

An illustration of the project



Hunter Valley Hydrogen Hub Fact Sheet



Planning is underway to prepare an environmental impact statement for the Hunter Valley Hydrogen Hub project planned for a site on Kooragang Island. In partnership with Orica, the project will deliver a safe, reliable and commercial-scale renewable hydrogen supply chain in the Newcastle industrial and port precinct.

The project is modest in size, a step towards further diversification around the Port of Newcastle. The hydrogen will be generated from renewable energy resources and sustainable water.

The facility is designed to be scaled up through subsequent phases offering future expansion, including additional hydrogen refuelling stations and potential integration to the existing gas network. Expanded production will help diversify the energy mix in the region, provide employment growth opportunities and provide an alternative energy source to help local industry to decarbonise.



About the partners

Origin and Orica are partnering to complete a feasibility study for the project.

Origin is one of Australia's leading energy companies, powering more than four million homes and businesses throughout Australia with electricity, gas, LPG and hot water.

With more than 5,200 employees across generation, retail, exploration and production and a growing interest in future energy and data-driven services, we want to lead the transition to lower emissions by connecting our customers to the energy and technologies of the future.

With over 145 years of expertise, Orica's 13,000+ community of engineers, scientists, technologists, operators, business specialists and on-site crew support customers in surface and underground mines, quarry, construction, and oil and gas operations. Safety is the top priority for the company, and it carries a strong reputation on safety.

What is hydrogen?

Hydrogen is the smallest, and most common element in the universe with the chemical symbol of H. When hydrogen burns, it reacts with the oxygen in the air to generate heat. This heat is then used to produce energy.

Why are we investing in hydrogen?

Hydrogen produced from renewable energy has tremendous potential to support decarbonisation in Australia and overseas because it is one of the most abundant elements in the universe and can deliver energy without carbon emissions.

Why Hunter Valley?

We've chosen the industrial area of Kooragang Island as the location for the Hub based on its proximity to high energy users, existing skilled workforce, existing energy infrastructure and land available for complementary business.

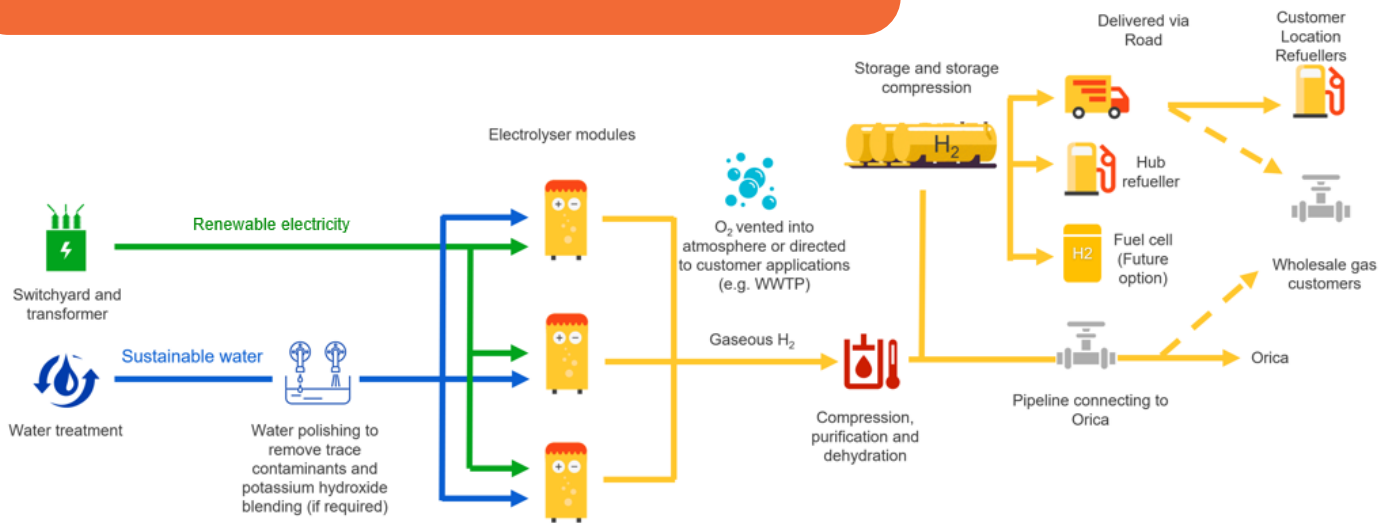
Want to know more?

We'd love to hear from you, reach out to us using the QR code



How is hydrogen produced?

Hydrogen is produced by taking water and splitting the hydrogen and oxygen atoms using a process called electrolysis. If renewable energy is used for electrolysis, the hydrogen produced is known as renewable hydrogen.



What is Origin doing to ensure the safety of the community?

Hydrogen, like many other gases, is highly flammable and can be dangerous if not handled correctly. Origin has extensive experience in generating, storing and transporting a range of gases such as LNG and LPG, following and often exceeding all Australian and state legislated regulations around safety and the environment.

These facilities are designed using strict codes and standards and are independently verified as safe to operate. As one of Australia's leading energy companies and leading suppliers of LPG, Origin safely operates Major Hazard Facilities throughout Tasmania, Victoria, New South Wales and Queensland. We will continue to strive for best practice in the design, build, operation of our facilities.

