

BUILDING PERFORMANCE LAB FACT SHEET



Energy-Efficient Building Operations for New York's Green

An introduction to the Building Performance Lab's mission and strategies.

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BPLab's Role in the High-Performance Building Industry

Sustainable cities need buildings that are energy efficient and a workforce that's trained to manage them for optimal performance. The Building Performance Lab (BPLab), a CUNY Institute for Urban Systems program that is supported in part by NYSERDA, has a

key role to play in the city's drive to become a global leader of high-performance building operations.

Together with our partners in the industry, we are working to reduce energy use in existing commercial buildings while improving

environmental factors such as indoor air quality and increasing overall tenant satisfaction. BPLab's multi-track approach combines applied research, curriculum development, and technology training with real estate industry outreach and collaboration.



The Challenges of Adopting Advanced Building Operations

Improving the energy performance of commercial properties is one of the most immediate and effective ways that the city can reduce its carbon footprint. The citywide deployment of advanced energy upgrades proposed by PlaNYC 2030 will make New York a global leader in urban energy management. However, it will require a major initiative to equip the workforce and industry for the implementation and management challenge.

New construction — the lauded "green buildings" —

attracts attention but it is change to the energy management of the existing building stock that will make the greatest difference in reducing New York's carbon footprint. In 2030, buildings that are standing today will account for 85% of the city's energy use.

In New York and in cities across the U.S. there is a shortage of building managers and operators trained specifically to run and maintain advanced energy systems. Benchmarking — the process of establishing a

baseline record of energy performance — is often inexact, making it impossible to set standards of building performance and to measure the effectiveness change.

BPLab is working to develop a technologically-savvy workforce, improve building performance measurement and reporting systems, and facilitate working relationships between building owners, property managers, major tenants, energy regulators, and representatives of government.

BPLAB PROGRAMS



Practicum & Internship

CUNY engineering students take part in “living lab” opportunities for practical work and applied research that will prepare them to enter a specialized workforce with valuable skills.

In its first year, the internship program has helped to raise the profile of building performance issues at CUNY and will continue to bring talented young engi-

neering students into the emerging field of green buildings systems.

Interns have worked on a groundbreaking wireless, multi-site metering and reporting system for the CUNY Office of Design, Construction and Management. Their experiences will encourage others across the city to become early adopters of high-performance technologies.

Stakeholder Consortium

The Building Performance Stakeholder Consortium is unique in the city’s building industry. Stakeholders — a cross-section of commercial real estate and property management professionals — meet three times a year to discuss the benefits and challenges of “going green.” By the consensus views reached by its members, the Consortium directly informs the Lab’s research and educational agendas.

At the first meeting of the Consortium, stakeholders spoke of the “cultural change” that has begun to usher in new services and technologies to a rapidly changing market. But there are many hurdles yet to cross. For example, while many tenants are environmentally-conscious and are increasingly demanding energy-efficient services, others are adverse to even incremental change. Both groups present unique challenges

to property managers and owners.

BPLab is currently pursuing research on two topics that emerged from Consortium discussion led by co-chair Nancy Anderson, executive director of the Sallan Foundation. At the next general meeting, BPLab will report back to Stakeholders, initiating a feedback loop that will advance the Consortium’s agenda and inform BPLab’s applied research and curriculum development activities.

Continuing Education & Satellite Labs

Advanced Building Automation Systems (ABAS) are poised to revolutionize the building management profession but are often underutilized. Furthermore, many building professionals skilled in ABAS cannot keep pace with new developments in system capabilities. In response, BPLab is preparing to offer continuing education classes and is developing satellite lab capabilities for hands-on training.

Class participants are trained to identify and

address “low-hanging fruit,” cost-effective, high-impact changes that can lead to major energy system overhauls. BPLab will soon be able to offer opportunities for working professionals to earn nationally-recognized building operator certification.

The International Union of Operating Engineers Local 94 Training Center has partnered with BPLab to create satellite lab facilities for applied instruction in cutting-edge management tools. Union members learn how to achieve optimal energy performance, as well as improved indoor air quality, emergency response, and preventive maintenance.

The Satellite Lab program has gained the support of major real estate owners and management firms. BPLab anticipates it will become a nationwide model for strategic alliances between academic institutions and the building management workforce.

Research & Curriculum Development

As a direct link between the building industry and CUNY’s extensive academic facilities, BPLab is in a unique position to solicit and manage applied research projects and develop undergraduate and graduate curricula that address immediate needs in a market filled with emerging technologies and evolving techniques.

The Stakeholder Consortium functions as an advisory board, helping to guide the application of CUNY’s research and academic capabilities, while BPLab’s workforce development programs act as testing grounds for training techniques and teaching perspectives that will evolve into applied engineering curricula.