

Innovative use of solar energy

October 27 2010, By Wilfred Lai

Working in collaboration with industry partners, researchers of The Hong Kong Polytechnic University (PolyU) have successfully developed a Solar-powered Air-conditioning System for vehicles and completed a series of testing on the road.

The innovative system is developed by Professor Eric Cheng of PolyU's Department of Electrical Engineering together with Green Power Industrial Ltd. With the support of Swire Coca-Cola Hong Kong, the system has been installed on the top of a truck for carrying beverages and proved to work on the road.

PolyU President Professor Timothy W. Tong hailed this innovation as a practical solution to providing green energy for the much-needed air-conditioning system for professional drivers in Hong Kong. He also expressed gratitude to the support of industry for this development.

“We look forward to having more fruitful collaboration with Green Power Industrial Ltd and Swire Coca-Cola Hong Kong to build a low-carbon city. Together, we can jointly make a contribution for sustainable development of our community,” said Professor Tong.

Mr. Lance Wright, General Manager of Swire Coca-Cola Hong Kong, said that “Swire Coca-Cola believes sustainability is fundamental to the way they conduct business and the support to this [solar energy](#) system research project is a prime example of the company's commitment to a sustainable future.”

Professor Tong also joined Mr Jacky Lau, Vice President of Green Power Industrial Ltd and Mr Wright to see the first truck installed with the Solar Energy System on the campus.

The truck installed with Solar-Powered Air-conditioning System differentiates itself from other vehicles with a solar energy panel made up of photovoltaic modules on the top of it. As the truck moves along roadside, it will automatically collect solar energy for storage in a specially made battery system supported by an optimized control system.

The power collected will support a stand-alone electric air-conditioner which can be switched on when the car engine is not running. The sophisticated system can also operate during cloudy or rainy days because solar energy is automatically stored in the battery during sunny weather.

PolyU and its partners will explore further use of this solar energy system in Hong Kong.

Provided by The Hong Kong Polytechnic University

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