



Case study

London Fire & Emergency Planning Authority



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Lord Truscott, Parliamentary Under Secretary of State for Energy

Emergency Services turn to Solar

With a 50% grants available now, solar photovoltaics (PV) from Solarcentury are a cost effective, proven technology to reduce carbon emissions.

Generating on-site renewable energy can cut fuel bills dramatically and photovoltaics, which generate electricity from light, are one of the most cost effective solutions. Solarcentury, the UK's leading solar energy company, has been assisting the London Fire & Emergency Planning Authority (LFEPA), which runs all London Fire Brigade (LFB) stations and is part of the Greater London Authority, to reach its carbon reduction target.

Parliamentary Under Secretary of State for Energy, Lord Truscott said: *“The Government wants to see more micro generation in the UK and is working hard to develop the sector for both industry and consumers. The LFB project is exactly the kind of initiative we want to see more of, and they are to be applauded.”*

To date Solarcentury has supplied solar PV systems to eight London Fire Brigade (LFEPA) stations and has recently won a tender to install photovoltaics on the head quarters of LFEPA. The installation of solar PV is contributing to LFEPA being ever closer to reaching a target of reducing its carbon emissions by 1,900 tonnes by 2010.

To reach this ambitious target, LFEPA is also installing Combined Heat and Power units to service the station's hot water requirements, refreshing existing plant equipment, including boilers and replacing inefficient lighting. The LFB is also introducing a new fleet of fire engines to meet EU emissions targets. Photovoltaics are a clean, silent technology that require little ongoing attention. These 'fit and forget' characteristic make solar PV, of all the renewables, an attractive proposition for most local authority, and especially emergency service, organisations.

“Solar PV requires virtually no maintenance,” said Jeremy Leggett, Solarcentury Executive Chairman, “Unlike other renewable energy sources solar PV can be installed, and up and running in the same day. From that point it doesn’t need any regular maintenance.”

Under the Low Carbon Buildings Programme (LCBP) schools, local housing authorities, housing associations and other public sector and charitable bodies throughout the UK can apply for 50% grant funding for renewable energy installations. Solarcentury have developed valuable installation and project management experience by working with the emergency services, allowing these ‘working buildings’ to function as normal during the installations.

Having made the decision to use solar PV there are only a few simple steps emergency services organisations need to take to gain grant funding and get a system installed. Firstly a Solarcentury engineer will begin assessing the feasibility of the project. Following this Solarcentury’s engineers will carry out a site survey. At this stage they will discuss the options with the organisation – covering the size of the potential system to be installed. Our projects team then issue the organisation with a formal quote for the work, which can be used to assist in the application for the LCBP grant. Once the order is confirmed the solar system can be installed and Solarcentury will invoice for the un-funded part of the installation and issue a warranty for the system.

Richmond Fire Station is one of LFEPA’s sites that is benefiting from a solar pv installation. The solar pv on the fire station is spread over three distinct areas: the roof windows, a flat roof and a pitched roof.

In total the entire installation is capable of producing a total peak DC power of 17.12 kilowatts under Standard Test Conditions. The total estimated annual energy yield for the array is 11,490 kilowatt hours, and it is projected that the system will save 6,526 tonnes of carbon per year for the station.

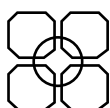
The pitched roof installation consists of 48 Sanyo 190W pv modules, which covers a total area of 57m², capable of producing a total peak DC power of 9.12 kilowatts.

The flat roof installation contains 32 Sanyo 190W pv modules. These modules are installed on a framework to hold them at the optimal angle for capturing daylight. The total surface of the array is 38m², and it is capable of producing a total of 6.08 kilowatts.

The roof windows have been installed with 24 80W pv glass-glass laminates (GGL). The peak power of the GGL in the skylights is 1.92kWp, with a surface area of approximately 38m².



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