Hydrogenus Energy Limited

Company Newsletter

HYE News #020 November 2026

"Zero Carbon Electricity, On Demand at a Lower Cost"

Market Opportunity

- Renewable energy lacks inertia, placing grid stability into question, running the risk of a blackout
- Legacy transmission infrastructure is creating curtailment (waste)
- Long-term, four plus hours, energy storage is expensive
- Large parts of the economy are dependent on diesel generators – remote location

Our Solution Delivers

- Dispatchable zero-carbon energy
- Inertia into the grid providing grid stability to support the renewable energy transition
- An internal combustion engine that is well understood in the market, easy to scale and can be placed in most locations
- Uses curtailed energy to produce hydrogen for immediate fuel use. Ammonia is used for long-term storage
- Final product will be a 1 MW transportable power station, contained in a 40-foot shipping container

Target Industry Verticals

- Grid Forming/Grid Syncing
- Remote location distributed energy
- Microgrid applications for the built environment

Ballarat pilot to double capacity at Hydrogenus Energy's first commercial site

September's successful grid connection and synchronisation in Ballarat, Victoria, has been the catalyst for Hydrogenus (HYE) to move with confidence to the next stage of the company's commercialisation journey.

Critically, DW Controls (DWC), HYE's technical partner, has committed to doubling the capacity of the existing pilot by purchasing a second 100kW hydrogen fuelled (HYE) modified Internal Combustion Engine (HYE-ICE). The combined gensets will meet DWC's growing commercial energy needs. HYE expects this purchase order before the end of the calendar year.

The expansion of this commercial site will not only grow commercial sales, but also deliver HYE an important reference site, providing:

1. Data: There is no substitute for real world data in terms of engine performance outside a controlled environment.
2. Business model test: The monetisation of the HYE business model, with all the variables known and unknown, will allow HYE to build the necessary business cases for future client engagements, e.g. actual energy and economic savings experienced.



HYE-ICE now operational in Ballarat, Victoria

3. Reference site: From a sales and marketing perspective, the first commercial site is a critical performance hurdle, as a commercial reference site goes a long way to address buyer behaviour concerns such as an unknown new product or not wanting to be a first mover.

Demonstrations / Sales

HYE and DWC have begun organising demonstrations with parties that have expressed interest in purchasing the HYE-ICE. Whilst we have received interest from a broad range of organisations in domestic and international settings, we have focused on local organisations to ensure control over quality, process and service. This focus acknowledges that, as HYE moves from a pure R&D company to a delivery company, new procedures and skill sets must be introduced, and it is prudent not to overextend HYE capacity at the "starters line".

This local first approach does not affect HYE's expectations of moving to purchase orders. Given the high cost of energy and fuel security issues, as discussed in prior newsletters, HYE is confident that, through HYE and DWC's engagements, we will have clarity on further purchase orders by the end of the calendar year or early next year. It is now a question of aligning diaries.

As previously advised, HYE will soon advise stakeholders on the timing of public demonstrations, with a target date toward the end of November (perhaps early December). Demonstrations will be segmented to ensure effective use of time and appropriately targeted to the audience's needs.

Executive Team

Mark Smith - Non-Exec Chair

Marcus Clayton - Exec Director

Shay O'Brien - CEO

Pieter Bruinstroop - Exec Director

Earle Harper - CCO

Patents

Australian Patent #2052248628

International Application under the Patent Cooperation Treaty (PCT) # WO 2025/189228 A1

New IP to create long term customer and shareholder value

As a result of the success of the grid synchronisation process in September, HYE has developed New Intellectual Property (IP) that is likely to add value to customers and ultimately HYE shareholders over time.

HYE has two key elements in our value proposition, first, the engine itself; and second, the Electronic Control Unit (ECU) and ownership of the associated code that controls all elements of the HYE-ICE. New functionality (new IP) has been created, allowing the ECU to interface directly with the grid and intervene in the customer's energy use by automatically switching from mains power to HYE-ICE power before a customer breaches any power capacity thresholds. This is known as peak lopping, and is likely to add significant cost savings to an HYE-ICE customer and provide a quantifiable financial payback.



Screenshot of the HYE ECU interface.

HYE would like to acknowledge the efforts of MoTeC (www.motec.com.au), the underlying owner of the software platform, and DWC for their expertise and input in developing this solution.

In preparation for the controlled rollout of the HYE-ICE, HYE has expanded IP protection to include multiple new geographic jurisdictions, including China, the United States, and South Africa.

Why is peak lopping so important for customers?

