



MEDIA RELEASE

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Pacific Energy delivers Northern Territory's first hydrogen stand-alone power system

Pacific Energy has designed and delivered its first containerised hydrogen electrolyser and fuel cell system for Charles Darwin University's (CDU) Renewable Energy Microgrid Hub for Applied Research and Training (REMHART), which will use the system to study the feasibility of hydrogen as a clean energy source for the Northern Territory's grids.

The system, known as a hydrogen stand-alone power system (H2 SPS), is an adaptation of Pacific Energy's award winning solar stand-alone power system, and comprises four Enapter electrolysers, a PowerCell 5kW fuel cell, battery and inverters.

Pacific Energy collaborated with CDU at their REMHART facility, which is dedicated to creating and testing new renewable energy technologies, to create a system that can convert power from the university's specialised Renewable Energy Grid Testing Facility into renewable hydrogen.

The system's electrolysers use electricity to split water into hydrogen and oxygen gases through the electrolysis process. The hydrogen component is stored in pressurised containment vessels until it is required to produce power. When power is required, the fuel cell combines the hydrogen gas with oxygen from the air, producing electricity that can then be fed into the grid.

The system, which has already produced hydrogen and 5kW of electrical output during testing, has the capability to supply 8.6kW of three-phase power using its inverters and battery. Its modular design means it can be scaled with ease, using the same philosophies, concepts and safety system hardware used in CDU's model.

Pacific Energy's Chief Executive Officer, Jamie Cullen, said the company was pleased to deliver its first H2 SPS to REMHART, saying it would play a critical role in developing the energy industry's understanding of hydrogen as a renewable energy source.

"At Pacific Energy, we are keenly focused on transitioning Australia, and the world, to a clean energy future. That's why we're excited to be a part of projects like this one, which will help us overcome some of the challenges we currently face when integrating hydrogen into the renewables mix," Mr Cullen said.

"We're incredibly proud to deliver our first H2 SPS to Charles Darwin University, and we're looking forward to seeing how it supports the university in its important hydrogen studies."

CDU's Pro Vice-Chancellor of the Faculty of Science and Technology and Director of the Energy Resources Institute, Professor Suresh Thennadil, said this equipment upgrade is key in enabling exploration into hydrogen.

"The installation of a containerised hydrogen electrolyser and fuel cell system will enable us to better understand the challenges and intricacies associated with incorporating hydrogen as an additional energy source, as well as the durability of electrolysers and other components under local climatic conditions," Professor Thennadil said.

"This upgrade provides a unique and flexible platform to study renewable energy systems, particularly small regional and remote grids, which are common throughout the NT," he said.

Pacific Energy's system was designed and manufactured at its manufacturing facility in Perth, which is one of the world's largest purpose-built SPS manufacturing facilities.

Technicians from Darwin and Perth installed and commissioned the H2 SPS, and Pacific Energy's Darwin-based technicians will continue to support the operations and maintenance of the system going forwards.

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About Pacific Energy

Pacific Energy is an Australian market leader in the provision of sustainable distributed energy, operating for over four decades, with owned-and-operated assets at 47 sites nationally and more than 750MW of contracted capacity under management.

A trusted partner at the forefront of the clean energy transition, Pacific Energy is uniquely positioned to offer clients a complete in-house experience that delivers renewable and traditional power generation solutions from design, manufacturing and construction through to commissioning and operations and maintenance.

With unrivalled capability across all energy technologies, Pacific Energy has demonstrated experience integrating solar, wind, green hydrogen and battery energy storage into new and existing remote power systems, with an end goal to maximise efficiencies and minimise emissions.

Pacific Energy is headquartered in Perth, Western Australia and has operations in Kalgoorlie, Victoria, Queensland, South Australia and the Northern Territory. It is owned by QIC, a globally diversified investment manager with more than A\$100 billion in funds under management.

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