New lighting system saves nearly $600,000

Prominent university in California has lightbulb moment, reduces energy costs with Centrica Business Solutions.

$480K
energy cost savings

$100K
maintenance cost savings

2M
kWh reduction in energy consumption

centrica
Business Solutions

Overview

Catering to thousands of undergraduate and graduate students and enjoying an international reputation for excellence, this prominent public university in California has ambitious sustainability targets for reducing carbon emissions. In pursuit of these goals and to also reduce costs and maintenance, they wanted to replace the old lighting systems in 11 campus buildings housing 537,000 sq. ft. of offices, classrooms, labs, engineering facilities and auditoriums.

The old lighting included a variety of technologies such as high-pressure sodium and high-wattage fluorescent lights that did not allow the university to stay in line with California's stringent environmental targets. The university wanted to standardize on one technology and install more sophisticated lighting that would improve working conditions for both students and staff.

The lightbulb moment

In a $4.5M, three-year project, with over two years on-site, Centrica Business Solutions replaced all lighting with modern LED fittings. They also implemented new control systems that allow for better flexibility of lighting controls across different parts of the campus, improving working conditions for staff and students.

Technical overview

The solution was a combination of both new LED fixtures and cost-saving LED retro-fit kits that use existing fixtures. The scope included a wide variety of fixture types, as well as lighting controls. A variety of controls strategies and technology were utilized depending on the facility and room type, but most included dimming, motion control and daylight harvesting. Most controls installed wirelessly connected to, or were set to connect to, the centralized building control systems, enabling administrators to manage them remotely. All are compliant with California Title 24 that sets out requirements for energy conservation and green design in construction and maintenance.

Customer results

The university has achieved energy savings of $480,766 and has reduced usage by two million kilowatt-hours. They have also cut maintenance costs by a further $100,000 as LED lights require less frequent maintenance.

The university's primary goal was to have a lighting control system that can act independently and reports back to the primary building management system, which controls things like HVAC and solar systems. In that way, all of the university's energy usage will be captured and controlled on a single platform and administrators will have overall control, using intuitive dashboards to set preferences, rules and standards.

2M kWh savings

$480K utility cost savings

$100K maintenance cost savings

1.5M pounds of coal offset

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