



Media Release

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Solar PV and cloud prediction: a powerful combination for regional Australia

Two projects backed by the Australian Renewable Energy Agency (ARENA) are showing the world how solar power and cloud prediction technology can be brought together to supply cheaper, more reliable renewable energy to Australians.

ARENA CEO Ivor Frischknecht announced today that SunEdison Australia has completed the \$7.3 million 1 MW Karratha Airport Solar Farm with \$2.3 million ARENA support. The City of Karratha has entered into a 21 year agreement to buy power from the solar plant and is expected to benefit from lower electricity costs over this period.

A separate ARENA project, Fulcrum3D's CloudCAM solution, is operating at the site - tracking clouds and optimising the amount of solar power produced at the airport.

Mr Frischknecht said the two projects demonstrated how ARENA was backing new technologies that demonstrate the benefits of renewable energy, especially in regional communities.

"Cloud prediction makes solar cheaper and more reliable while reducing the need for batteries. That's what makes this project so exciting," said Mr Frischknecht.

"The technology is in its infancy. This is one of the first commercial trials in Australia and will be crucial for proving the technology's feasibility.

CloudCAM is being used at the site to accurately forecast solar power output. It employs ground mounted cameras to track and predict cloud movements and shadows.

"Combined with innovative control systems developed by MPower, the technology makes solar cheaper and reduces intermittency by giving the operators a clearer picture of the solar resource they can expect in the immediate future," Mr Frischknecht said.

"As large-scale solar ramps up in Australia, spurred on by ARENA support, there will be more opportunities for cloud prediction technology to work alongside solar farms and ultimately accelerate the deployment of solar across Australia.

"Insights from the operation of Karratha Airport Solar Farm will be made publically available and will focus on the performance of the cloud predictive technology."

CloudCAM was developed through a [separate \\$1.1 million project](#) supported by \$545,000 of ARENA funding. Fulcrum3D has completed its trial and the [results are available online](#). The company is now focussed on selling its product domestically and internationally.

Mr Frischknecht said the Karratha Airport Solar Plant would also create a case for more renewables to be connected to the North West Interconnected System (NWIS).

“The NWIS is a smaller network that requires renewable energy to meet performance criteria that are geared towards maintaining network stability,” Mr Frischknecht said.

“ARENA-supported projects like the Karratha Airport Solar Farm and CloudCAM are important for demonstrating to network owner and operator Horizon Power that solar can provide sustainable, reliable power into the NWIS without the need for large amounts of expensive battery storage.”

About ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the supply of renewable energy in Australia. Through the provision of funding coupled with deep commercial and technical expertise, ARENA provides the support needed to accelerate the development of promising new solutions towards commercialisation. ARENA invests in renewable energy projects across the innovation chain and is committed to sharing knowledge and lessons learned from its portfolio of projects and information about renewable energy. ARENA always looks for at least matched funding from the projects it supports and to date has committed \$1.1 billion in funding to more than 270 projects. For more information, visit www.arena.gov.au.

About SunEdison

SunEdison develops finances, installs, owns and operates renewable power plants, delivering predictably priced electricity to its residential, commercial, government and utility customers. The company is one of the leading renewable energy asset managers and provides customers with asset management, operations and maintenance, monitoring and reporting services. Corporate headquarters are in the United States with additional offices around the world.

About Flex

Flex Ltd. is the Sketch-to-Scale™ solutions provider that designs and builds intelligent products for a connected world. With approximately 200,000 professionals across 30 countries, Flex provides innovative design, engineering, manufacturing, real-time supply chain insight and logistics services to companies of all sizes in various industries and end-markets. For more information, visit www.flextronics.com/energysolutions. *Flex – Live Smarter™*

About Fulcrum3D

[Fulcrum3D](#) was established in 2011 by Fulcrum Energy and its partner Orang-utan Engineering to develop, manufacture, market and support remote sensing equipment for solar and wind energy applications. In addition to CloudCAM, the Fulcrum3D product range includes wind monitoring with the compact-beam Sodar as well as solar resource and weather monitoring.