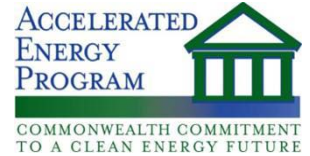




GREENFIELD COMMUNITY COLLEGE CoFFEE CASE STUDY



PROJECT OVERVIEW

Greenfield Community College (GCC) was the first site to receive funding through the Commonwealth Facility Fund for Energy Efficiency (CoFFEE). The project focused on upgrading inefficient lighting to LED technology.

BACKGROUND



Before participating in the CoFFEE program, GCC has had a long standing commitment to sustainability, demonstrating by its many efforts over the years to “green” the campus including:

- Mounting 392 solar photovoltaic modules
- Installing a high-efficient HVAC system which reduces heating and cooling cost by 41%
- Developing a zero-net energy Greenhouse
- Cooling provided by six geo-thermal wells to the core of the building.

In recognition of these advancements, GCC’s active Green Campus Team has been recognized with a DOER Leading by Example award.

INSTALLATION

GCC began the LED retrofit project after receiving CoFFEE funds in July 2015. Over the summer, **an entirely in-house staff replaced 392 T8 lighting fixtures with LEDs.** By utilizing the slower summer months to complete a retrofit, GCC was able to minimize the coordination. The installed lighting contained wireless *SpaceWide Technology*, a stand-alone LED system with integrated occupancy sensing and daylight sensors.

The Philips EVO kits fit in the existing lighting bays and took 30 minutes each to install. The lighting system was not tied to any pre-existing controls, cutting down on the time and cost of running new wires. The system comes with factory setting dimming behaviors, which can be adjusted easily remotely based on ambient light levels reducing the expensive and time consuming commissioning process.

As part of this project, GCC has partnered with a neighboring technical school to assist with the installation of the outdoor LED wall packs, providing valuable hands-on experience for students.

Project at a glance

Location: 1 College Drive, Greenfield, MA 01301

ECM(s):..... 392 LED Lighting Fixtures

Project Cost: \$63,055

Annual Cost Savings:\$14,488

Utility Incentive..... \$40,900

Annual Energy Saving:

- Electricity:92,396kwh

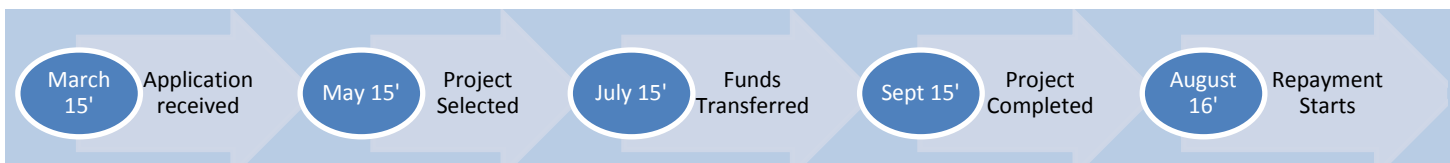
Annual GHG Reductions:44 tonnes CO₂

Simple Payback.....1.6 years



RESULTS

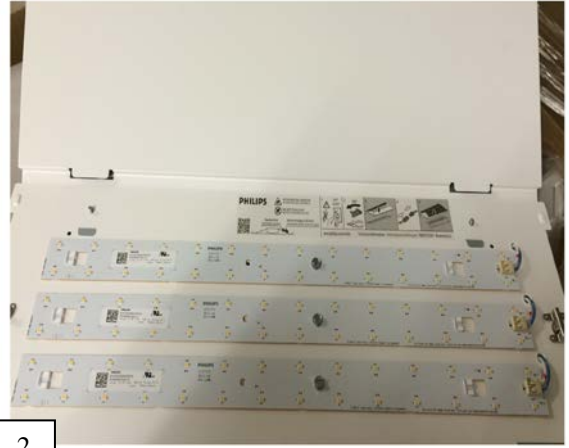
The CoFFEE program allowed GCC to invest in efficiency technology without tapping into its budget. The lighting system is **both energy efficient and cost effective, resulting in large savings** while meeting the needs of an academic environment and its pledge to a sustainable campus. In recognition of the project’s success, GCC is considering using the system throughout the campus.



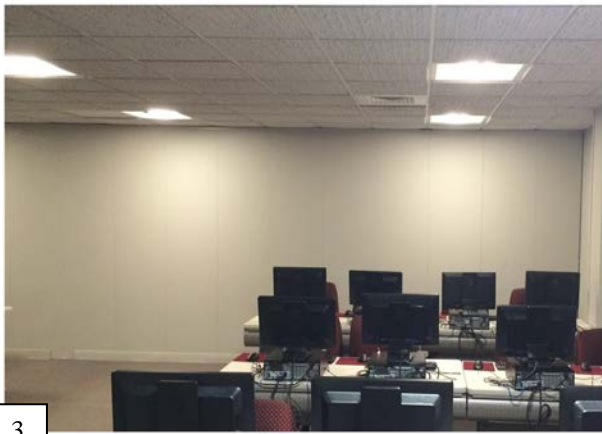
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1. Existing T8 Fluorescent Lighting Fixtures.
2. LED luminaire to replace existing fluorescent lights
3. The system is capable of lighting up areas of a classroom in use to full levels while leaving unoccupied areas at reduced levels.
4. Hallways sensors powered up to full levels ensure sufficient lighting for foot traffic.
5. Empty classroom using low light setting (77%/output) via daylight harvesting.



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This case study was prepared by the Division of Capital Asset Management and Maintenance (DCAMM) with the assistance of Greenfield Community College. To learn more about the CoFFEE program, please visit the website www.mass.gov/dcamm/coffee or contact Ryan Harold at 857-204-1449, ryan.harold@state.ma.us or specifically on this project, contact Jeff Marques, marquesj@gcc.mass.edu, 413-775-1700. The CoFFEE program was developed with the support of a US Dept. of Energy Grant. To learn more about DCAMM's Accelerated Energy Program (AEP) please visit www.mass.gov/dcamm/aep