

Aussie tech gurus driving local, low-cost solar panel breakthrough

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The Age

October 5, 2020

An Australian start-up that developed breakthrough solar technology to supply households with cheaper, more efficient rooftop panels has secured federal government support to develop a commercial production process and local manufacturing.

SunDrive has discovered a way to replace the silver used in conventional solar cells with copper, which is a cheaper metal. The project will build a small scale automated production line prototype and SunDrive aims to produce the technology in Australia.

The Australian Renewable Energy Agency (ARENA) will contribute \$3 million to SunDrive's commercialisation project, which is worth \$9 million in total.

The technology was developed by SunDrive's chief executive Vince Allen during his PhD at the University of New South Wales in Sydney, before founding SunDrive in 2015 with a flatmate from his undergraduate studies David Hu.

Solar panel manufacturing comprises about 20 per cent of the world's annual silver consumption, with the volume expected to rise steeply as the next generation of efficient cells in development now require up to three times more silver.

Copper is cheaper to buy than silver, and is in more abundant supply in mineral deposits around the world.

As the commercial production project gets under way, SunDrive is moving to bigger premises in Kirrawee in southern Sydney.

Dr Allen said his company was aiming to create a local production industry.

"Our goal is to use the learnings from this project to bring to life a superior solar technology, creating new local industries which can compete on the global stage," he said.

"With only 3 per cent of world electricity coming from solar today, there is still so much innovation that must occur. Gaining the support from the Australian government puts us in a stronger position to capitalise on the opportunity that lies ahead."

ARENA chief executive Darren Miller said solar technology must "evolve and adopt new cell structures that increase efficiencies, reduce costs and employ more abundant materials" as renewable energy increases in share of the energy production mix.

"It's fantastic to see an Australian solar startup at the forefront of producing the next generation of high efficiency solar cells. Through technological innovations from startups like SunDrive, Australia will remain at the forefront of solar innovation and research and development for years to come," Mr Miller said.

ARENA last week announced its support for a \$4.8 million project with network operators to trial smart inverter technology in areas where the network is most constrained, so access to feed-in tariffs for supplying the grid is fairer.