

19 JULY 2023

The incredible potential of Ultra Low-Cost Solar in Australia

The Australian Renewable Energy Agency (ARENA) has today brought together some of Australia's heavy hitters in the solar space to launch its white paper on the incredible potential of ultra low-cost solar (ULCS) for Australia and the world.

At the forefront of the white paper is ARENA's 30-30-30 vision for ultra low-cost solar in Australia, which represents 30 per cent solar module efficiency and an installed cost of 30 cents per watt by 2030.

ARENA sees ultra low-cost solar as a key factor in Australia becoming a renewable energy superpower. While the currently available solar PV technology is sufficient for domestic energy use, ultra low-cost solar will be needed to significantly reduce the cost of renewable electricity for heavy industrial processes including enabling the production of green hydrogen below \$2 per kilogram.

The main objectives for *'The Incredible ULCS: How ultra low-cost solar can unlock Australia's renewable energy superpower'* white paper are to:

- elevate solar photovoltaics (PV) in Australia's national priorities by outlining the benefits that extremely cheap solar could unlock
- communicate key barriers and innovation priorities for ultra low-cost solar to government, industry and the Australian public.

Urgent action needs to be taken to accelerate Australia's progress towards net zero, with solar featuring as one of the heroes in this story. Along with wind generation, solar is one of the most important technologies to decarbonise the global energy system.

This is particularly the case in Australia where solar will be essential to reducing emissions across electricity, industry, transport and buildings.

Since its inception, ARENA has been championing the power of solar energy, through funding Australia's very first large-scale solar farms, to funding cutting edge solar research through the Australian Centre for Advanced Photovoltaics (ACAP) and R&D funding rounds. To date, ARENA has committed over \$800 million in funding towards solar PV projects.

Today's solar PV technology is already mature and sufficiently cost effective to deploy at scale. It requires no significant technology breakthroughs to achieve Australia's 2030 goals within the electricity system provided we can make strides with critical enablers such as energy storage, flexible demand, transmission and grid connection.

However, ultra low-cost solar could lead to much cheaper electricity for Australians and export opportunities to neighbouring countries, as well as supporting the decarbonisation of hard-to-abate sectors such as industry and transport.

This vision requires a step change from where we are today at around 22 per cent solar module efficiency and over \$1 per Watt installed cost. In terms of total levelised cost of energy (LCOE), ARENA's vision requires a drop to around one-third of today's solar LCOE to below \$20 per megawatt hour.

ARENA CEO Darren Miller said, "achieving this vision won't be easy, but Australia has a comparative advantage due to our huge land mass, strong solar resources and abundance of minerals that can be used to make green products."

"Innovation is key to reducing the cost of solar. Groundbreaking research has been taking place in Australia's labs since the 1980s, and we have homegrown startups such as 5B and SunDrive doing exciting things in novel deployment methods and materials science. Now Australia needs to step up support so we can see even further cost reductions through increased module efficiencies, cheaper material costs and innovative ways to deploy and maintain solar out in the field."

ARENA media contacts:
0407 125 909
media@arena.gov.au

For more information
arena.gov.au

“We need a united front to tackle this task. We’re calling on Australia’s governments, market bodies, developers, investors and innovators across the entire supply chain to commit to these goals. I truly believe that Australia’s solar potential is huge and that we’re well positioned to become a renewable energy superpower.”

To view or download a copy of the white paper, visit <https://arena.gov.au/knowledge-bank/the-incredible-ulcs/>

ARENA media contacts:
0407 125 909
media@arena.gov.au

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