



# JAGUAR LAND ROVER CASE STUDY

**Kingspan Energy has delivered the UK's largest rooftop solar photovoltaic system for Jaguar Land Rover's new Engine Manufacturing Centre based at i54 South Staffordshire, Wolverhampton, West Midlands.**

## PROJECT SUMMARY

Premium car manufacturer Jaguar Land Rover is at the forefront of driving sustainability values and responsible use of resources in all areas of their business.

These considerations were critically important in the design and build of their new Engine Manufacturing Centre based at i54 South Staffordshire, Wolverhampton, West Midlands.

The new engine manufacturing centre has been designed to minimise energy demand and maximise efficiency from the ground up.

Jaguar Land Rover also had a strong desire to integrate the most cost-effective and efficient solar photovoltaic (PV) system into the envelope of the new factory building. This would not only provide renewable energy and cost savings but also deliver an attractive return on investment.



## OVERVIEW

To meet Jaguar Land Rover's requirements the project contractor had to deliver a large-scale rooftop solar PV system, built to the highest specification, under strict site conditions, during the winter period.

Kingspan Energy was chosen to lead the project from start to finish. Having already worked on some of the most prestigious large-scale solar PV projects in the UK, Kingspan Energy has extensive expertise in sustainable energy solutions and in-depth knowledge of the industrial and commercial roofing sector, offering an end-to-end service package, including the 25 Years combined roof & solar PV system guarantee.

The project set ambitious targets, starting from the size of the system at 5.8 MWp, covering a total area of 35,000 m<sup>2</sup> of roof space, and a requirement to be completed in three months.



## PERFORMANCE

The 5.8 MWp system spreads across 35,000 m<sup>2</sup> of roof space and is expected to generate 30% of the plant's annual energy requirements.

This output, enough to power more than 1,600 homes, will be used on site to reduce the building's primary energy consumption from the grid.

The system is also expected to save over 2,400 tonnes of CO<sub>2</sub> every year, the equivalent of burning 1,225 tonnes of natural gas.

The installation includes more than 21,000 of 275 Wp polycrystalline PV modules, linked together by over 100 miles of electric cables.



## CHALLENGES

The timeframe coupled with the size of the system presented the biggest project challenges.

Jaguar Land Rover put a dedicated project team in place to support the project delivery, which enabled quick decision-making and efficient work flow.

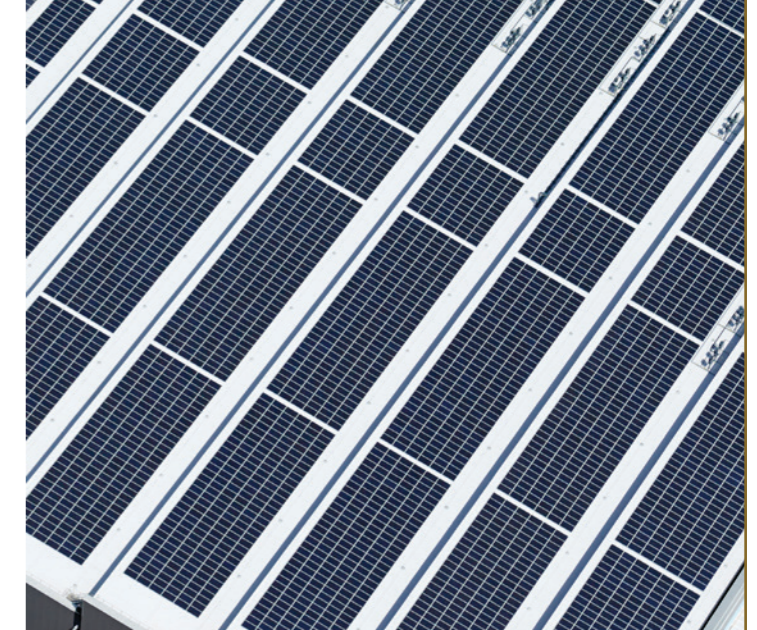
Under the guidance of Kingspan Energy's experienced project management team, the entire system was designed and installed in just 11 weeks, exceeding the ambitious three month schedule set by Jaguar Land Rover.

