Case Study

University of Illinois at Chicago
FlowSafe Fume Hoods and Performance Contracting

About the University
The University of Illinois at Chicago (UIC) is a public research university with over 30,000 students. It is designated as a top research university by the Carnegie Classification of Institutions of Higher Education. The university is a beacon of innovation through its research laboratories, teaching laboratories, and healthcare facilities, and is the principal educator of Illinois healthcare professionals.

However, when faced with an aging laboratory infrastructure along with increased budget constraints, UIC engaged an energy service company (ESCO) to help identify ways to renovate buildings, decrease energy consumption, and save operational costs. The ESCO performed a comprehensive facility audit, provided a savings and performance guarantee, turnkey design, and long term partnership.

To balance implementation cost with the calculated savings, the ESCO carefully selected energy conservation measures, which included lighting upgrades, HVAC replacements, enhanced building controls, and the installation of over 350 FlowSafe Stable Vortex® II Fume Hoods. The installation work was meticulously scheduled to avoid shutting down any active research buildings.

Laboratories are often the largest energy consumer on a campus, but it can be difficult to reconcile how to save energy without compromising lab safety.

The patented design of FlowSafe Fume Hoods enables it to constantly adjust to environmental changes in the room and properly contain to better protect users with, on average, 40% less airflow than conventional fume hoods.

The reduced airflow also makes lecturing in laboratories easier, as FlowSafe Fume Hoods are much quieter than the average fume hood. The reduction in required airflow also lessens the demand on a building’s overall HVAC system and provides predictable energy savings.

• 350+ high performance fume hoods
• ESCO project
• ADA-compliant hoods
• Customized order
• Overall $3m in annual cost savings

The fume hood replacement aspect of the project was a critical component in enabling the university to meet its climate action and cost saving goals.
A Customized Order

UIC’s extensive fume hood order was quite customized. Hoods of various sizes were manufactured to mimic previously installed fume hoods in order to fit onto existing cabinetry.

The manufacturing team also diligently replicated each previously installed hood’s utilities like gas, vacuums, and sinks into the new Stable Vortex® II hoods so utility connections would be seamless and convenient.

The Stable Vortex® II is a product that can meet the needs of various stakeholders, from university officials to energy officers, HVAC technicians, and professors and students.

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