



Media Release

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Funding boost for world-leading solar PV research

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) today announced it has awarded \$29.2 million for 20 research projects to propel the development of solar photovoltaic (PV) technology.

The funding has been offered to research teams from the University of New South Wales, Australian National University, Monash University and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

ARENA's third round of R&D funding supports early-stage research to reduce the cost and improve the efficiency of solar PV, from creating flexible solar devices to making semi-transparent, high-efficiency solar cells for integrating into windows.

Most of the projects will focus on silicon technologies, as the vast majority of solar panels worldwide are currently made using silicon. Some projects will aim to develop solar cells using new materials, such as organic photovoltaics and perovskites, which would be lower cost to manufacture, printable or more sustainable.

Together with contributions from industry partners and leading institutions from Asia, Europe and the United States, total value of the projects is approximately \$102 million.

ARENA CEO Ivor Frischknecht said Australian innovation was already built into many silicon solar panels made globally, and this funding would accelerate solar PV technology.

"Australia is leading the world in solar PV research and development. Over the past five years, ARENA has funded breakthroughs which have helped make solar PV competitive with wind power and we want to take that even further.

"In this funding round, the candidates and the calibre was so high, we actually increased the total funding we awarded to nearly \$30 million," Mr Frischknecht said.

"This research will improve the technological and commercial readiness of new innovation in solar PV cells and modules, enhance Australia's position as world-leaders in solar PV R&D and address Australian-specific conditions," he said.

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**For more
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FULL LIST OF SOLAR PV R&D FUNDING RECIPIENTS

Project name by Institution	ARENA funding (Approx in \$AUD)	Research Focus
Australian National University		
Tandem micro concentrator - developing a commercially competitive gallium arsenide /silicon tandem solar cell system with much higher cell efficiency	\$788,515	Reducing costs
Fabricating high efficiency silicon solar cells based on depositing thin layers of polysilicon onto silicon wafers	\$1,116,142	Increasing efficiency
Driving increased efficiency and reliability in silicon photovoltaics	\$2,399,392	Increasing efficiency
Developing low-cost stable electrodes for perovskite solar cells	\$936,732	Reducing costs, new materials
Perovskite-silicon tandem cells - towards commercial reality	\$672,841	Reducing costs
Next generation industrial silicon solar cells	\$1,977,845	Reducing costs
CSIRO		
Manufacturing of printed perovskite PV modules	\$3,310,248	Reducing costs, new materials
Monash University		
Developing a new type of high efficiency building integrated PV cell	\$744,661	Building integrated PV
Bringing all-polymer (organic) solar cells closer to commercialisation	\$840,000	Reducing costs
University of New South Wales		
Improving world-record commercial high-efficiency	\$1,785,000	Improving efficiency

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silicon solar cells through recombining process Analysis & innovative corrosion protection techniques		
Integrating industrial black silicon with high efficiency multicrystalline solar cells	\$500,000	Improving efficiency
Accelerating industrial solar cells efficiency by developing plasma-enhanced chemical vapour deposition based metal oxides	\$503,389	Improving efficiency
Merging silicon wafering technology with hydrogen trapping techniques	\$1,968,000	Improving efficiency
Hydrogen treated multi-surface PERL silicon PV Cells with laser doping and contact plating techniques	\$1,100,000	Improving efficiency, reducing costs
Driving efficiency beyond 20% in low cost, low-toxic Kesterite Solar Cells	\$1,331,098	Reducing costs, new materials
High-efficiency silicon solar cells employing innovative atomic scale engineered surface and contact protective layers	\$2,019,456	Reducing cost, improving efficiency
Silicon sub-cells for high efficiency multi-layer solar cells	\$1,144,628	Improving efficiency
Hydrogen treated and hybrid interface Silicon PV Cells	\$ 1,735,000	Improving efficiency, reducing cost
A path to reduced cost for PV generated electricity by improving surface properties	\$1,160,000	Reducing costs
Increasing efficiency in thin film silicon tandem cells	\$3,184,166	Improving efficiency

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