



Cooper Union Achieves 10% GHG Reduction through Student Engagement and Green Building Initiatives



THE COOPER UNION

Enrollment:
Approx. 1,000 FTE

Institution Type:
Private Engineering, Art,
and Architecture College

Institution Size:
414,000 gross sq.ft.

Region:
New York City



Engineering a Clean Energy Future

The Cooper Union for the Advancement of Science and Art (Cooper Union), is a private engineering, art, and architecture school in New York City. With less than 1,000 undergraduate students and three main buildings, the small private institution provides a unique opportunity for students to work directly with faculty and industry professionals. Melody Baglione, Professor and George Clark Chair of Mechanical Engineering, recognizes that training the next generation of engineers on energy and sustainability topics is a primary benefit of being a Clean Green Campuses member.

As a Clean Green Campuses member, Cooper Union qualifies for the New York State Energy Research and Development Authority's (NYSERDA's) Roadmaps program which has transitioned into the FlexTech program. The program provides funding for comprehensive campus energy master planning. Support from the program connected Cooper Union students, faculty, and facilities staff with energy consulting firm, Smith Engineering, in a multifaceted initiative to advance energy efficiency efforts and reduce the carbon footprint on campus. Cooper Union's approach to achieving its goal of 40% carbon emissions reduction by 2030 is two-fold: capitalizing on industry expertise through collaboration and engaging students and staff in the process.

"I got involved in this program because I thought it was a great learning opportunity for my students... it's really important to me to show students the real-world context of the things they're learning"

*– Melody Baglione,
Professor of Mechanical
Engineering at
Cooper Union*



“NYSERDA funding helped [Cooper Union] to identify and jumpstart energy efficiency initiatives. I hope we can sustain these projects going forward... funding from NYSERDA helps us get our house in order”

– Melody Baglione



Leveraging Industry Experience

With the assistance of students, faculty, and staff, Smith Engineering worked to identify and implement more than 20 energy conservation measures (ECMs) on campus over the next several years. The ECMs identified in a level-3 ASHRAE building energy audit include chiller plant optimization, air handler and ventilation retuning, and other building management system optimization efforts. Assuming all planned ECMs are implemented, Cooper Union is projected to meet its target of 40% reduction in greenhouse gases as early as 2023.

Student Involvement in Carbon Reduction

Cooper Union students have unique learning opportunities that allow them to be a key part of the team driving carbon reduction initiatives. Through Smith Engineering, Cooper Union created a new Energy Efficient Building Systems course, which exposes students to energy-efficient building systems and optimization. Students also have the chance to work with energy and building software and analysis tools and engage in research projects centered on energy data analytics, building systems, and controls optimization.

Membership in Clean Green Campuses, coupled with a pledge to reduce greenhouse gas emissions by 40% by 2030 through the NYC Carbon Challenge, has paved the way for Cooper Union to approach energy efficiency opportunities on campus with an innovative and collaborative mindset.

Ready to join? Get started today.

Learn how at nysERDA.ny.gov/clean-green-campuses.



NYSERDA