

University in New York City

Turnkey airflow optimization project that spanned 83,000 square feet of lab space.



AT A GLANCE

Goals

- Lower lab reheat
- Apply the available utility rebate
- Decrease free exhaust capacity

Results

- 1,224,000 reduction in kWh
- 71,600 reduction in Therms
- Rebate covering 70% of project cost
- 955 MTCO2E carbon reduction
- \$255,940 LL97 tax savings

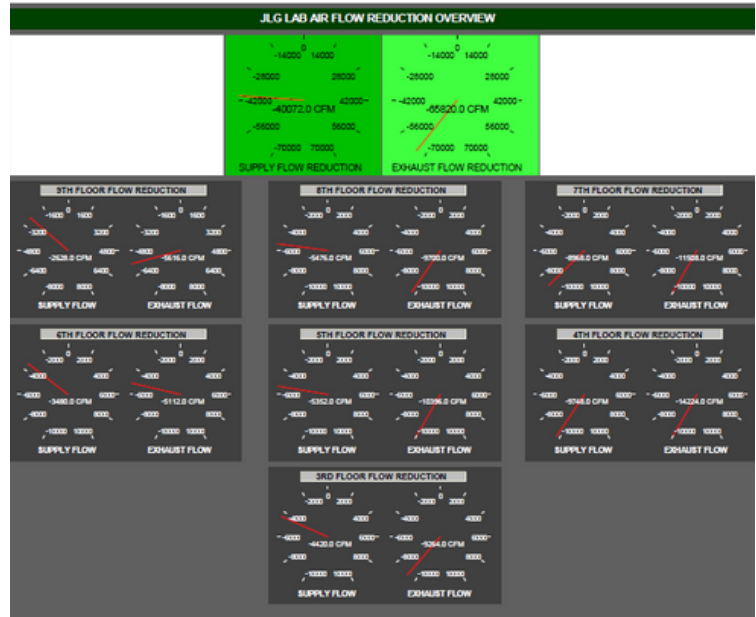
A New York City university sought to minimize energy consumption in its most energy-intensive spaces on campus to comply with the regulatory requirements of Local Law 97 (LL97). After a comprehensive assessment of the university's portfolio, Thrive Buildings identified a research facility with large potential for energy reduction. Next, Thrive formulated a project specifically tailored to curtail energy usage within the laboratories while capitalizing on the utility rebates available in the NYC market.

Thrive's assessment of the entire lab building pinpointed the areas most conducive to airflow optimization. Also in need of addressing were the exhaust cfm levels as a recent expansion had increased the lab square footage and caused inadequate exhaust levels in some areas of the building.

To address these concerns, Thrive introduced Aircuity's multi-parameter, centralized demand control ventilation platform, which was installed in 114 lab spaces. Thrive managed the entire project, overseeing the design, installation, and start-up of the solution, while also handling the rebate application process. The local utility company's robust rebate program covered 70% of the project costs, further enhancing the program's financial feasibility.

Results

Incorporating a Niagara Control System on top of the Siemens building management system, the site team achieved room-level optimization plus furnished airflow and energy dashboarding. This initiative resulted in a substantial reduction in carbon emissions, effectively aligning the building with LL97 targets until 2030.



<p>\$247K</p> <p>Annual Energy Savings*</p>	<p>\$1.23M</p> <p>Utility Rebate</p>	<p>< 1 Year</p> <p>Simple Payback</p>
<p>1.2M kWh</p> <p>Saved Annually</p>	<p>6.9 MMcf</p> <p>Natural Gas Avoided</p>	<p>955</p> <p>MTCO2E Savings</p>

*Savings exclusive of utility

The implementation of Aircuity's system led to a reduction in overall cfm by 60,000, eliminating the need for any mechanical upgrades, despite the increase in lab square footage. This comprehensive approach not only facilitated compliance with regulatory standards but also showcased effective lab energy and Scope 1 carbon reduction practices, positioning the university on a sustainable path for the future.