

NXP demonstrates groundbreaking solar street lighting solution at CES 2012

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NXP Semiconductors announced that it has developed an innovative, sustainable and highly efficient solar-powered street lighting solution, together with Philips Lighting. The groundbreaking Solar Gen2 solution, which NXP is demonstrating this week at CES 2012 (booth CP8), could have a major impact on energy consumption in urban areas at night. By charging street lamps during daylight hours, the new solar-powered solution from Philips Lighting and NXP can supplement the capacity of the conventional electricity grid, saving money and reducing CO2 emissions.

The key to the breakthrough lies in the combination of new High Brightness LEDs and unique patented optics from Philips Lighting, together with NXP's MPT61x range of configurable ICs for Maximum Power Point Tracking (MPPT), which can deliver 98% power conversion efficiency in solar photovoltaic (PV) cells.

Philips' High Brightness LEDs offer a highly energy-efficient solution, which is superior to any conventional lighting and allows street lamps to be spaced up to 50 meters apart -- much wider than is possible with other solutions. This makes Solar Gen2 the most cost-effective solution per km of road lighting and provides a serious alternative to grid-connected AC systems.

NXP's MPT61x intelligent charge controller family enables Solar Gen2 to transfer the maximum amount of power from the solar panels to the batteries. The MPT61x ICs also ensure that the charging and discharging

of the battery happens in a smart way to maximize battery life. In addition, the controllers can dim [light](#) levels as needed based on a self-learning intelligence and history log.

Kees van der Klauw, SVP Technology & Development at Philips Lighting, says: “Solar Gen2 is a fantastic example of how several companies have worked together to create an innovative, best-in-class solution. It addresses a real need felt by 1.6 billion people in countries where the [electricity grid](#) cannot be relied upon to power street lighting at night. Solar Gen2 provides a cost-effective, reliable, off-grid outdoor lighting solution that can compete with existing on-grid lighting in performance, integral cost and [energy consumption](#), improving the quality of people’s lives around the world.”

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.”

More information: www.nxp.com/pip/MPT612

Provided by NXP

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