Maximized energy savings with controls

150,000 sq ft facility with Bluetooth mesh luminaires

The customer – one of the most popular bottled water providers in the US, was looking to maximize energy savings by installing a lighting control system at its production facilities. At the same time, the customer wanted to be able to take advantage of the future connected lighting and building intelligence benefits. To fulfill these needs, a combination of Bluetooth mesh standard components from different vendors and the Silvair Lighting Control solution was used.

The large installation that includes 550 lighting fixtures across the facility, including high bay lighting and office lighting, was designed and commissioned by Pentalux.

The company achieved 30% in additional energy savings for the customer by incorporating Silvair Lighting Control with the LED luminaires. The baseload reduction (just from LED fixtures) was projecting about \$85,000 in energy savings annually, and Pentalux was able to realize about \$110,000 in energy savings with controls, which gives around \$45 savings per node per annum. A significant impact on the additional energy savings was to use an occupancy sensing with a 2-stage dim-to-off scenario in smaller zones. Due to the diversity of the customer's facility, more than 100 lighting zones had to be created during the planning stage. The key was to set the zones to dim down 50% power after 5 minutes when spaces were not occupied. After another 5 minutes, the lights in the zones are automatically turned off.



DETAILS

| Category: | Bottled water manufacturing facilities |
|-------------|--|
| Technology: | Fulham EliteControl controllers, McWong TruBlu controllers, and sensors |
| Strategies: | Occupancy Sensing / Daylight Harvesting |
| Area: | 150,000 sq feet / 13,935 m² |
| Location: | Mableton, GA |
| Year: | 2020 |

PARTNERS:











This strategy allows capturing savings from dead areas of the facility (mainly warehouse and production space) throughout any 24 hours without impacting production or visibility.

The commissioning process was also another highlight of the installation. Pentalux created the overall zone and control strategy in the web app and worked with the installing contractor to physically commission the devices using a mobile app to these pre-made zones as the project was being installed on site. The two-stage process allows to minimize the disruption caused by the retrofit. The sites operate 24/7, and with no need for any new lighting control wires, the installation of sensors and controllers went much faster and cost significantly less.



This unique mix of Highbay, Recessed Office, and Can lights installed with Bluetooth mesh controllers and sensors from Fulham and McWong show how important it is to create and support the globally interoperable standard.

The ability to pick and choose from a variety of hardware manufacturers and put them together on the same Bluetooth platform to control the light fixture of our customer's choosing is a testament to what an open standard control system should look like.

> **Romano Vlastelica,** Founder and Director at Pentalux



BENEFITS

- Massive energy savings
- Non-disruptive installation
- Easy commissioning
- Efficient sensor-driven control scenarios
- Future-ready infrastructure for occupancy analytics and asset tracking

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