

# Distributed energy storage solutions in Australia







#### **Overview**

How is energy stored in Australia?

Currently storage of electrical energy in Australia consists of a small number of pumped hydroelectric facilities and grid-scale batteries, and a diversity of battery storage systems at small scale, used mainly for backup. To balance energy use across the Australian economy, heat and fuel (chemical energy) storage are also required.

Why do we need balancing energy storage technologies in Australia?

Increasing gap between maximum and minimum operational demand in Australia call for urgent need of balancing storage technologies. Fast response hybrid battery-supercapacitor energy storage are deemed prudent solution for the transition period, while PHES and Hydrogen are for long-term storage.

What are some examples of distributed energy resources?

Common examples of DER include rooftop solar PV units, battery storage, thermal energy storage, electric vehicles and chargers, smart meters, and home energy management technologies. Distributed energy resources are changing the way Australia produces and manages electricity.

How are distributed energy resources changing Australia?

Distributed energy resources are changing the way Australia produces and manages electricity. Rather than electricity being generated by big, centralised power stations, it is now starting to come from many places including millions of homes and businesses.

Is Australia a test bed for distributed energy storage?

Australia is widely viewed as a test bed for the impacts and benefits for distributed energy storage due to its rapid energy storage market growth – 356 per cent growth between 2014 and 2015 (China Energy Storage Alliance, 2016).



#### What is distributed energy resources (DER)?

Distributed energy resources (DER) is the name given to renewable energy units or systems that are commonly located at houses or businesses to provide them with power. Another name for DER is "behind the meter" because the electricity is generated or managed 'behind' the electricity meter in the home or business.



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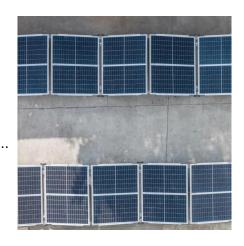


The role of energy storage in Australia's future energy supply mix

While acknowledging these diverse applications for energy storage, the first report primarily considers the transformative role that energy storage can play in Australia's electricity systems.

<u>Market Trends</u>, <u>Australian Large-Scale and</u> <u>Distributed Energy</u>...

There may be several years of rapid development in large-scale storage with many projects lined up, but in terms of growth rate, more distributed storage is expected due to its ...



Battery energy storage is 'must-have' to realise Australia's ...

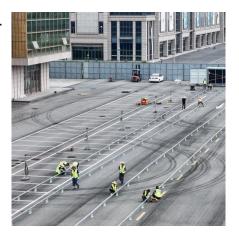
Australia is in critical need of robust planning of distributed battery energy storage systems to increase network flexibility alongside the development of new generation resources ...

Market Trends , Australian Large-Scale and Distributed Energy Storage

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