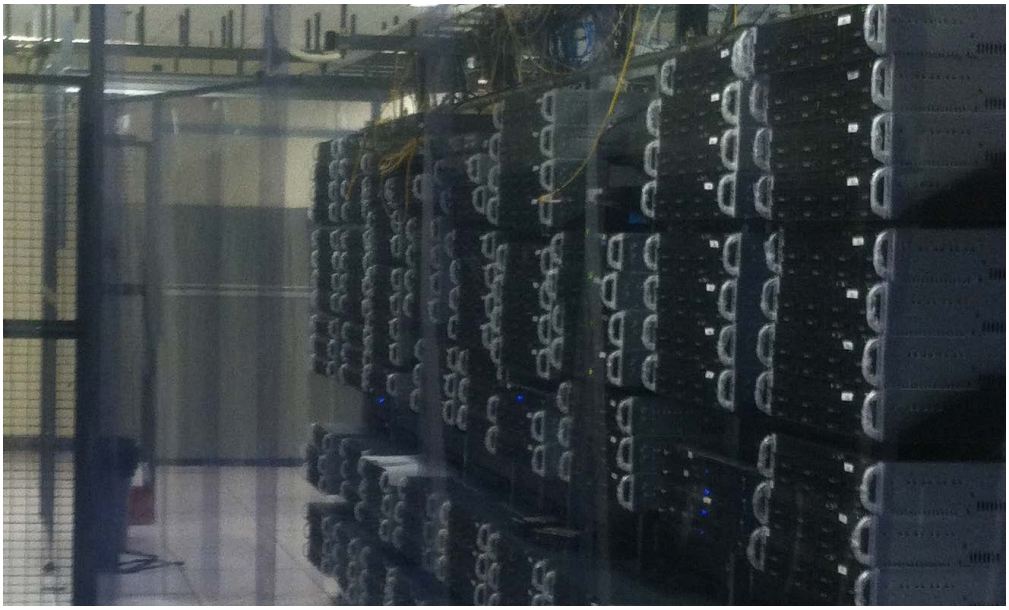
zColo



"With Con Edison's support, our airflow project paid for itself in only one year, and our annual energy savings are huge. We're extremely pleased with the Data Center Efficiency Program, as it helped us reduce our energy footprint and provide optimal operating conditions for our customers."

– Shaun Mooney,
Director of Infrastructure,
60 Hudson Street

zColo, a Zayo Group Company, manages large colocation data centers. These facilities are designed to house and power IT equipment for external clients, ensuring that business-critical applications have fast connectivity, a high-level of security, top reliability, and system resiliency. zColo maintains a 30,000-square-foot colocation facility at 60 Hudson Street in New York City that houses multiple data centers. This facility, formerly known as the Western Union Building, is now a carrier hotel that functions as one of the most important telecommunication and data hubs in New York City. It houses vital network equipment for more than 100 companies.

Recommendations

zColo partnered with turnkey engineering firm, Bluestone Energy Services to assess opportunities for increasing operational efficiency at its colocation facility. Bluestone audited the air flow balance in the facility and found opportunities to optimize the performance of the cooling equipment.

Bluestone Energy Services found inefficiencies with the cooling equipment. Supply air was short-circuiting back to the computer room air conditioning (CRAC) units and hot air was re-circulating in the server cabinets. To solve this problem, Bluestone proposed an air-balancing retrofit to remove the hot exhaust from the server equipment, preventing it from mixing with the cool supply air that recirculates back into the equipment.

The airflow balancing project improved the air management efficiency of multiple components of the facility's cooling equipment through installation of the following:

- Covers for empty rack slots to prevent cold air from bypassing the hot equipment racks.
- Open top, cold-aisle containment with curtains to prevent mixing of hot and cold air streams at the ends of the aisles.
- Overhead supply fans in the plenum, using electronically commutated (EC) motor fans with VFDs that respond to temperature sensors on the racks.
- An intelligent cooling system that includes a central control unit to monitor the CRAC units and cold aisles to deliver the proper amount of cold air where needed.

Once installed, the project resulted in energy and cost savings for zColo, offsetting over 1.5 million kWh per year, and saving almost $300,000 in annual energy costs. The project's cost was offset with $149,500 from Con Edison, resulting in a one-year payback.

This project was completed with the participation of Bluestone Energy Services, a member of the Con Edison Market Partner Network. This team of energy professionals offers valuable support through Con Edison's Commercial & Industrial (C&I) and Demand Management programs. Customers can use any vendor that they choose and are not required to use a Market Partner to participate in the program.

Get started

To learn how you can participate in this exciting program, call the NYSERDA hotline at **1-866-NYSERDA**.

Visit **nyserda.ny.gov/datacenters** for more information and answers to frequently asked questions.

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