



Green
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ARENA

Port of Newcastle Green Hydrogen Hub

Frequently Asked Questions

WHAT IS THE PORT OF NEWCASTLE GREEN HYDROGEN HUB PROJECT?

The Port of Newcastle Green Hydrogen Project is a proposal for a green hydrogen production and distribution facility to be located at Port of Newcastle.

Green hydrogen is hydrogen produced from water and renewable electricity. The potential for green hydrogen is that it is emissions free and complementary to the build-out of renewable generation. The plant used to produce green hydrogen is called an electrolyser. For more information on green hydrogen, visit arena.gov.au/renewable-energy/hydrogen/

The Port of Newcastle Green Hydrogen Hub will be developed in phases, starting with 40MW in phase 1. Over time the size of the project has the potential to increase to over 1GW. To put it into context, 40MW can generate enough green hydrogen to power 900 buses for a year.

The project is currently in feasibility study stage, which includes exploring how the project could be developed and ways in which green hydrogen could be used. These uses include mobility, bunkering, energy production and other industrial uses, such as the production of green fertiliser.

For more information on the Port of Newcastle Green Hydrogen Hub, visit www.portofnewcastle.com.au/projects-and-development/pon-hydrogen-hub-project/

WHO IS BEHIND THE PORT OF NEWCASTLE GREEN HYDROGEN HUB PROJECT?

The Port of Newcastle Hydrogen Hub project is being co-developed by Port of Newcastle and Macquarie Group's Green Investment Group.

Port of Newcastle is Australia's deepwater global gateway, supporting trade worth about \$A26 billion each year. As custodians of Australia's oldest seaport, Port of Newcastle is diversifying its trade as it strives to create a safe, sustainable, and environmentally and socially responsible future.

Green Investment Group is a specialist in green infrastructure principal investment, project development and delivery, green impact advisory and the management of portfolio assets. Its track record, expertise and capability make it a global leader in green investment and development, dedicated to accelerating the green transition. As part of Australian-headquartered Macquarie Group, Green Investment Group has investments or operations in over 25 markets and a global development pipeline of over 35 GW.





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During the feasibility study, we are partnering with a range of high-calibre regional and international organisations to better understand the ways in which green hydrogen produced at Port of Newcastle could be used. These include Idemitsu, Keolis Downer, Lake Macquarie City Council, Snowy Hydro and Jemena. Macquarie Group's agriculture funds management platform will also participate in the feasibility study, focusing on green ammonia for producing fertiliser. We are also partnering with University of Newcastle on research and development.

The Australian Government, through ARENA, is supporting the feasibility study through a \$A1.5 million grant under its Advancing Renewables program.

WHY PORT OF NEWCASTLE?

The Hunter has a strong industrial heritage, and as the oldest seaport in Australia, Port of Newcastle has supported the region's economy through providing vital links for our importers and exporters to international markets.

As the Hunter's economy diversifies to include low-carbon industries, we believe green hydrogen will play a vital role and Port of Newcastle is ideally placed to contribute.

Specifically, Port of Newcastle offers:

- World-class export infrastructure
- Links to domestic road and rail networks
- Proximity to existing demand
- Proximity to renewable energy zones
- Access to and relationships with key energy supply chains

The Port also has land for future growth and a shipping channel that has the capacity for new export industries.

HOW MANY JOBS WILL THIS PROJECT CREATE?

This project will create direct jobs during construction and operations and support the creation of indirect jobs through the development of new industries.

Once the feasibility study has been completed, we will have an indicative number of direct jobs that will be created by the project.





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WHAT IS INVOLVED IN PRODUCING GREEN HYDROGEN? IS IT SAFE?

Green hydrogen is hydrogen produced from water and renewable electricity. Using an electrolyser, renewable electricity is used to separate water into hydrogen and oxygen. By using renewable electricity to conduct the electrolysis, there are zero emissions from producing the hydrogen, making it green. For more information on green hydrogen, visit www.arena.gov.au/renewable-energy/hydrogen/

We are very focused on safety and an assessment of the safety requirements for this project will be a key part of the feasibility study. Fortunately, this is not a new industry and we will be able to make use of the experience of existing industry, which includes hydrogen production for chemical manufacturing and refining.

WHAT STAGE IS THE PROJECT AT?

The project is currently in the feasibility study stage, which includes working with our project partners to better understand the diverse possible uses for green hydrogen. Those uses include mobility (hydrogen trucks and buses), bunkering, energy production, and industrial uses.

Information on the Port of Newcastle Green Hydrogen Hub Project can be found at www.portofnewcastle.com.au/projects-and-development/pon-hydrogen-hub-project/

HOW LONG WILL THE FEASIBILITY STUDY TAKE TO COMPLETE? WHEN WILL YOU START CONSTRUCTION?

Green hydrogen is a new technology, albeit one that has attracted a lot of interest in Australia and internationally.

Our objective is to conduct a careful and rigorous exploration of the use cases for green hydrogen produced at Port of Newcastle Hydrogen Hub, including the local and regional demand.

Once the feasibility study has been completed, we can determine whether the project can move into development and construction. While it is too soon to estimate when the project would commence operations, our goal is to be at 1GW capacity by 2030 so that we can support a range of domestic and export industries.

