



Media release – 4 May 2022

New, green power station for Queensland

Today, Queensland renewable energy company, Sunshine Hydro, launched their \$2b 'Flavian' pumped hydro and green hydrogen project located within the Central Queensland Renewable Energy Zone.

'Flavian' pumped hydropower will generate reliable energy to the grid from 2028, along with green hydrogen production.

This project will power local industry with renewable energy and heavy trucks with green hydrogen to help decarbonise the Queensland economy.

Sunshine Hydro Chair, Michael Myer said, "Our unique green hydropower system will provide highly reliable renewable energy to power the equivalent of 600,000 homes to "keep the lights on" while generating 500 new jobs in the green economy.

"We will apply our innovative closed loop hydropower model, which selects of a clever mix of energy inputs, outputs, and storage, which we call a Superhybrid™ to generate reliable green power and green hydrogen.

"The 'Flavian' project site near Miriam Vale, has ideal topography for the world's first integrated pumped hydropower and green hydrogen project of this type.

"In addition to securing suitable land, we are proudly partnering with Energy Estate, an Australian renewable energy and green hydrogen developer, to co-develop and provide green energy to power the Flavian project.

"We have put in place valuable partnerships with Burnett Mary Regional Group BMRG, and the traditional owners, the Gidarjil Development Corporation.

"Through these strong partnerships, we will deliver one of the world's most sustainable renewable energy projects, with extensive conservation and biodiversity outcomes across the site.

"The Flavian Superhybrid will abate on average 4 million tonnes of carbon p.a., which is around 2.5% of the Queensland's current level of annual carbon emissions, while generating cheaper energy to place downward pressure on energy prices.

Gladstone Regional Council Acting Mayor Kahn Goodluck welcomed Sunshine Hydro's announcement, stating that it was another tick of approval for the region's journey to become the nation's leader in renewable energy.

"It's fantastic to hear Sunshine Hydro will apply their exciting technology within our region," Councillor Goodluck said.

Timing: Land is secured, and planning has commenced with a final investment decision targeted for 2025 and energy production from 2028.

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Media contact:

Greg Bourke: e: greg@thecommsteam.com.au ph: 0478 318 702.

Explanatory notes

How the green closed loop pumped hydropower system works:

The Sunshine Hydro hydropower technique involves creating and connecting an upper and lower water storage.

Using renewable energy, water is pumped to the higher storage and then released to flow under gravity through turbines to generate electricity. This energy can be sent to the grid or powers the production of green hydrogen.

The water is collected in the lower reservoir, ready to pump to the higher reservoir with renewable energy sources. **This is the green closed loop hydropower system in action.**

A combination of energy sources within this green energy ecosystem is called a Superhybrid which is a unique Sunshine Hydro methodology.

The Superhybrid energy ecosystem is managed through an Advanced Energy Storage Optimising Program (AESOP) supported by programmed artificial intelligence.

The AESOP software tool chooses the best way to allocate the available renewable energy at any moment — whether to support the electricity grid, create green hydrogen, or save it for another day.

About Sunshine Hydro:

Brisbane-based Sunshine Hydro is an emerging Australian renewable energy company, which has developed unique closed loop pumped hydro methodologies.

We are focused on generating large-scale ‘firm’ (reliable) green energy through our unique Superhybrid hydropower model to meet long term consumer demand and support decarbonisation of our economy.

Images:

Available on request