



# Case study Citi

Location  
Philips Lighting

Canary Wharf, London  
Philips Lighting Solutions



**PHILIPS**



“The new control system provides us with more precise zoning so that only occupied areas are lit. The dimming functionality also enables us to adjust lighting levels within the zones to suit the preferences of the people working in those spaces.”

Les Smith, EMEA Critical Facilities Engineering Manager



# Lightening the load for Citi's carbon emissions



## Fast Facts

### Customer

Citi

### Location

Citigroup Centre EMEA Headquarters,  
Canary Wharf, London

### Philips Products

Philips LightMaster control system  
Bespoke recessed LED luminaire  
Downlight LED luminaire

### Project in Partnership with

ISS

## Background

Philips LED light fittings and lighting controls are helping Citi to significantly reduce energy consumption and carbon emissions at its Citigroup Centre EMEA headquarters in Canary Wharf, London. Citigroup Centre consists of two merged buildings and accommodates the majority of Citi's UK based employees. The company has a strong sustainability policy, which includes a commitment to achieve a 20% increase in energy efficiency, compared to 2005 levels, by 2015.

## The Solution

As lighting is estimated to account for 20-25% of the company's energy consumption this was clearly an area to be investigated. "We were keen to evaluate the potential for LED lighting and decided to try out a relatively small project initially, with a view to measuring the savings and potentially rolling out LEDs throughout the building," said Les Smith, Citi's EMEA Critical Facilities Engineering Manager. "It also became apparent that improving the control of the lighting would help to reduce energy consumption even further, so the Philips LightMaster system was included in the project."

Overall, the combination of LED lighting and controls has delivered energy savings of around 45% compared to the previous lighting installation. The initial project focused on levels 6 and 7 in one tower and included several elements. Early on, existing fluorescent luminaires at the perimeters were replaced with dimmable LED luminaires, using a modified fitting for ease of installation into the existing ceiling grid. These luminaires are dimmed in relation to natural daylight, maintaining design illuminance levels with minimum energy consumption. "Daylight influences around a third of each floor so the impact on energy consumption is significant," Les Smith continued.

Upgrading the perimeter lighting was a clear demonstration of the benefits of LED lighting. Energy modelling by Philips indicated that further savings would be achieved by upgrading the lighting in the main body of each floor. To that end, Philips designed a bespoke LED luminaire that would fit the existing multi-

service ceiling tile system and facilitate installation. Initially the bespoke luminaires were tested in a small trial area and were then fitted throughout the two levels.

These luminaires are also linked to the LightMaster lighting control system and controlled in relation to occupancy. "We had some occupancy control of the lighting already but the zones were so large that, essentially, as soon as someone had walked through the space in the morning the lighting stayed on all day."

The customised light fittings developed by Philips meant that there was no need to alter the existing ceiling grids. As a result, capital costs were lower and installation time was reduced so the work could be completed outside normal working hours.

The replacement of the existing fluorescent lighting with LED light sources has provided an immediate reduction in installed electrical load. Further savings in energy consumption are being achieved by the use of dimming through the LightMaster system. In addition, the daylight harvesting at the outer rows of luminaires can provide a further 36% energy reduction for lighting at the perimeter, while occupancy control will add to the savings, though these haven't been measured yet. A further benefit of the LED lighting is the long life of the lamps, so that maintenance costs will also be reduced.

When the financial benefits of Enhanced Capital Allowances are combined with the energy and maintenance cost savings, Citigroup expects to see a return on its investment within around 3.5 years. This latest project builds on a relationship between the two companies that has been built since 2004. In making use of this latest generation of LED lighting and lighting controls, Citi has been able to maintain a high quality lit environment for its staff while significantly reducing energy consumption and carbon emissions. In piloting the LED and control combination, the company now has a proven solution that has the potential to deliver significant savings in energy consumption across its portfolio.



If you would like to see more projects or have an enquiry, visit us at  
[www.philips.co.uk/lighting](http://www.philips.co.uk/lighting) or email: [lighting.uk@philips.com](mailto:lighting.uk@philips.com)

**Contact details:**

**Guildford**

Philips Lighting  
Philips Centre  
Guildford Business Park  
Guildford, GU2 8XH  
Tel: 0845 601 1283

**Dublin**

Philips Electronics Ireland Ltd  
Philips House  
South County Business Park  
Leopardstown  
Dublin 18  
Tel: +353 1 764 0000

Email: [lighting.uk@philips.com](mailto:lighting.uk@philips.com)  
[www.philips.co.uk/lighting](http://www.philips.co.uk/lighting)



©2013 Koninklijke Philips Electronics N.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights.

Date of release: March 2013