

About Hydrogen Park Gladstone

ABOUT

Hydrogen Park Gladstone (HyP Gladstone) is a small demonstration facility designed to produce renewable hydrogen to start to decarbonise domestic gas supply in Gladstone.

Proudly supported by the Queensland Government with grant funding of up to \$1.78 million from the Hydrogen Industry Development Fund, HyP Gladstone is an important first step in the development of a sustainable renewable hydrogen economy as supported by the Queensland Hydrogen Industry Strategy 2019-2024.

At HyP Gladstone, we are proposing to produce renewable hydrogen using a 175 kilowatt electrolyser with water and renewable electricity.

The renewable hydrogen is blended with natural gas at volumes of up to 10% and supplied to nearby homes and businesses via the existing gas network.



Artist's impression of the proposed HyP Gladstone project at Lot 43, South Gladstone

Want to know more?

AGN will continue to provide regular updates to the community throughout the project.

If you have any further questions or would like to be kept informed about receiving renewable blended gas, visit our website by scanning the QR code below:



A pathway to cleaner energy

Up to 10%
blended
renewable gas
in Gladstone

For more information
blendedgas.agn.com.au

ABOUT AUSTRALIAN GAS NETWORKS

Australian Gas Networks (AGN) is one of Australia’s largest gas distribution companies. Our networks serve more than 1.3 million homes and businesses in South Australia, Victoria, Queensland, New South Wales and the Northern Territory.

As a longstanding owner of gas infrastructure in Gladstone and throughout Central Queensland, AGN is proud to contribute to a low carbon economy, and to be an important first step in the development of a sustainable renewable hydrogen economy as supported by the Queensland Hydrogen Industry Strategy 2019-2024.

WHAT IS HYDROGEN?

Hydrogen is the simplest and most abundant molecule in the universe. It is colourless, odourless, non-toxic and an excellent carrier of energy.

Like natural gas, hydrogen can be used to heat buildings, power vehicles and produce electricity. Unlike natural gas, when burned, hydrogen produces only heat and water vapour - no carbon emissions.

WHY THE PROJECT?

This project reduces the amount of carbon in our gas network.

On our distribution networks, we are targeting 10% renewable gas by volume by 2030, and offering 100% renewable gas to new housing estates by no later than 2025. Our aim is to fully decarbonise our distribution networks by 2040 as a stretch target and by no later than 2050.

