

CASE STUDY

Project:	Solar Street Lighting
Country:	Various
Project Value:	Various
Year:	2007 - ongoing
Product:	Specialised bespoke street lighting and luminaires



Sollatek[™]

Sollatek lights up the world

As solar power enters a new phase of increased demand, so Sollatek invests in staying ahead of its field by developing new luminaire styles to complement specific projects and their environments.



Driving today's new demand for solar power are factors such as the prohibitive costs of mains cabling; lack of electricity supply; remote locations aiming to modernise; land geography; accessibility and environmental concerns. This means that from governments and large organisations, to local authorities, housing associations and owners of private residential and commercial premises, solar-powered lighting solutions are gaining popularity.

We all know that solar power is the simple solution where sun and insolation (sun energy) are in abundance. In countries such as these, sun is a naturally occurring and therefore free and efficient

resource. But how can those located where sunlight levels are lower find economically and ecologically sound solutions?

The answer is that Sollatek is using its expertise and experience to help customers cut energy costs and achieve an ecological solution, wherever their location. The company has developed a portfolio of external solar-powered lighting systems for use across the world, optimising the low levels of sunshine typical of cooler, northern hemisphere countries such as the UK.

In all cooler countries, the challenge is to optimise and make full use of the finite hours of sunshine. This makes positioning of solar panels a critical factor. Power output, the autonomy period and the durability of materials also impact on performance and long life of an installation - all these variables influencing design.

continued overleaf

Each system generates its own energy from the solar modules during the day. This is stored in deep cycle maintenance-free batteries for nighttime use. Intelligent electronics sense nightfall and automatically activate the lamp which, via a user settable timer, can operate either for a pre-set number of hours, or until dawn. An internal charge controller protects the battery against over charge and over discharge and all materials are completely protected against corrosion.

To deliver the right solution, each system is custom designed on its individual merits and usage. As well as taking into account the location for use, the options to be considered include the following variables:

- ambient or normal street light,
- maybe a brighter street light to light up a dark spot,
- an individual light,
- or a cluster of lights for a dedicated project.

The panel size in solar lighting system dictates the amount of energy produced and the size of the battery required to efficiently power the light. The battery, normally buried under the mounting post, is thus protected in torrid conditions, tempering the variation between daytime heat and nighttime cold. Conversely, it can also be mounted on the lamppost for easier access.

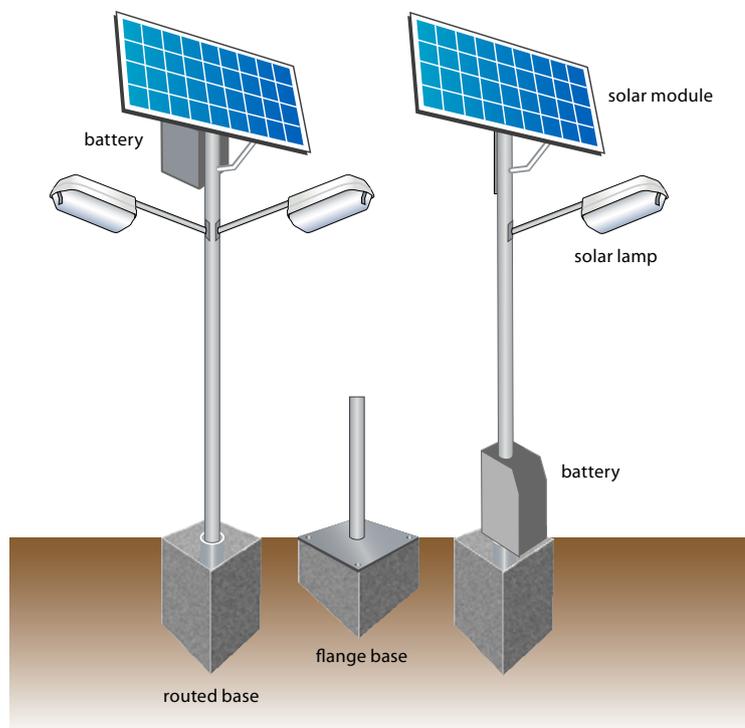
In UK installations, to maintain charge in the battery, south-facing positions unobstructed by trees or buildings are imperative to maximise the solar panels' exposure to the sun. Additional options are a timer to restrict power output to hours of darkness and, to extend the power output, a passive infra-red (PIR) sensor to activate the lights by movement.

Additional factors are:

- the style of luminaire and the height of post needed,
- level of brightness - white light: compact fluorescent - yellow light: high efficiency SOX-E lamps.
- duration of autonomy required: 2 to 2.5 days depending on location/insolation.

Optional protective and security measures include anti-climbing collars, polycarbonate shields above and beneath the solar shields and steer nuts designed to break if tampered with.

You can always count on the skills, flair and attention to detail of Sollatek designers and engineers. Throwing light on these multi-variables for you, we'll deliver a purpose designed and illuminating solution to meet your street lighting and luminaire needs.



Other Sollatek Solar products

Solar Energy Systems	Charge Controllers	Solar Lights	Solar Energy Kits	Batteries	Solar Modules	Solar lantern