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Power to store

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A Perth-based renewable energy storage company Australian Vanadium Limited has switched on WA's first 'CellCube', a Vanadium redox flow battery energy storage system, on a farm near Busselton in Western Australia.

The Vanadium flow battery is a rechargeable **flow battery** that employs **vanadium** ions in different oxidation states to store chemical potential energy.

The development is an example of the wave of new power options now available as the energy sector continues to diversify, the company said.

The storage system was constructed by flow battery manufacturer Gildemeister Energy Storage in Austria and then shipped to WA.

The total project cost for the storage system and solar PV system was A\$164,000 excluding shipping.

AVL managing director Vincent Algar said it was expected this installation would be the first of many on Australian farms as vanadium flow batteries can store large amounts of solar and wind power.

"They are a perfect option for many off-grid farming operations, particularly in more remote areas," Vincent said.

"The CellCube FB10-100 now allows us to showcase the benefits of large energy storage devices to commercial customers.

"This includes the ability to time-shift up to 10 hours of power usage by storing renewable energy from the solar PV system for later use."

Vincent Algar said that, aside from agriculture, the Gildemeister storage systems have large cost-saving energy ramifications for a range of industries, including mining and resource development.

"Many WA farmers will find installing a vanadium battery, with appropriate solar panels, will be cheaper in the long term than connecting to the grid or running diesel generators," he said.

These storage systems could provide reliable three phase power for high energy use applications, such as welding, and the energy system in operation on the Busselton farm – which includes solar power panels and the battery – was good value.

VSUN Renewable Energy Solutions – is a highly progressive, innovative energy business that has capitalised on its international connections and synergies as a wholly-owned subsidiary of resource company Australian Vanadium Ltd.

VSUN is the major distributor of Gildemeister's energy storage systems in Australia.

Their CellQubes are based on the vanadium redox flow technology allowing for clean, zero-emission and fast energy supply.

The CellQube has been developed over more than 15 years with around 10 years of practical application results and over 100 installations worldwide.



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