Peak lopping (sometimes known as peak shaving) is a strategy businesses use to reduce the highest spikes in a facility's power consumption curve. Instead of allowing total electricity draw from the main grid to spike to an expensive or unavailable maximum during high-demand moments, the system supplements or limits grid sourced power. For businesses, peak lopping is particularly useful to:

- Avoid High Demand Charges: Utility companies often charge commercial and industrial customers steep "demand charges" based on their highest single peak of power consumption during a billing cycle (sometimes multiplying costs dramatically). Cutting down that top spike saves money.
- Overcome Grid Limitations: If a facility needs more power than the local utility infrastructure or incoming mains supply is physically capable of delivering, peak lopping bridges the gap without requiring an expensive utility grid upgrade.
- Grid Stability & Resilience: Running standby or peaking plants helps stabilise the wider electrical grid during times of high stress or intermittent renewable output.

HYE-ICE Application

HYE's new ECU interface (new IP) to the grid autonomously monitors the relationship between specified energy boundaries set by the customer, e.g. do not buy energy from the grid above a certain price, and manages these boundaries relative to live grid price action.

Registered Office
Block Arcade, Suite 324
96 Elizabeth Street
Melbourne VIC 3000
Australia

Contact Details
Pieter Bruinstroop | Director
m: +61 400 315 935
e: pieter.b@hydrpogenus-energy.com

Earle Harper | CCO
m: +61 407 345 180
e: earle.h@hydrpogenus-energy.com

e: info@hydrogenus-energy.com
w: www.hydrogenus-energy.com

When the live grid price breaches the defined boundaries or rules, the ECU will identify that conditions to engage HYE-ICE have been met and will automatically engage and provide energy to the customer at a price cheaper than the grid, providing the customer a quantifiable saving.

DWC will use this application as part of their own deployment of the HYE-ICE solution. DWC intends to take surplus solar energy generated from solar panels on their factory roof and, via a soon-to-be-installed electrolyser, turn it into fuel for the HYE-ICE, which will be used for the peak-lopping function.

The HYE business objective is that, once the process is understood and mapped, a "turnkey" solution can be rolled out across light industrial areas nationwide with access to surplus renewable energy such as solar.

Product Certification

All design features included in the production model demonstration are Australian Gas Networks (AGN) compliant products, which reduce complexity and cost. After we receive Type B approval, we will then lodge an application for Type A certification. Type A certification will take time to prepare the formal application and time for assessment and approval. However, once completed, we will have a set of plans that any registered gas plumber will be able to follow, making installation of subsequent projects much quicker and easier.

Government & Industry Engagement

HYE continue to engage State and Federal Government representatives on both sides of the aisle. HYE has targeted relevant energy ministries as a first step to introduce HYE to the government. In a recent initiative, HYE reached out to the Hon. Chris Bowen, the Federal Minister for Energy, tabling HYE's energy solution as an ideal enabler for the Australian Federal Government's support for the Pacific Islands' energy security announcement and the desire to reduce the Pacific Islands' dependence on diesel fuel. (Ref: https://minister.dcceew.gov.au/bowen/media-releases/729-million-strengthen-pacific-energy-security)

HYE also attended the All Energy Conference at the Melbourne Exhibition Centre on 28/29 October. HYE connected with multiple domestic and international parties, with a clear call to action to explore mutually beneficial outcomes, including government agencies, technology providers, and end users.

Of particular interest, and a topic receiving increasing public attention, was our initial engagement with representatives from various Electric Vehicle (EV) groups. HYE pitch of reliable regional energy security to power EV charging hubs was well received and is likely to complement current policy and investment initiatives. To be clear, these conversations are in their infancy, but what is encouraging is that this business case can be made across most markets where EV hubs are being deployed.

About Hydrogenus Energy

Hydrogenus Energy has developed and patented the Intellectual Property for the modifications required to an Internal Combustion Engine to operate safely, effectively, and efficiently using hydrogen, injected at low pressure, as its only fuel.

The HYE modified ICE (HYE-ICE) hydrogen fuelled generator provides electricity on demand with a very high degree of control, regardless of load changes, and does not require high-purity hydrogen.

HYE is working with complementary IP developers to provide a generator that can be synchronised with the grid, offering grid firming services at a lower cost than a battery when energy is required to be stored for more than 4 hours, and can also provide grid firming services.

Hydrogenus has strong interest from numerous companies and organisations, both locally and internationally, interested in acquiring our products in the near term.

HYDROGENUS Energy Limited
Hydrogenus Energy Limited
ACN 163 460 884