

# Philips develops efficient solar powered LED street lighting

January 24 2012

---



Philips has developed what is said to be the world's most efficient and cost effective solar powered LED street lighting solution per km of road.

Philips' latest Solar Gen2 innovation is developed together with NXP Semiconductors N.V. and presents a total solution for highly sustainable and efficient [street lighting](#) that is a serious alternative to grid connected systems, cutting back energy costs and CO2 emissions.

Solar Gen2 offers a highly energy-efficient [LED](#) solution which is

superior to any conventional lighting and allows for a lamp post spacing of up to 50 meters, much wider than with other solutions, while at the same time complying with stringent EU road lighting standards (ME3). By charging street lighting during the day, Solar Gen2 can supplement the capacity of the conventional electricity grid.

Solar Gen2 is especially valuable for towns and cities near the equator, which can take advantage of the many hours of sunlight to supplement the capacity of their conventional electricity grid – and so address their growing concerns about their ability to meet the steep increase in energy demand. In rural areas it can literally light up the lives of an estimated 1.6 billion people who don't have access to conventional electricity.

“The Solar Gen 2 breakthrough underlines [Philips](#)' commitment to provide innovative, meaningful solutions that help increase people's sense of well-being, comfort and safety around the world, while saving energy costs and avoiding CO2 emissions,” reacted Marc de Jong, CEO Professional Lighting Solutions. “By combining the latest LED lighting with solar and battery developments, Solar Gen2 offers a best-in class, reliable and cost-effective off-grid lighting solution that can help cities meet their growing energy demand and significantly improve the lives of people who currently live without electricity,” he further commented.

René Penning de Vries, CTO at NXP Semiconductors, says: “We're very proud to have developed this solution in collaboration with Philips Lighting. By making Solar Gen2 as power efficient as possible, we've produced something which is genuinely groundbreaking while remaining affordable in those countries that can benefit the most from it. Harnessing the energy of the sun as effectively as possible means reduced electricity demand and a more robust infrastructure.”

The key to the breakthrough lies in the combination of new High Brightness LEDs along with unique patented optics to create the most

efficient and robust outdoor lighting system. On top of that, an intelligent charge controller, developed by NXP Semiconductors N.V., ensures the transfer of a maximum amount of power from the solar panels to the batteries. A smart way of charging and discharging maximizes battery life and light levels can be dimmed based on a self learning intelligence and a history log.

A further benefit of the new solution is that it is future proofed by the inclusion of the Philips LEDGINE, which allows LED modules and drivers over time to be simply replaced and upgraded. In addition, Solar Gen2 includes theft prevention.

Focus markets for Philips solar street lighting solutions are South East Asia, Africa, China, India and North America.

Source: Royal Philips Electronics

Citation: Philips develops efficient solar powered LED street lighting (2012, January 24)  
retrieved 5 August 2024 from

<https://phys.org/news/2012-01-philips-efficient-solar-powered-street.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.