## ACHIEVEMENTS

Robert Guilmartin, project manager, Kingspan Energy commented:

*"For Kingspan Energy and JLR, Health and Safety, planning and implementation was the primary focus from the outset. Given the short time scales involved, and the winter weather conditions, it was a fantastic achievement by both companies to complete this landmark project within such tight time constraints."*

*"This project helps to showcase our commitment to providing market-leading sustainable solutions to our customers, strengthening our position as the market leader in rooftop solar PV in the UK."*



## COST SAVINGS

This incredible achievement just shows that with the right combination of people, products, technology and design, combined with a holistic approach to sustainability, large scale renewable projects can form a strong business case.

All the electric power generated by the system is free to be used on site and will replace electricity that would otherwise have to be purchased from the grid. As future electricity prices are set to move solely in the rising direction, savings will only increase overtime.



## INVESTMENT

*"This landmark project sets the tone for UK businesses to make the most of the assets they have with PV generation"* explained Peter Turley, Business Unit Manager for Kingspan Energy.

*"Large-scale rooftop PV installations are a fantastic commercial investment when companies can find the upfront capital cost to benefit from them. We're working closely with our partners and customers to help facilitate more solar PV installations than ever before, helping businesses up and down the country to benefit from the reduced costs and increased energy security these projects bring."*

## PROJECT SCALE

The scale of the Jaguar Land Rover's solar PV array is unprecedented - this is currently the largest rooftop solar PV installation in the UK.

Expected savings, in terms of lower energy rates and reduced energy consumption from the grid, coupled with the impressive cut in carbon dioxide emissions will distinguish the new Engine Manufacturing Centre as one of the most energy-efficient facilities in the country, powered by renewable energy.

The project sets a remarkable example of how manufacturing companies can embrace large-scale renewable solutions as part of their business strategy to not only enhance their sustainability credentials, but to generate significant savings for their business.



## PROJECT CARD

**Building owner:** Jaguar Land Rover

**Location:** i54 South Staffordshire,  
Wolverhampton, West Midlands

**System size:** 5.8 MWp

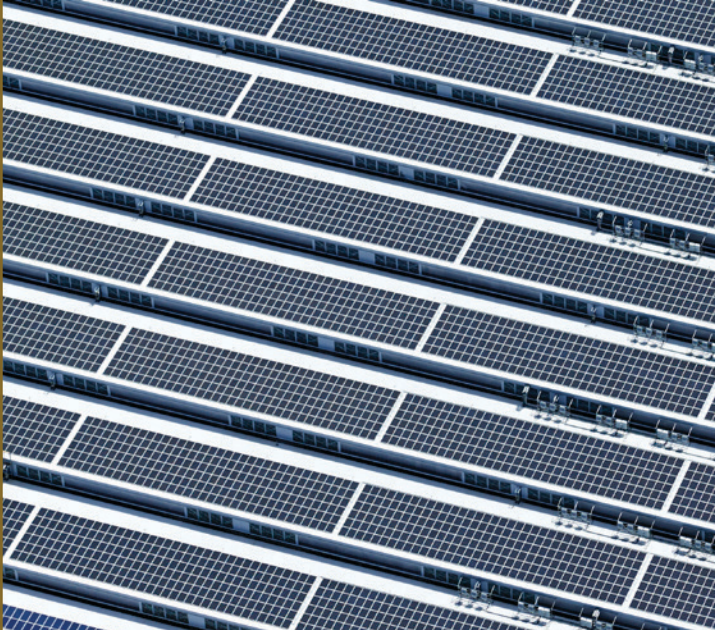
**Roof space coverage:** 35,000 m<sup>2</sup>

**Project type:** New Build

**Sector:** Industrial/manufacturing

**Completion date:** March 2014

**Installation time:** 3 months



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