Colas is revolutionizing roads with Wattway Solar Roads

Boulogne, October 13, 2015 — Colas, world leader in transport infrastructure, has unveiled Wattway, the Solar Road. The fruit of five years of R&D in a partnership with the French National Institute for Solar Energy, this major innovation gives an entirely new function to roads, that of producing renewable energy.

For Hervé Le Bouc, Chairman and CEO of Colas since 2007: “Today, our Wattway process is unique on a global level. The Solar Road will play a part in the energy transition, and is a building block for Smart Cities.”

WHAT IS WATTWAY?
Wattway is a photovoltaic road surfacing concept, the first of its kind in the world. Wattway panels are comprised of photovoltaic cells embedded in a multilayer substrate. These cells collect solar energy via a very thin film of polycrystalline silicon that enables the production of electricity. On the underside of the panels, there is a connection to a lateral module containing the electrical safety components. The panels can be used on any road around the world, and are able to bear all types of vehicle traffic, including trucks. Extra thin (just a few millimeters) yet extremely sturdy, skid-resistant, designed to last, Wattway panels are installed directly on the pavement, without any additional civil engineering work. The Wattway process uses existing infrastructure so there is no need to deconstruct then rebuild.

A REVOLUTIONARY ROAD
Protected by two patents, this unparalleled cutting-edge technique is a major breakthrough, as it provides the road with a new function: producing clean, renewable energy locally, in addition to a road’s conventional use as a vector for mobility. Wattway is able to provide power to street lights, signs, tramways, as well as housing, offices, etc. For example, 20 m² of Wattway can supply enough electricity to power a single home (not including heating). With a one kilometer long section of Wattway panels, it is possible to power the street lights for a town of 5,000 inhabitants (ADEME).
THE ROAD OF THE FUTURE
A road that can produce electricity is a connected road. Roads of the future will be intelligent and able to communicate thanks to widespread development in sensors making it possible to provide real-time information on traffic, to manage traffic dynamically, and to roll out automatic diagnosing programs in the pavement itself. One can also imagine electric vehicles being charged via induction technology.

MARKET-READY
Wattway is a product designed for public (local authorities) and private (companies) partners who want to play a role in the launch of this innovation as part of their drive to foster the energy transition.

TWO KEY MARKETS
In towns and cities, Wattway is at the heart of energy transition issues, and is a building block for “Smart City” solutions. This cutting-edge solar technology will provide renewable energy as close as possible to where electricity consumption is the highest and demand is constantly increasing.
In isolated, off-grid areas, when population density is so low that the cost of hooking up to the electricity network is prohibitive, Wattway solar roads make it possible to create infrastructure to produce short-circuit energy locally and durably.

THE COLAS GROUP
The Colas Group is world leader in the construction and maintenance of transport infrastructure, aiming to meet the challenges of mobility, urban development and environmental protection. With 60,000 employees in more than 50 countries on five continents, the Group performs some 100,000 projects each year via 800 construction business units and 2,000 material production units. In 2014, consolidated revenue at Colas totaled 12.4 billion euros (47% outside of France). Net profit attributable to the Group amounted to 604 million euros.

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