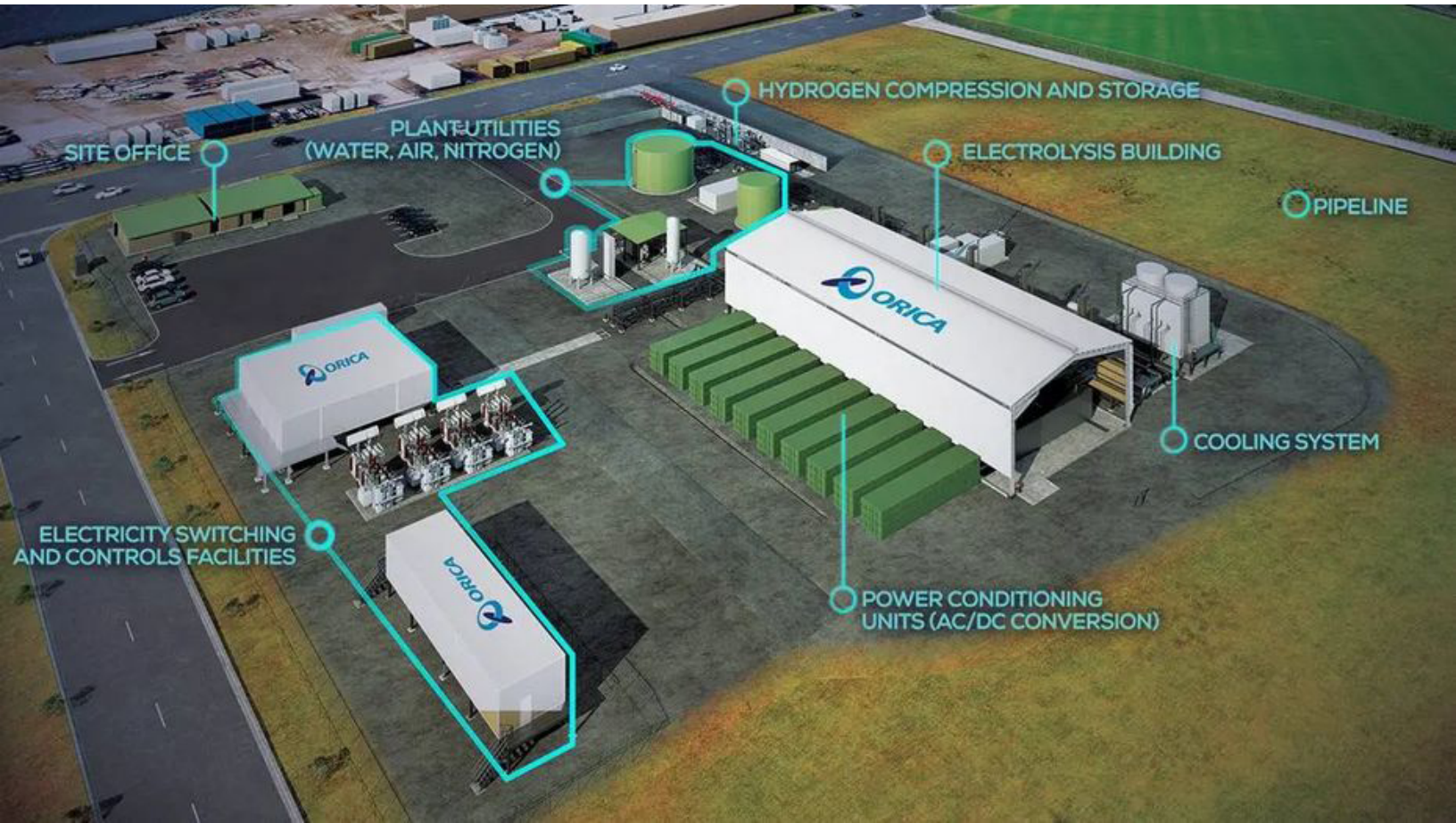
Plug Wins 50MW Electrolyzer Order as Orica's Hunter Valley Hub Becomes the Largest Australian Renewable Hydrogen Project to Reach FID

Delivering 50 MW of GenEco™ PEM Electrolyzer Technology to Help Transform Industrial Manufacturing in Australia



Executive Summary

The transition to low-carbon industry is increasingly moving beyond pilot projects and into commercial execution. Around the world, manufacturers are seeking practical ways to reduce emissions from existing operations while maintaining the reliability and scale required to serve essential industries.

Australia's Hunter Valley Hydrogen Hub represents one of the country's most important examples of that transition.

Developed by Orica, one of the world's leading providers of mining and infrastructure solutions, the project integrates renewable hydrogen directly into an operating ammonia manufacturing facility. Rather than building a standalone hydrogen plant, Hunter Valley demonstrates how renewable hydrogen can become part of existing industrial infrastructure, reducing dependence on natural gas while preserving domestic manufacturing capability.

Following Final Investment Decision (FID), Plug will deliver a 50 MW GenEco™ Proton Exchange Membrane (PEM) electrolyzer system for the project, making Hunter Valley the largest renewable hydrogen project in Australia to reach execution and the first recipient of Australia's Hydrogen Headstart program to do so.

