ASX Announcement

Thursday, 3 October 2024

GreenHy2 signs $1.5M Agreement to Supply Hydrogen Storage System to Telstra

GreenHy2 Limited (ticker "H2G") is pleased to announce that we have signed a Federal Government Grant to provide our Hy2MEDI generation and storage system to Telstra. The System, valued at $1.5M, will be funded by the Australian Government, Department of Infrastructure, Transport, Regional Development, Communication and the Arts from the Telecommunications Disaster Resilience Innovation (TDRI) Program, Power Resilience Round.

GreenHy2 submitted to the TDRI Program in late 2023 for a 100% renewable energy, diesel-free Stand-Alone Power System (off grid) solution for Telecommunications, using a solar array, an Advanced long-life Solid State Metal Hydride battery, and Power Generation with dual fuel cells and an alternative hydrogen generator.

Matching finance for the $3.0M project was committed by INFRACO (a subsidiary of Telstra for Critical Site Infrastructure) as the end-user and asset owner.

The Hy2MEDI for this Project has been specifically designed, using GKN Hydrogen* technology, for the Telecommunications industry and operates at 48-50VDC specifically for Telecommunications equipment. The system is highly redundant and robust, and is designed to operate through natural disasters or other events which may impact both emergency and community telecommunications. GreenHy2 will integrate the solar array, electrolysers, hydrogen dryer, water purification, GKN metal hydride storage system, fuel cells and control system into the Telstra site, and carry out all installation and commissioning works associated with the generation and storage system.

Future

The project will optimise the current configuration to ultimately provide the highest performing robust telecommunications solution and enable roll-out to all critical infrastructure sites for both fibre optic repeater stations and mobile towers; transitioning to a renewable and non-diesel future. Telstra currently has over 9,000 diesel supported telecommunications installations across Australia and many more throughout Southeast Asia and the Pacific

Islands. Telstra owns Digicel Pacific a mobile network operator in the Pacific including Fiji, Papua New Guinea, Vanuatu, Samoa, Tonga and Nauru where the technology is highly applicable.

Background

The Project is to demonstrate the performance and value of a Hybrid Stand-Alone Power Supply for Critical Communications infrastructure sites (mobile, fibre or both) that is extremely reliable, safe and does not require delivery of any fuel, in particular diesel, to maintain performance. The Project will use solar panels connected to a Solid-State Hydrogen Battery and includes a fuel cell and/or a Hydrogen generator to provide back-up power. The major advantages of the system are the very high storage capacity of the Advanced Solid State Hydrogen battery, which will provide a minimum of ten days operation with no solar input, and the high level of safety provided by storing Hydrogen as a solid which is far safer than Lithium, Diesel or compressed Hydrogen from a fire perspective. This system includes 100% equipment redundancy to comply with the specifications for Telstra Critical sites. Operating at 48-50VDC negates the requirement for solar inverters and allows the use of highly reliable DC-DC connection to the load and batteries.

Diesel Removal for Net Zero

Telstra and other Utilities are already considering the removal of diesel-supported off grid systems as the requirement for diesel deliveries can add significant risk and complexity to remote or critical sites and is not aligned to a net zero solution. This proposed project trials a 100% renewable solution that is not compromised by heat over time as are Li Batteries. The Advanced Hydrogen battery has a tested life of over 30 years and is guaranteed for 20 years, is extremely safe as the hydrogen is stored in molecular form as a solid, has been approved for fire risk by Essential Energy and National Parks and Wildlife, is 100% recyclable and its only by-product is pure water. The combination of Solid-State Hydrogen and Fuel cells provides ideal response during disasters such as bushfires. Even if smoke blocks the solar panels, the high capacity of the Hydrogen battery will provide 7-10 days power storage in a very small footprint (one 20ft container). Solid Hydrogen provides cheap energy storage on a $/kWh basis. It is safer than Lithium and operates at only 40 bar compared to the alternative of compressed hydrogen gas that is stored at high pressure of between 350 and 700 bar.

Communications

H2G will continue to update shareholders on significant events as they occur.

**GKN Hydrogen is a wholly owned subsidiary of Langley Group Plc., UK.*

William Howard

Executive Director, Chief Financial Officer & Company Secretary
GreenHy2 Limited

This announcement had been authorised for release by the board.

FOR FURTHER INFORMATION PLEASE CONTACT:

Paul Dalgleish
Executive Chairman & Managing Director
1300 321 094
shareholders@greenhy2.com.au

William Howard
Executive Director, CFO & COMPANY SECRETARY
1300 321 094
shareholders@greenhy2.com.au

ABOUT GreenHy2 Pty Ltd Formerly Tempoaust Limited
GreenHy2 Limited (ASX: H2G) is one of Australia's leading innovators in the delivery of engineering solutions for renewable energy. The company was established in 2011 and has specific expertise in Solid State Hydrogen Storage for use in fuel cells and as hydrogen gas. GreenHy2 is a clean energy company dedicated to reducing our collective carbon footprint.