



**Commercial**

**Marks & Spencer**



The honors for the largest SolarWall® system in Europe resides with UK Retailer Marks & Spencer for their 4,334 m<sup>2</sup> system. The SolarWall system was designed in **three** colors and the sun logo was added as an extra stylistic detail.

## Background

Marks and Spencer (M&S) is one of Britain's largest retailers with over 700 stores in the United Kingdom and over 350 stores in 40+ countries around the world.

In May 2013 M&S opened its much anticipated giant 900,000 ft<sup>2</sup> distribution centre in Castle Donington, Leicestershire. The size of the building is equivalent to 11 stadium sized football fields, making it one of the largest distribution warehouses in the UK. The facility will handle all of M&S's online orders, processing up to two million items a week and employing 1,200 people.

It is impressive to note that the facility is also carbon neutral. More impressively, the building is home to Europe's *largest SolarWall® system*, which was an essential element of designing a cost-effective carbon neutral building of that size.

## Solution

The SolarWall® air heating system is 4,330 m<sup>2</sup> (46,000ft<sup>2</sup>) and will heat and ventilate this enormous building using solar energy, instead of fossil fuels. The SolarWall system is divided into 4 sections positioned between the tower stairs, each consisting of 3 different colors; Alaska Grey, Anthracite and M&S Green. In total, the SolarWall system is equivalent to the size of 16 tennis courts.

## Results

The M&S SolarWall system is expected to provide energy savings of 1.1GWh. This is a staggering amount of renewable energy to be generated on-site from one technology, and to provide a basis for comparison, is equivalent to the *total energy used* for *two* typical M&S stores. This will result in the elimination of over 250 tons of CO<sub>2</sub> each year.

The SolarWall technology successfully achieved both environmental and economic requirements; meaning that its impressive renewable energy production and corresponding GHG emissions reductions were accomplished at a reasonable cost that met ROI requirements. The system is also building-integrated, and was designed to be an attractive addition to the south façade.

*"There's a compelling case for renewable energy, both from a business and environmental point of view, when we build large, out-of-town sites....here at Castle Donington the Solar Wall was the best possible option with such a large, south facing wall. The technology offers one of the fastest returns on investment of any solar technology currently available."*

-Roger Platt, Marks & Spencer Project Manager at Castle Donington

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