

## A-Core Container

# Australian Industrial Park Energy Storage Policy



## Overview

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As Australia transitions to net zero, renewable energy storage is critical to ensure a secure, sustainable and affordable electricity supply. Our Renewable Energy Storage Roadmap highlights the need to rapidly scale up a diverse portfolio of storage technologies to keep pace with rising demand and.

The Electricity and Energy Sector Plan sets out an ambitious and achievable pathway to reduce emissions while ensuring the affordable, reliable, secure and equitable supply of energy. It is one of six sector plans under the Net Zero Plan. The Net Zero Plan sets out how we will achieve a fair.

A new report from the CSIRO has highlighted the major challenge ahead in having sufficient energy storage available in coming decades to support the National Electricity Market (NEM) as dispatchable plant leaves the grid. The CSIRO assessment used the Australian Energy Market Operator's (AEMO) 2022.

ly changing. The increasing prevalence of renewable energy is redefining the Australian energy market. As the National Electricity Market shifts from coal and gas generation toward more diverse and distributed forms of power such as wind and solar, energy technology, hydrogen fuels and pumped hydro.

Current forecasts from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Australian Energy Market Operator (AEMO) indicate that as much as 95% of the National Energy Market (NEM) would need to come from variable renewable energy (VRE) to meet Australia's emission.

As Australia works towards its target of 82% renewable energy generation by 2030, battery energy storage systems (BESS) are playing a vital role. They store excess energy from sources like wind and solar when demand is low, and release it when it's needed, helping to keep the power grid stable. 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.

How long does energy storage last in Australia?

434 Godfrey et al. (2017) The role of energy storage in Australia's future energy supply mix. Australian Council of Learned Academies, Melbourne. 435 Internal source. Maximum storage duration: Typically deployed for 12–24 hours. However, can provide energy for short- and medium-duration needs.

How will storage affect Australia's energy supply?

- Time shifting energy: Storage will play an increasing role shifting energy supply to match later periods of demand. As discussed in Part I, increasing levels of VRE, such as rooftop PV installations, are expected to supply an increasing proportion of Australia's electricity needs.

Is energy storage a viable option in Australia?

There are limited commercially mature (bankable) energy storage options in Australia that are deployable in the near term, and the most widely deployed systems in Australia, li-ion and PHES, face supply chain risks and geographical constraints respectively.

Should Australia participate in international energy storage dialogues and RD&D activities?

International collaboration: There is room for Australia to further participate in international energy storage dialogues and RD&D activities to support the development and deployment of energy storage systems in Australia, and to avoid duplication of effort and investment.

How will Australian energy policy help the community?

We will provide long-term benefit to the Australian community through improved energy supply, efficiency, quality, performance and productivity. These policies and programs will also support the Australian Government meet its legislated emissions reduction targets of 43% by 2030 and net zero by 2050.

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