New Jersey's cleanenergy njcleanenergy.com program™

Success Stories

Rutgers University

PROJECT INFORMATION

Program Participant
- Rutgers University

Location
- Various campuses

Project Contact
- Michael Kornitas Director of Sustainability and Energy
  Rutgers University

Technology
- LED lighting
- Reduced-wattage fluorescent lights
- Occupancy sensors
- Motors for HVAC, vacuum and domestic water supply systems

Total Project Cost
- $1,776,051

NJCEP Incentives
- $1,153,952 through the Large Energy Users Program

Estimated Annual Savings
- 5,145,199 kWh
- $595,299

Project Payback
- 1.04 years

Project information, savings and environmental benefits were provided by the project contact.

Consolidating multiple lighting and motor upgrades across four campuses through the Large Energy Users Program leads to greater energy savings

Background

Rutgers, The State University of New Jersey, is the largest institution of higher education in the state. With more than 1,000 buildings across 27 million square feet, operating the university requires a significant supply of energy.

Recognizing the potential environmental impact from university activities, campus officials have committed to reduce the university's carbon footprint. Since 2009, Rutgers has reduced carbon emissions from energy and water use as well as solid waste generation by nearly 644 million pounds of carbon dioxide equivalent.

Energy efficiency has played a major role in helping Rutgers achieve their emission-reduction goals. Rutgers officials recently implemented more than 60 energy-efficiency projects with financial assistance from *New Jersey's Clean Energy Program*™ (NJCEP), resulting in a reduction of more than 4.63 million pounds of carbon emissions.

A building-by-building approach can, however, be difficult for an institution or business the size of Rutgers. Beginning in 2015, officials turned to the more streamlined process offered through the NJCEP Large Energy Users Program.

The Center for Law and Justice at Rutgers University-Newark is one of many Rutgers buildings that will receive new lighting and sensors as part of the Large Energy Users Program.

Solution

The NJCEP Large Energy Users Program is designed to promote investment in energy-efficiency projects among the state's largest commercial and industrial facilities. As much as $4 million in incentives are available for eligible entities that provide annual contributions of $300,000 or more to the New Jersey Clean Energy Fund through the Societal Benefits Charge.

To assist in applying for the program, Rutgers hired an energy-auditing firm to conduct a lighting analysis on the Camden and Newark campuses. The analysis found opportunities to save electricity
by upgrading interior lighting across 16 buildings with 12,650 reduced-wattage

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The Large Energy Users Program's quick payback period means the university sees a positive cost saving in a short period of time.

Michael Kornitas
Director of Sustainability and Energy
Rutgers University

RUTGERS

Rutgers, The State University of New Jersey
57 US Highway 1
New Brunswick, NJ 08901

fluorescent and LED fixtures and by installing nearly 850 occupancy sensor controls.

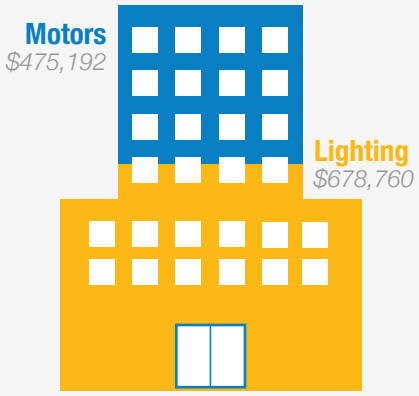
Rutgers also reviewed opportunities to upgrade motors across a variety of applications. The assessment recommended upgrading motors larger than ten horsepower at the Camden, New Brunswick, Newark and Piscataway campuses. All together, Rutgers plans to install 286 new high-efficiency motors on HVAC, vacuum and domestic water supply systems across 37 buildings by December 2015. Rutgers officials hope to add variable frequency drives (VFDs) on select motors as part of a future project.

"The university is able to strategically plan its energy reduction by targeting specific needs on multiple campuses," said Michael Kornitas, Director of Sustainability and Energy at Rutgers University. "Instead of replacing the motors in one building, we're able to upgrade hundreds of new motors, resulting in a substantial reduction of energy that will maximize our carbon footprint reduction."

NJCEP provided $1,153,952 in incentives to lower the combined cost of installing $1,538,603 in new lighting and motors. Rutgers anticipates the projects will save 5,145,199 kWh, or $595,299 in annual electricity costs. Campus officials estimate the project will pay for itself within 1.04 years when factoring in an additional $49,556 in annual operational and maintenance cost savings.

"The Large Energy Users Program's quick payback period means the university sees a positive cost saving in a short period of time," Kornitas said.

Project Incentives: *$1,153,952*



By combining energy-efficiency projects across multiple campuses, Rutgers is able to significantly reduce its environmental impact. The lighting and motor upgrades are estimated to eliminate 8,020,112 pounds of carbon dioxide equivalent, roughly equal to the annual carbon dioxide emissions produced by 786 passenger vehicles.