



Singapore Polytechnic electrical and electronic engineering students (from left) Lester Loh, 19, Ko Keng Wee, 20, and Md Tanvirul Huda, 19, are working on the Scone – or solar cone – prototype, which can potentially absorb more than five times the solar energy that a solar panel can. ST PHOTO: TIMOTHY DAVID

New platform helps students bring energy-efficient ideas to life

Tan Shu Yan

A locally designed solar cone, which absorbs more than five times the solar energy that a solar panel can, could help generate energy for residential use and reduce utility costs.

The solar cone, or Scone, has an inverted conical shape and has special lenses that maximise energy absorption onto a solar cell, harnessing more energy per unit area.

As it is compact in size compared to a flat solar panel, it also addresses the problem of an increasing shortage of suitable rooftop space for solar energy generation.

If Scone is installed on the rooftops of residential units, more heat can be absorbed and converted into energy for heating water for residential usage. This could reduce the cost of energy for residents.

A prototype of Scone was created

by three Singapore Polytechnic (SP) students and showcased yesterday at the launch of ideaBox, a platform which offers students the space and resources to crystallise their ideas into energy- and cost-saving technologies.

An initiative by SP and Singapore Power Group (SP Group), ideaBox selects ideas with potential from tertiary-level competitions, and passes them to SP students to translate into product prototypes, with guidance from industry experts.

SP Group will mentor students in areas like engineering, design and media, and will provide \$1 million in funding over the next three years.

Mr Wong Kim Yin, group chief executive officer of SP Group, said: "We strengthen our collaboration with Singapore Polytechnic by exposing their students to real-world challenges, to test out new ideas and build solutions to implement their ideas."

The idea for Scone was first presented by five students from various tertiary institutions at the Singapore Frontier Challenge last September.

The project came in second in the competition, after Cloud Nine, which utilises rainwater collected on rooftops of high-rise buildings to generate electrical energy. Cloud Nine has also been prototyped at ideaBox, and is preparing for field deployment in the next three months.

Mr Lester Loh is one of the three SP students working on the Scone prototype.

"This is just the start, and maybe it will take some time to be released into the market... We hope to just do further research on how to improve the product," said the 19-year-old who is starting his third year in electrical and electronic engineering.

tshuyan@sph.com.sg