



solarcentury

intelligent generation™

**Solar**  
Architecture

# CIS Tower, Manchester

**Sector: Commercial.** The largest vertical solar facade in Europe. Solarcentury provided specialised PV knowledge to design a weatherproof cladding solution by integrating photovoltaics (PV) around the tower's structure.

The Cooperative Insurance group, became, with the CIS tower in Manchester, the first insurance company in the world to launch a customer-led ethical policy to guide the ethical performance of its investments. In line with their aim to reconstitute the relationship between its business activities and nature, CIS asked Solarcentury to develop a solution for ventilated PV rain cladding for their HQ in Manchester. Arup then employed Solarcentury to act as PV consultants, providing specialised PV knowledge and design.

The original mosaic began to fail a mere six months after the building was completed. It has become a significant health and safety issue, and hence the need for it to be addressed. This project demonstrated how solar power can be easily incorporated into any building refurbishment to provide an extremely cost effective alternative to conventional building materials.

Solarcentury provided specialised PV knowledge to design a weatherproof cladding solution by integrating photovoltaics (PV) around the tower's structure, offsetting building material cost of replacing the traditional mosaic tiles. In total, 7,244 80W modules were used to clad the entire service tower. From this total, 4,898 PV modules are live, 870 'full size' dummy modules and 109 'medium size' dummy modules and 1,367 edge modules were used in order to optimise the system's electrical generation and minimise costs.

## Summary of electricity comparisons:

Generates total electricity for 61 average three-bed houses each year

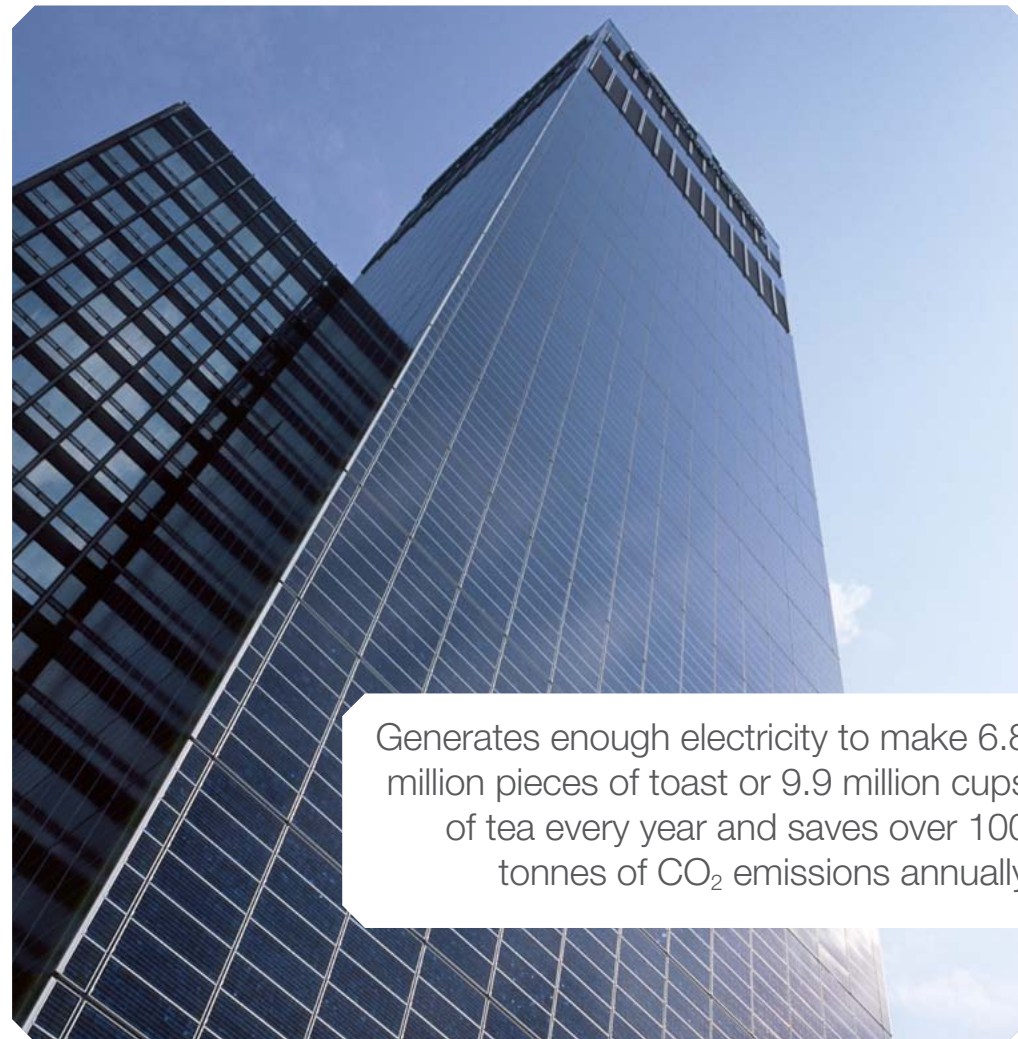
Generates enough electricity each year to light an average three-bed house for over 305 years

## Summary of CO<sub>2</sub> comparisons:

Annually saves over 100 tonnes of CO<sub>2</sub> emissions, a major greenhouse gas, equivalent over 7 million party balloons or 63 Olympic swimming pools.

Annual CO<sub>2</sub> savings: account for 141 trees required to absorb CO<sub>2</sub> over 100 years.

To achieve the Kyoto Protocol, the UK is required to reduce CO<sub>2</sub> emissions by 12.5% below 1990 levels by 2010. This installation offsets the contribution of 303 UK individuals to this target every year.



Generates enough electricity to make 6.8 million pieces of toast or 9.9 million cups of tea every year and saves over 100 tonnes of CO<sub>2</sub> emissions annually



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