Is hydrogen safe to transport?

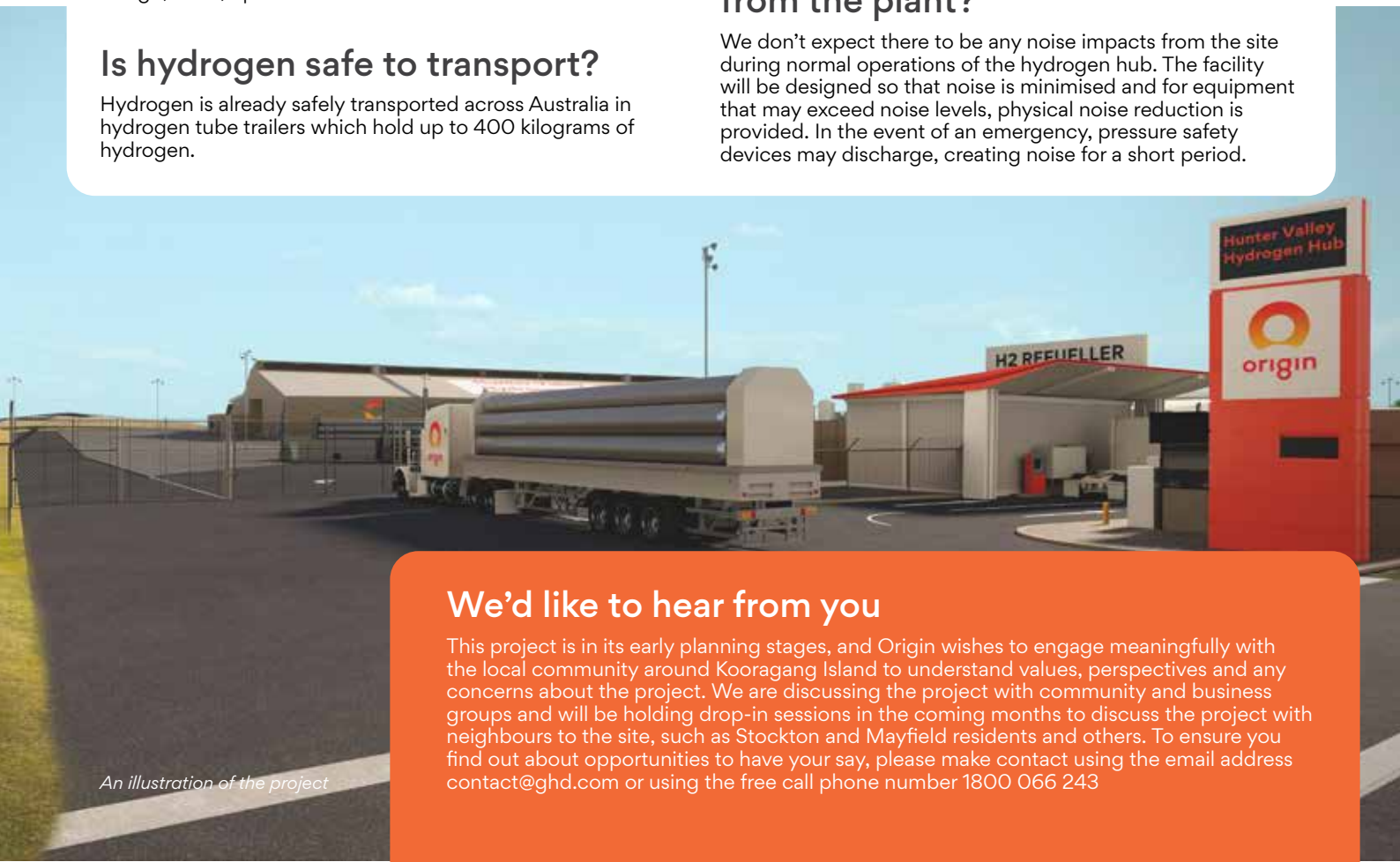
Hydrogen is already safely transported across Australia in hydrogen tube trailers which hold up to 400 kilograms of hydrogen.

What is sustainable water?

Sustainable water is water sourced responsibly from renewable sources in order to meet the needs of the present without compromising the needs of the future. The current proposal is to use locally sourced recycled wastewater to produce hydrogen through electrolysis. Recycled wastewater, also known as water reclamation and reuse, is physically and chemically treated wastewater to a quality suitable for its intended end use. Origin is already experienced at beneficial use of recycled water. Since 2014, Origin has been recycling water from its upstream gas operations and providing this water to farmers for irrigation.

What is the expected noise level from the plant?

We don't expect there to be any noise impacts from the site during normal operations of the hydrogen hub. The facility will be designed so that noise is minimised and for equipment that may exceed noise levels, physical noise reduction is provided. In the event of an emergency, pressure safety devices may discharge, creating noise for a short period.



We'd like to hear from you

This project is in its early planning stages, and Origin wishes to engage meaningfully with the local community around Kooragang Island to understand values, perspectives and any concerns about the project. We are discussing the project with community and business groups and will be holding drop-in sessions in the coming months to discuss the project with neighbours to the site, such as Stockton and Mayfield residents and others. To ensure you find out about opportunities to have your say, please make contact using the email address contact@ghd.com or using the free call phone number 1800 066 243