

23 February

UK sees its first grid-connected solar streetlight

New SunMast trial paves the way to zero-emission street lighting

A trial of the UK's first grid-connected solar streetlight has begun in South Mimms, Hertfordshire, undertaken by [Connect Plus](#), the consortium tasked with upgrading and maintaining the M25. If successful, the [SunMast](#) 'eco streetlight' could reduce the carbon footprint of street lighting by 120% per cent.

SunMast uses a series of photovoltaic (PV) panels integrated into the body of the mast to convert daylight to electricity. An inverter in the base of the mast converts the electricity from DC to AC and it is then exported back to the national grid, effectively becoming a distributed solar energy system. When night falls, street lights are then powered from the grid in the normal way.

SunMast is designed to generate more power than it consumes and is hoped to one day help achieve zero-emission street lighting. If just one per cent of the UK's street lighting was replaced with SunMasts, a remarkable 24,840,000 kWh of renewable energy would be generated, enough to supply more than 6,000 UK homes with electricity each year.

It was designed by Danish solar-powered lighting developer [Scotia ApS](#), which recently agreed a new partnership with [KN Network Services Ltd](#) who are based in the UK and Ireland. The new venture is called Scotia Light Limited, and will be responsible for bringing the SunMast and other solar products to market.

"The timing of the SunMast trial is perfect; with local councils across the UK under pressure to cut budgets, there has been much discussion about turning off street lights to save money," said KNNS UK Managing Director Mark Cassidy. "SunMast can not only play a major role in ensuring cities and roads stay lit without compromise to safety or quality, but as it generates renewable energy so easily, it can also put councils on the road to energy self-sufficiency."

SunMast also enables Connect Plus to monitor energy use much more effectively, looking at electricity generation vs consumption in different light conditions. This is possible due to UK smart home technology firm [PassivSystems](#), which has supplied its solar PV monitoring technology to the SunMast trial. Connect Plus will be able to remotely view the SunMast performance and take action if performance is not as it should be.

Unlike many solar monitoring solutions, PassivSystems collects data directly from the generation meter instead of the inverter, so the information on SunMast performance will be much more accurate.

“SunMast is a very powerful proposition and the ability to accurately monitor the performance of its solar panels is integral to its success,” said Colin Calder, CEO, PassivSystems. “Without effective monitoring its almost impossible to gauge the performance of any solar installation. PassivEnergy™ solar monitoring allows users to monitor on a per installation basis or across a portfolio, to track performance and identify potential faults and so we look forward to working with SunMast further as it gains momentum in the UK.”

The SunMast’s photovoltaic panels, which are integrated into the body of the mast, are designed to work with any standard outdoor lamp as well as LEDs. Because the SunMast does not depend on batteries, which deplete quickly and require maintenance, it can also provide a completely reliable approach to road lighting. SunMast is also able to function despite the UK climate and was designed specifically for use in Northern Europe.

“The UK weather means there is a common misconception that solar power is not as effective in this country,” concluded KNNS UK managing director Mark Cassidy. “But SunMast uses a new breed of low-light sensitive PV cells that don’t require direct sunlight and work optimally with cloud cover, so it will work as well in the UK as anywhere else in the world.”

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About PassivSystems: www.passivsystems.com

PassivSystems Ltd was established in 2008 to develop smart-home technology for the mass market. Beginning with energy, and continuing with security, assisted-living and other lifestyle services, PassivSystems creates simple, human-centred products that deliver effective solutions to some of today’s most pressing global problems.

The company and its first product PassivEnergy have been widely commended by industry and media. The PassivEnergy home energy management product was cited as one of the top five gadgets at CES 2010 and PassivSystems was recognised as one of Europe’s leading privately owned companies in the Red Herring 100 Europe 2010.

Further recognition followed with PassivSystems named as both a 2010 Global Cleantech 100 and Tech Media Invest 100 company and the latest commendation was as a Red Herring Global 100 company. This was awarded in January 2011 and recognises the world’s most promising private technology businesses.

About KN Network Services

KN Network services is a successful, dynamic company with a track record supporting Telecoms, Transport, Energy and Construction sectors in Ireland and the UK for over 30 years.

Our clients include many blue chip organisations, local authorities/councils, and new technology operators such as BT, 3, UPC, London Underground, Iarnrod Eireann and Dublin City Council.

We have a proven commitment to delivering safety, quality and value for money and working alongside clients in a spirit of flexibility and win-win.

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