



## **Falcon collaborates with NYU-Poly for energy pilot program**

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Falcon Engineering has provided a grant to fund a pilot program to create publically accessible "Building Energy Actuarial Tables" at NYU-Poly.

Across the U.S., energy policies at the federal, state and local level have been the driving force for new regulations and mandates for building benchmarking, disclosure, and energy efficient day-to-day operations and capital improvements.

Building owners are continually tabulating utility bills for use in budget, benchmarking and energy audit reports. Many energy programs today also now require that measurement and verification demonstrate that energy savings originally estimated have been achieved before incentive payments are made. This leaves building owners, investors and lenders in a quandary. What are the risks, costs and savings for improvements in operations & maintenance, or implementing capital energy efficiency and renewable energy measures, and what are the opportunities for various building types?

As of Oct. 2013, there is no central repository of this information; it is dispersed amongst trade journals, energy periodicals, energy audit reports and blogs and by private and government energy research agencies, as well as state, city and federal energy program administrators. To help fill this void, Falcon Engineering has funded a pilot program at the Industrial & Manufacturing Engineering Graduate Program to create publically accessible "Building Energy Actuarial Tables" for different building types. Over the last two and one half months, six NYU-Poly graduate engineering students have worked with Falcon Engineers and the N.Y.C. Dept. of Education to develop a prototype building energy actuarial table for the K-12 schools building type. N.Y.C. schools are an early participant in this effort providing anonymous information about more than 1,200 of its K-12 schools.

"Falcon Engineering sponsored this project and Ed Brzezowski used his expertise in construction engineering and energy conservation to guide students. The six engineering graduate students used Industrial engineering, computer science and hard work to find, collect and analyze the data from multiple sources and formats. The result is an interactive tool for comparison of energy conservation improvements for building size, type and ROI. This project provided excellent engineering experience for the students in the application of academic studies to practical engineering projects. The result of their work demonstrated the feasibility of the tool to guide reduction in energy costs. I look forward to working with Falcon and other organizations dedicated to energy conservation in the next phase of automated data collection and sustainability tracking," said Robert Albano, industry professor of industrial and manufacturing Engineering at Polytechnic Institute of NYU.

The project will result in the development of a database, based on extensive online and periodical research, review of benchmark, energy audits, retro-commissioning, and measurement and verification reports. This information will be analyzed, curated and tabulated in the building energy

actuarial tables that will be easy to use and allow direct comparison of building metrics.

The data will also indicate for each type of measure, their estimated and actual savings, as well as persistence of energy savings over time. The curated data will also show which types of measures should be looked at closer to understand lessons learned and best practices.

For more information and to see the Pilot results for this data collection, analysis and report, see <http://buildingenergytable.wordpress.com/>

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