

FOR IMMEDIATE RELEASE

Australia's Energy Transition Holds Opportunity for Vanadium Flow Battery Storage

New Vanitec video explores drivers shaping long-duration energy storage adoption

LONDON, 29 January 2026 – As Australia moves toward more reliable, low-emissions power systems, long-duration energy storage will be a critical enabler of the country's clean energy transition. To achieve its 70% emissions reduction target by 2035, Australia forecasts the need for around 120 GWh of long-duration storage over the coming decade. Vanadium flow batteries, first developed in Australia, are already being deployed nationally, with significantly larger mining and grid-connected projects in development.

[Vanitec](#), the not-for-profit global member organisation whose objective it is to promote the use of vanadium-bearing materials, has released a new video examining the technical, operational, and policy drivers behind the growing momentum for vanadium flow battery storage. The video outlines why this "Australian-born" technology is well aligned with Australia's clean energy transition objectives and long-term energy storage requirements.

To view the full video exploring the growing role of vanadium flow batteries in Australia's energy storage landscape, visit: https://youtu.be/OgMXrMmZQ44?si=Jp7dxhjeaV_KLrZS

"We are excited to share the real-world impact vanadium flow batteries are having in strengthening grid stability and supporting the integration of renewable energy in Australia and beyond. With a supply chain of vanadium producers and VFB manufacturers in the country, we remain optimistic about VFB's expanding commercial deployment in Australia," says John Hilbert, CEO of Vanitec.

Australia's Energy Targets Drive Demand for Long-Duration Storage

Vanadium flow batteries are increasingly being recognised for their suitability in long-duration and high-cycle applications. Using a non-flammable, water-based electrolyte, the technology enables deep discharge without degradation, supporting operational lifespans of 25 years or more and in excess of 13,000 charge-discharge cycles with no loss of capacity.

Vanadium flow batteries are particularly suited to Australia's operating environment due to their durability, scalability and ability to maintain performance in hot climates. Demonstrated through Horizon Power's vanadium flow battery pilot, the technology has shown superior performance compared with lithium-based batteries in Australia's extreme heat. This capability enables deployment in environments where other technologies may be constrained, strengthening their competitiveness across the region.

From Early Installations to Utility-Scale Projects

With 11 MWh of vanadium flow batteries already installed across Australia, including a flagship 8 MWh system in South Australia, deployment momentum is steadily building. This

growth is set to accelerate, with a 12 MWh mining microgrid vanadium flow battery scheduled for commissioning in 2026 and a 500 MWh grid-connected system planned for Kalgoorlie, Western Australia, by 2029, expected to be one of the largest of its kind outside of China. Together, these projects will require more than 2,600 metric tons of pure vanadium, underscoring both the scale of upcoming installations and the growing role of vanadium flow batteries in Australia's energy storage landscape.

Brendon Grylls, Executive Chair of Richmond Vanadium Technology, says: "Vanadium flow batteries have demonstrated exceptional resilience in Western Australia's hot, arid conditions, delivering long-duration performance and operational reliability where other technologies struggle. At Richmond Vanadium Technology (RVT), we're proud to advance this technology, leveraging our world-class North Queensland Richmond-Julia Creek resource and collaboration with RKP to strengthen a secure domestic supply chain. This landmark initiative in Kalgoorlie underscores the strategic role vanadium companies like RVT can play in delivering reliable, low-emission power systems and economic benefits across WA and Australia."

Ashley Martin, Interim Executive General Manager at Atlantic Vanadium Pty Ltd, says: "Atlantic is pleased to see the growing adoption of vanadium flow batteries in Australia. With the benefit of the significant process plant, established infrastructure, proven flowsheet and all approvals necessary for the development secured, our Windimurra processing facility located in Western Australia is well positioned to become one of the world's next major vanadium producers."

Graham Arvidson, Chief Executive Officer of Australian Vanadium Limited says: "As Australia accelerates its renewable build-out, the question is no longer whether we can generate enough clean power. It's how we store it – safely, reliably, and for long durations through heatwaves, cloudy weeks, and seasonal shifts. The answer lies in vanadium flow batteries – a technology Australia can mine, manufacture, and own from end to end. That's precisely the model being built by Australian Vanadium Limited (AVL): Mining vanadium, refining it into high-purity electrolyte, and manufacturing vanadium flow battery systems here at home. This is not conceptual – it is a supply chain ready to scale with strong support in place. AVL is now an established manufacturer of vanadium electrolyte and has successfully deployed its Australian-made electrolyte into operating batteries."

Government Backing Accelerates Deployment and Local Supply Chains

Australia's Federal and State government policy is also supporting this. At the national level, vanadium flow batteries have been recognised in both Australia's National Battery Strategy and Critical Minerals Strategy. This policy support is being reinforced through targeted investment, such as the Australian Renewable Energy Agency's August 2025 allocation of \$500 million to its Battery Breakthrough Initiative, aimed at scaling electrolyte and cell stack manufacture for flow batteries in Australia.

At state level, the Government of Western Australia is backing vanadium flow batteries as part of regional energy reliability strategies, including a \$150 million commitment for a 500 MWh battery project.

As the country scales long-duration energy storage to support its clean energy transition, vanadium flow battery technology is increasingly positioned as a strategic solution for both grid and off-grid applications.

To view Vanitec's map of Vanadium Flow Battery projects in Australia, and around the world, visit vanitec.org/vanadium/map.

Follow Vanitec on [LinkedIn](#).

About Vanitec

Vanitec, is a not-for-profit global vanadium member organisation, bringing together representatives of companies and organisations involved in the mining, processing, manufacture, research and use of vanadium and vanadium-containing products. The objective of Vanitec is to promote the use of vanadium bearing materials, and thereby to increase the consumption of vanadium.

Vanitec members in Australia include [Atlantic Vanadium](#), [Australian Vanadium](#), [Richmond Vanadium](#), and the [Vecco Group](#).

For media enquiries, please email: info@vanitec.org

Vanitec Limited
8 Brindles Field
Tonbridge
Kent, TN9 2YS
United Kingdom

Tel: +44(0) 1732 2401 21
E-mail: info@vanitec.org
Website: www.vanitec.org

Reg. No. 06490949