World leading solar research
A 3.275 megawatt solar research facility at the University of Queensland’s Gatton campus will provide invaluable insights into grid integration, paving the way for future large-scale solar systems.

"This project features state-of-the-art, thin-film panels, configured in tracking and non-tracking geometries."

UNIVERSITY OF QUEENSLAND
SOLAR DIRECTOR PROFESSOR PAUL MEREDITH

Officially opened in late March 2015, the Gatton Solar Research Facility comprises more than 37,000 thin-film PV panels, mounted on the campus’s 10 hectare former airstrip.

For the first time in Australia, multiple PV mounting technologies including fixed-tilt, single-axis and dual-axis tracker technologies will be in operation side-by-side in the same field to inform electrical and economic performance.

The plant will also include battery storage to improve understanding of the value of short- and medium-term energy storage, its impact on the quality of power supply and any resulting economic benefits.

The UQ Solar initiative, managed by the University of Queensland’s (UQ) Global Change Institute (GCI), seeks to better understand the cost efficiencies of solar technologies to improve the integration of solar energy into the electricity grid, paving the way for future large scale solar systems to be connected.

The development is funded by a $40.7 million Federal Government Education Investment Fund program grant administered by the Department of Education, and is part of a research collaboration between UQ, the University of New South Wales, First Solar and AGL PV Solar Holdings Pty Ltd, an affiliate of AGL Ltd.

UQ Solar Director Professor Paul Meredith said the facility would be a game-changer in renewables research.

"This research is about improving the way that we integrate solar into our state’s overall energy mix. It also works towards establishing and proving the business model for solar generation in Australia at the megawatt scale."
"Queensland gets about 2,700 hours of sunlight a year. This site turns that into energy, and into knowledge about how to better service local, national and international energy needs through effective solar technologies," Professor Meredith said.

Professor Meredith said the Gatton facility was an exemplar of how clean energy could integrate with agriculture and was a test bed for off-grid applications such as remote communities or mining settlements.

"This project features state-of-the-art, thin-film panels, configured in tracking and non-tracking geometries," he said.

UQ Vice-Chancellor and President Professor Peter Høj said the Gatton installation was one of the most advanced research facilities of its kind in the world, and its commissioning was a landmark in UQ’s clean energy journey.

"UQ made a significant step into solar power generation and research four years ago when it installed a 1.22 megawatt solar system across four rooftops at St Lucia. That remains Australia’s largest rooftop system. "The Gatton system is almost three times bigger than the one at St Lucia, and takes the University’s renewable energy research to greater heights."

Project partner First Solar managed the facility’s engineering and construction and supplied the panels.

"This landmark installation will be a showcase for the region, helping to ensure that solar plays a strong role in Australia’s energy mix," said First Solar Asia-Pacific Regional Manager Jack Curtis.

ABOUT THE GLOBAL CHANGE INSTITUTE

GCI at UQ, is an independent source of game-changing research, ideas and advice for addressing the challenges of global change. GCI advances discovery, creates solutions and advocates responses that meet the challenges presented by climate change, technological innovation and population change. 

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A: The 3.275 MW solar research facility is built on the campus’ 10ha former airstrip.

B: A dual axis array at the Gatton Solar Research Facility.