For Plug, the project represents more than another electrolyzer order. It reflects growing customer confidence in Plug's ability to design, manufacture, and deliver commercial-scale hydrogen systems that move beyond concept into operation.

About the Customer

For more than 150 years, Orica has supplied critical products that support industries around the world. Today, its operations help serve mining, infrastructure, agriculture, food production, and manufacturing across more than 100 countries.

Among its largest manufacturing assets is the Kooragang Island facility in Newcastle, New South Wales, where ammonia and ammonium nitrate are produced for customers throughout Australia and the Asia-Pacific region.

As governments, customers, and industry increasingly prioritize emissions reduction, Orica recognized an opportunity to modernize one of Australia’s most important industrial facilities while maintaining reliable domestic production of essential products. The Hunter Valley Hydrogen Hub became the centerpiece of that strategy.

The Challenge

Decarbonizing heavy industry presents unique challenges.

Unlike many sectors that can transition through electrification alone, ammonia production depends on hydrogen as a chemical feedstock. Historically, that hydrogen has been produced from natural gas, making ammonia production one of the more carbon-intensive industrial processes.

Replacing conventional hydrogen production requires more than installing an electrolyzer. It requires integrating renewable hydrogen into an existing manufacturing process that operates continuously, safely, and at industrial scale.

The project demanded proven technology, experienced engineering, and an execution partner capable of delivering reliable hydrogen production for one of Australia's most significant manufacturing facilities.

Why Renewable Hydrogen Matters

The Hunter Valley Hydrogen Hub illustrates one of the most compelling applications for green hydrogen.

Rather than creating a new demand for hydrogen, the project replaces an existing fossil-based feedstock with renewable hydrogen produced using electrolysis.

Powered by renewable electricity, Plug's GenEco™ electrolyzers will produce approximately 4,700 tonnes of renewable hydrogen each year, reducing Orica's natural gas consumption by approximately 7.5% while supporting production of lower-carbon ammonia and ammonium nitrate.

Those products remain essential to Australia's mining, agriculture, food production, and industrial sectors, demonstrating how hydrogen can help reduce emissions without disrupting supply chains that communities depend upon.

Why Plug

Large industrial projects demand more than equipment.

Customers require confidence that technology will perform, projects will be delivered, and systems will integrate into complex operating environments.

Plug was selected to provide the Hunter Valley electrolyzer system because of its experience delivering commercial PEM technology and its ability to execute projects at industrial scale.

Unlike many equipment suppliers, Plug combines electrolyzer manufacturing with real-world experience designing, commissioning, operating, and supporting hydrogen systems across the globe.

Today, Plug has deployed more than 320 MW of electrolyzer capacity across six continents, providing customers with proven technology backed by operational expertise.

Hunter Valley builds upon Plug's growing presence in Australia, including previous deployments in Townsville and Chinchilla, while further expanding the company's footprint throughout the Asia-Pacific region.

The Plug Solution

Plug will supply a 50 MW GenEco™ PEM electrolyzer system engineered specifically for industrial hydrogen production.

The system will integrate with Orica's existing manufacturing operations to provide renewable hydrogen for ammonia production while supporting future expansion opportunities as Australia's hydrogen economy continues to develop.

The project demonstrates Plug's ability to deliver not only electrolyzer stacks, but a complete commercial hydrogen solution designed for long-term industrial operation.

Results at a Glance

Metric	Value
Electrolyzer Capacity	50 MW
Renewable Hydrogen Production	≈4,700 tonnes/year
Natural Gas Displacement	≈7.5%
Lower-Carbon Ammonia Production	≈26,600 tonnes/year
Annual CO_2 Reduction	≈35,000 tonnes CO_2-e
Project Status	Final Investment Decision (2026)

Supporting Australia's Hydrogen Future

Hunter Valley is significant not only because of its size, but because of what it represents.

The project demonstrates that renewable hydrogen has progressed beyond feasibility studies and pilot facilities into commercial industrial deployment.

Supported through Australia's Hydrogen Headstart initiative, Hunter Valley establishes a practical model for integrating renewable hydrogen into existing manufacturing operations while strengthening domestic industry, supporting regional employment, and building long-term energy resilience.

For Plug, the project reinforces a broader trend seen across global markets: customers are increasingly selecting experienced partners capable of executing large-scale hydrogen infrastructure as projects move from planning into construction.

Building the Global Hydrogen Economy

Hunter Valley joins a growing portfolio of commercial projects demonstrating Plug's ability to deliver hydrogen infrastructure at scale.

From Denmark and Portugal to Spain, the United Kingdom, North America, and now Australia, Plug continues to help customers transform renewable electricity into reliable industrial hydrogen production.

Each successful deployment strengthens Plug's operational experience, expands its installed base, and provides customers with greater confidence that hydrogen can serve as practical industrial infrastructure.

As more projects advance from award to execution, Plug remains focused on delivering the technology, expertise, and execution capabilities needed to build the global hydrogen economy.