



Media Release

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A step towards zero emission communities

A new CSIRO research centre to help transform Australian electricity networks and lower greenhouse gas emissions was opened today at the CSIRO Energy Centre in Newcastle, NSW.

CSIRO has established the Renewable Energy Integration Facility to develop new grid management technologies that will allow greater penetration of renewable, low-emission energy resources into electricity networks.

The facility will also be used to develop automatic fault detection techniques to help improve electricity supply reliability and reduce blackouts.

The official opening was attended by Ms Sharon Grierson MP, Federal Member for Newcastle, representing Minister for Innovation, Industry, Science and Research, Senator the Hon. Kim Carr.

“This project is yet another example of the important and valuable work happening at the CSIRO Energy Centre in Newcastle to help Australia reduce its greenhouse gas emissions,” Ms Grierson said.

CSIRO scientist Dr David Cornforth said the \$1 million facility represents a major upgrade of CSIRO’s experimental capability in energy management, and electricity grid operation and planning.

“The facility is state-of-the-art in its diversity of resources and experimental range,” Dr Cornforth said.

“It incorporates a large range of electrical generators and replicates the way electrical load for an entire complex changes during the day.

“This means researchers at the facility can test new grid design and operation techniques in a real-world environment using a variety of electrical generators and loads.”

The Renewable Energy Integration Facility is connected to solar photovoltaics, wind and gas turbines, battery storage and a load bank. The technologies being developed are designed to be used on any generation method, now and into the future.

“The facility demonstrates how electricity networks will work in the future where the electricity supply mix will include greater numbers of small power sources in conjunction with large, centralised power sources,” Dr Cornforth said.

“This research will not only benefit developed countries with existing electricity networks, such as Australia, but also assist in the low-emissions electrification of developing countries.”

New design and operation techniques have the capacity to transform electricity networks by increasing electricity reliability, improving system efficiency, removing common failure points, boosting renewable energy resource integration and reducing greenhouse gas emissions.

The Renewable Energy Integration Facility will be used for in-house research, as well as collaborative projects with industry and other researchers.

CSIRO has already established a research collaboration with The Energy Resources Institute of India (TERI) to assist with the low-emissions electrification of rural areas in India.

CSIRO will share information to help TERI develop its own technology suited to Indian conditions.

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