

## Sunshine Hydro and Energy Estate announce new joint venture to accelerate transformation of Victorian energy sector to a True Zero future

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What Victorians are looking for is a renewable energy power station that can deliver reliable energy 24/7 in all weather conditions. Australian companies Sunshine Hydro and Energy Estate have formed a new joint venture with the goal of developing up to 4.5GW of long duration energy storage in Victoria which will be integrated with new renewable generation and green hydrogen production — this green power station ecosystem is known as a SuperHybrid.

Sunshine Hydro is one of 11 Australian companies to have been featured in Beyond Zero Emissions “Cleantech Hub” at COP27 which showcased rising stars of Australia’s zero-emissions manufacturing industry at the Australia Pavilion. Energy Estate is an active participant in the Victorian energy sector and its pipeline of projects in Victoria include over 3GW of offshore wind in partnership with leading global developer BlueFloat Energy.

The new Victorian joint venture between Sunshine Hydro and Energy Estate intends to develop several large scale pumped hydro energy storage projects in Victoria with integrated green hydrogen production with an initial focus on the central regions of Victoria. In addition to developing pumped hydro projects the joint venture will assess the suitability of other long duration energy storage technologies for large scale deployment in Victoria such as flow batteries, solar thermal, compressed air and hydrogen storage. The joint venture has been formed following the recent announcements of the accelerated closure of the coal-fired generators in Victoria and the support given by the current Victorian Government for new sources of clean energy generation such as offshore wind.

It builds on the existing joint venture between the companies in Queensland where they are jointly developing the first SuperHybrid project which is located in Central Queensland near Miriam Vale – the *Djandori gung-i* project. In the Queensland project Sunshine Hydro and Energy Estate have also partnered with the local traditional owners, Gidarjil Development Corporation and Burnett Mary Regional Group (the region’s peak body for natural resource management). Energy Estate and Sunshine Hydro intend to extend their collaboration into other markets in Australia and globally where they we can develop SuperHybrids and help drive the transformation of the energy sector and the move to 24/7 delivery of clean energy.

Michael Myer, chair of Sunshine Hydro commented “Our aim is to replace the dispatchable capacity which will be lost once the coal-fired power stations in the LaTrobe Valley retire and support the development of a green hydrogen industry in Victoria. We don’t see ourselves competing with big batteries, much needed new transmission, Snowy 2.0 or even the Battery of the Nation. If the last few months have taught us anything it is that we need a lot more long duration energy storage – not just to keep the lights on but to keep energy prices down. As we rapidly electrify and move away from fossil fuels we need to all understand that building new large scale deep energy storage is vital – for consumers and industry.

Michael added “Sunshine Hydro is committed to demonstrating how the renewables industry and traditional owners can work together to build new clean sources of power generation in Australia and beyond, while respecting and protecting the natural environment,” he said.

Simon Currie, Co-Founder, Energy Estate, said, “Victoria can benefit from the accelerated development of clean energy ecosystems, which combine onshore and offshore wind farms, solar farms, transmission and batteries with deep storage and green hydrogen production.

Our joint venture will focus on how to maximise the repurposing of existing transmission infrastructure in areas like the LaTrobe Valley and how we can achieve enduring outcomes by using systems thinking to integrate projects to deliver multiple energy products and services. At the heart of our joint venture with Sunshine Hydro is a commitment to partner with local communities, workers and traditional owners. We can’t get to a cleaner future without building new projects and infrastructure but we can promise to do this in a way which puts outcomes for communities, workforces and the environment first.”.

Mr Myer, added, “Our large scale SuperHybrid projects will be located in regional Victoria and will demonstrate that there are a broad range of opportunities in the ‘green economy’ as we decarbonise, creating enduring local jobs during the construction and operational phases.”

The SuperHybrid projects in Victoria will use Powertracer traceability technology from Australian company Enosi, to validate the 24/7 carbon free characteristics of both energy and hydrogen products supplied to customers. Energy Estate and Sunshine Hydro have already partnered with Enosi for provenance and certification on other clean energy projects in Australia. Enosi will provide the JV with a certification system that;

- matches the consumption of energy in each 5 minute period as it is stored, with generation at renewable sources in the same period;
- provides certification of the provenance of stored energy when released from storage as electricity;
- provides temporal matching of the dispatched energy from the super-hybrid plant with consumption by off-taker(s) under PPA or sleeved PPA agreements as a service to the off-taker; and
- certifies the provenance of green hydrogen product created with temporal matching of the electrolyser operations and super-hybrid plant outputs.

Enosi's CEO Steve Hoy said "For stored energy to be considered fully renewable under both GHG Protocols and emerging European time-stamped certification standards, we need to provide independent and trusted certification that the stored energy was originally sourced from renewable plant, and aligned in time with renewable production. SuperHybrid plant can solve the credibility gap associated with claiming green credentials from energy usage when renewables are not available - like claiming to use solar energy at night.”

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## The partners



### About Sunshine Hydro

Queensland based Sunshine Hydro is an innovator in renewable energy with an ethos to decarbonise our society and industry in response to the challenges of climate change. The technology behind Sunshine Hydro, AESOP, enables new and existing pumped hydro and other deep energy storage projects to maximise decarbonisation and to replace fossil fuel generation plants effectively and efficiently. Sunshine Hydro has initiated the Djandori gung-i SuperHybrid project in Central Queensland following years of research, R&D and site analysis. Sunshine Hydro has a further pipeline of projects in development in Queensland and NSW.

For more details on Sunshine Hydro and SuperHybrids please visit: <https://www.sunshinehydro.com/>



### About Energy Estate

Energy Estate is a zero emissions independent energy company. Our portfolio of projects is diversified and includes over 30GW of onshore and offshore wind, solar, long-duration energy storage and transmission projects. We are developing large scale green hydrogen, green ammonia and green chemical production and storage projects in Australia, New Zealand and the US. A key driver for Energy Estate is to support and assist to transition the communities in which it operates and deliver enduring outcomes for traditional owners, local communities and workforces and all stakeholders.

In Victoria Energy Estate is developing large scale offshore wind projects in Victoria – the 2.085GW Greater Gippsland offshore wind project and the 1.1GW Southern Winds offshore wind project – in partnership with leading global offshore wind developer BlueFloat Energy.

Since its formation in 2018 Energy Estate has focussed on accelerating a range of long duration storage technologies which are suited to the Australian conditions including:

- Pumped hydro such as Dungowan pumped hydro in the New England region of NSW
- Advanced compressed air energy storage at Broken Hill with Canadian company Hydrostor
- Innovative solar thermal projects with Australian company Vast Solar
- Hydrogen storage in salt caverns with Green Hydrogen International and in rock caverns with Australian company Abergeldie Complex Infrastructure
- Integrated saltwater pumped hydro and desalination with US company Oceanus
- Ironflow BESS with ESS Inc., which is now manufacturing units in Australia with its partner ESI

For more details please visit: <https://www.energyestate.com/>

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