
Perth WA: Monday 14 November 2022

Hybrid Systems Australia delivers first renewable hydrogen plant in an Australian microgrid

Hybrid Systems Australia, Pacific Energy's integrated renewables subsidiary, joined Horizon Power and Western Australian Hydrogen Industry and Energy ministers, Hon Alannah MacTiernan and Hon Bill Johnston, in Denham on Friday to officially open Horizon Power's renewable hydrogen demonstration plant.

The Australian-first project, which is being delivered in partnership by Horizon Power and Hybrid Systems Australia, will test the technological and commercial viability of renewable hydrogen as a baseload power source.

Hybrid Systems Australia was engaged to design, construct and commission the plant, and worked closely with fellow Pacific Energy subsidiary, ENGV, to supply and install world-leading hydrogen equipment in the integrated system, including a 348-kilowatt (kW) electrolyser, a specialised hydrogen compression and storage system and a 100kW fuel cell.

The company also constructed a 704kW solar farm to generate the renewable energy required to produce hydrogen.

In addition to providing valuable learnings for future applications of renewable hydrogen across the power generation sector, the system aims to demonstrate the efficiency of the hydrogen equipment such as the electrolyser and fuel cell, the ramp rate of hydrogen in response to a decline in solar generation, and the efficiency and storage capability of hydrogen fuel cells versus batteries.

Hybrid Systems Australia's Executive Director, Mike Hall, said the project had proved groundbreaking, providing plenty of opportunities to further develop the company's expertise and add value more broadly to the burgeoning sector.

"As an industry-first, this project has presented some really interesting opportunities for us to grow our capabilities in the green hydrogen project delivery space," Mr Hall said.

"It's still a budding industry in Australia, so we really had to start at the beginning, from designing a system based on first principle thinking to navigating both existing and newly developing industry regulations and licensing designed for different applications."

"We've worked closely with Horizon Power and regulators to get the process right, and it's been a very dynamic project, but we looked at any challenges as growth opportunities, and in doing so, we've been able to see things through fresh eyes," he said.

"Different solutions have presented themselves along the way. It's made us more agile in this rapidly evolving space and, ultimately, better at what we do. It's been an exciting journey and one that we're really proud to have been a part of."

“We’re looking forward to seeing the outcomes of Horizon Power’s Denham project and ongoing research and, furthermore, what it means for renewable hydrogen in utility-scale applications.”

The plant, which produced its first hydrogen in October, is expected to produce renewable energy equivalent to the average power demands of 100 households, or about 20 per cent of Denham’s residential and business power needs, and will offset approximately 140,000L of diesel annually.

The project is a \$9.3 million investment, co-funded by Horizon Power, the Western Australian State Government and the Australian federal government. The WA Government provided \$5.7 million of funding, with \$1 million through the Renewable Hydrogen Fund. The Australian Renewable Energy Agency (ARENA) provided \$2.6 million of funding through its Advancing Renewables Program.

Hybrid Systems Australia, a subsidiary of the QIC-owned Pacific Energy Group Holdings Pty Ltd, is currently commissioning Horizon Power’s renewable hydrogen demonstration plant, which is expected to be fully operational in early 2023.

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About Hybrid Systems Australia

Hybrid Systems Australia is a nationally recognised leader in renewable energy that is headquartered in Perth, Western Australia, with operations extending to the Northern Territory.

The company specialises in grid-connected and off-grid renewable energy and storage systems and the end-to-end provision of renewable energy services, including design, procurement, manufacturing, testing, installation and commissioning.

Hybrid Systems Australia has a proven track record delivering solar PV, wind power, stand-alone power systems (SPS), battery energy storage systems (BESS), hydrogen and back-up thermal generation projects.

Hybrid Systems Australia is a subsidiary of Pacific Energy Group Holdings Pty Ltd, an Australian-owned market leader in the delivery of sustainable power generation solutions, which is owned by QIC, a globally significant infrastructure investor.

For more information, visit www.hybridsystems.com.au or follow us on LinkedIn at <https://www.linkedin.com/company/hybrid-systems-australia>

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Pictured:

1. Hybrid Systems Team with Stephanie Unwin, CEO Horizon Power and Western Australian Hydrogen Industry and Energy ministers, Hon Alannah MacTiernan and Hon Bill Johnston
2. Hybrid Systems Team with Energy Minister, Hon Bill Johnston

3. Hybrid Systems Project Manager, Nathan Lucken touring the facility with CEO Horizon Power and Western Australian Hydrogen Industry and Energy ministers, Hon Alannah MacTiernan and Hon Bill Johnston
4. Aerial shot of Hydrogen equipment being lifted on site





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