



Media Release

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Australian firm pushes toward solar cell breakthrough

An Australian manufacturing innovator has taken the first steps towards commercialising a potentially cheaper and highly efficient solar cell, thanks to \$449,000 support from the Australian Renewable Energy Agency (ARENA).

Acting ARENA CEO Ian Kay said the funding would enable NSW company Dyesol to create a roadmap setting out the steps needed to take its perovskite solar cell technology from the lab to a commercially available product.

“Perovskite cells have been demonstrated at laboratory scale but have never before been mass produced. Dyesol will map out the techniques and requirements for working towards scalable manufacturing of high-quality, uniform perovskite cells that achieve efficiency, durability and stability targets,” Mr Kay said.

“Most current generation solar photovoltaic (PV) panels on the market today are made with silicon, but there is growing interest in developing third generation solar technologies such as cells constructed from perovskite.

“Perovskite is abundant and cheaper than silicon and there are signs it may be more adaptable than conventional silicon, providing enhanced performance in low light conditions and being better suited for integration into external building components, such as windows and facades.

“Ultimately, we hope to see perovskite solar cells deliver a significant breakthrough in cost reduction in the manufacture of solar PV technology, in line with ARENA’s goal of reducing the cost of renewable energy and advancing innovative technologies.

“Dyesol is initially aiming for a delivery cost benchmark of US 10 cents per kWh, putting perovskite solar PV cells on par with current benchmarks achieved by silicon solar PV. This would be a considerable achievement given silicon PV’s maturity as a technology, and provides further scope for reduction in the cost of energy as manufacturing volumes grow.”

Perovskite was named by *Science* magazine as one of the renewable energy breakthroughs of 2013. In recent years, there have been significant advancements in the technology, with Dyesol working globally with companies and researchers to develop an international leadership position in the field.

Dyesol Chief Technical Officer Dr Damion Milliken said ARENA’s support would help the company develop international market leadership by bedding down critical manufacturing input materials and techniques necessary for commercialisation of a perovskite solar cell product.

“This project is about capacity building in the Australian perovskite solar cell space, where world-leading expertise exists on both the academic and industrial scenes,” Dr Milliken said.

“ARENA’s funding will be invaluable in accelerating commercialisation of this transformational solar PV technology and ensuring Australia is at the forefront of this development.”

ARENA media contacts:

James Webber: 0410 028 899

Judith Ion: 0434 169 037

media@arena.gov.au

**For more
information**
arena.gov.au

About ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the amount of renewable energy used in Australia. ARENA invests in renewable energy projects, supports research and development activities, boosts job creation and industry development, and increases knowledge about renewable energy. ARENA is currently supporting more than 200 projects and is actively seeking new projects to support.

About Dyesol

Dyesol is a renewable energy supplier and leader in Perovskite Solar Cell (PSC) technology. The Company's vision is to create a viable low cost source of electricity with the potential to disrupt the global energy supply chain and energy balance. Dyesol manufactures and supplies PSC materials and is dedicated to the successful commercialisation of PSC photovoltaics.