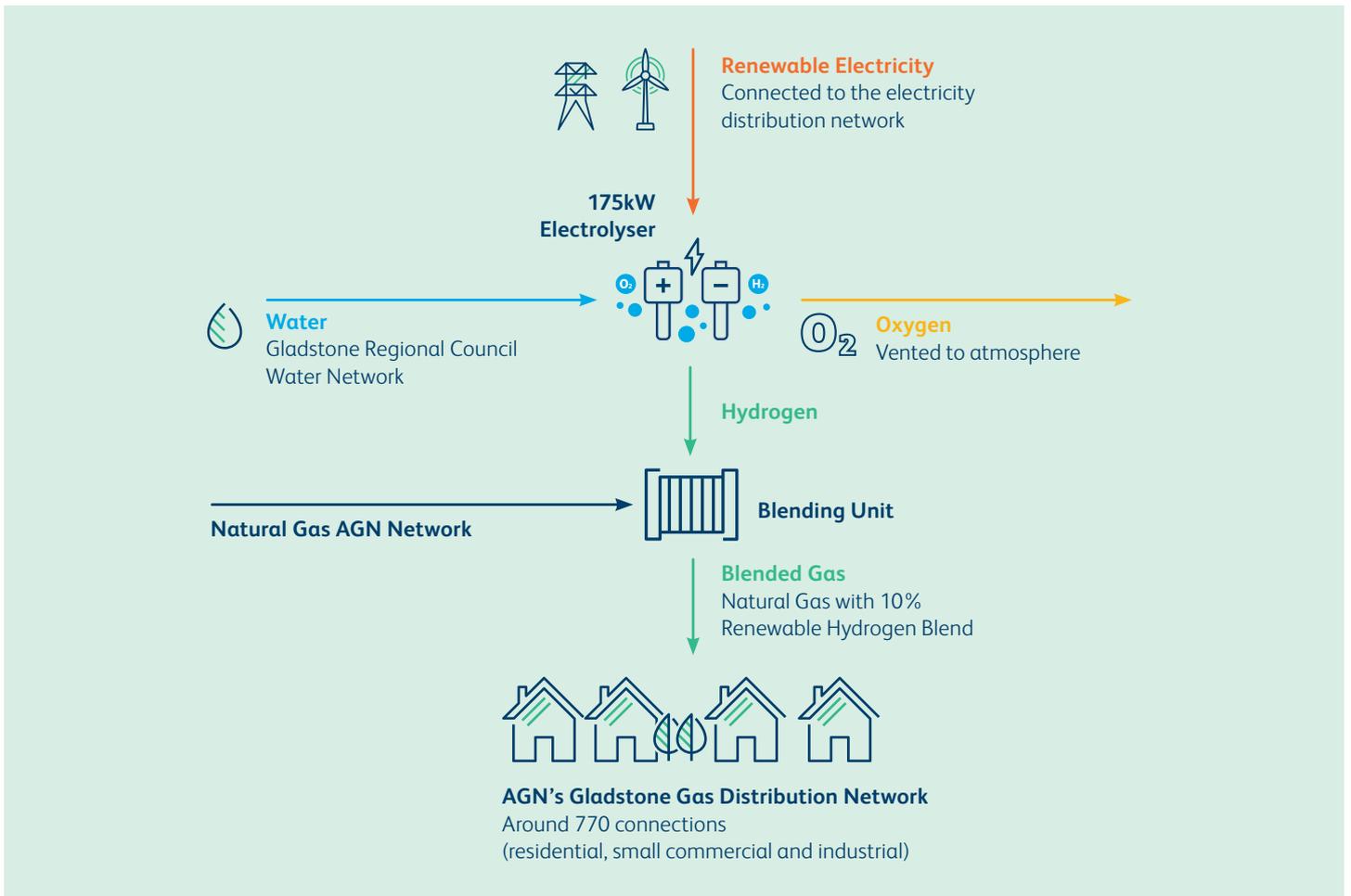
HOW IS IT MADE?

We are planning to produce hydrogen using an electrolyser, which splits water into hydrogen and oxygen using renewable electricity. This process has been around for a long time, first appearing in the 1800s and is in use around the world today.

HyP Gladstone will use a relatively small 175 kilowatt Proton Exchange Membrane electrolyser, which can produce up to 2.75 kilograms of hydrogen per hour. The electrolyser can rapidly respond to fluctuations in the electricity market, ramping up when renewable electricity is abundant and switching off in times of high electricity demand.

The water volumes consumed to produce hydrogen are low, an average of 101L litres per hour over a 24hr period. Annual volumes used to produce the hydrogen will be very low, the equivalent to six “water wise” households according to Gladstone Regional Council guidelines.

THE HYDROGEN PRODUCTION PROCESS



THE FACILITY

The HyP Gladstone facility is modular, with key components outlined in the below artists impression.

Very similar facilities have already been established by businesses similar to ours in the Perth suburb of Jandakot, and in the Canberra suburb of Fyshwick. We are already producing hydrogen at our existing Hydrogen Park South Australia facility located in the metropolitan Adelaide suburb of Tonsley.

There are no plans to expand production capacity at this site. There is potential to develop a refuelling facility (similar to a small petrol station) alongside HyP Gladstone. This concept is at an early stage and would be subject to a separate Development Application and approvals process in the future, which would consider all relevant issues including traffic and noise.

THE SITE

The HyP Gladstone facility is planned to be located on Derby Street, South Gladstone on a 30x37 metre site (approx. 1,110 square metres), an area similar to around four tennis courts or one Olympic-size swimming pool.

The location selection was driven by a need to relocate our natural gas City Gate for Gladstone, which is contained within this site. The existing City Gate on Breslin Street (near the Dawson Highway) is nearing the end of its operational life and requires relocating.

The City Gate takes gas from the transmission pipeline network and reduces its pressure for use in the distribution network which supplies homes and businesses in Gladstone, so needs to be located close to both distribution and transmission pipelines.

SAFETY

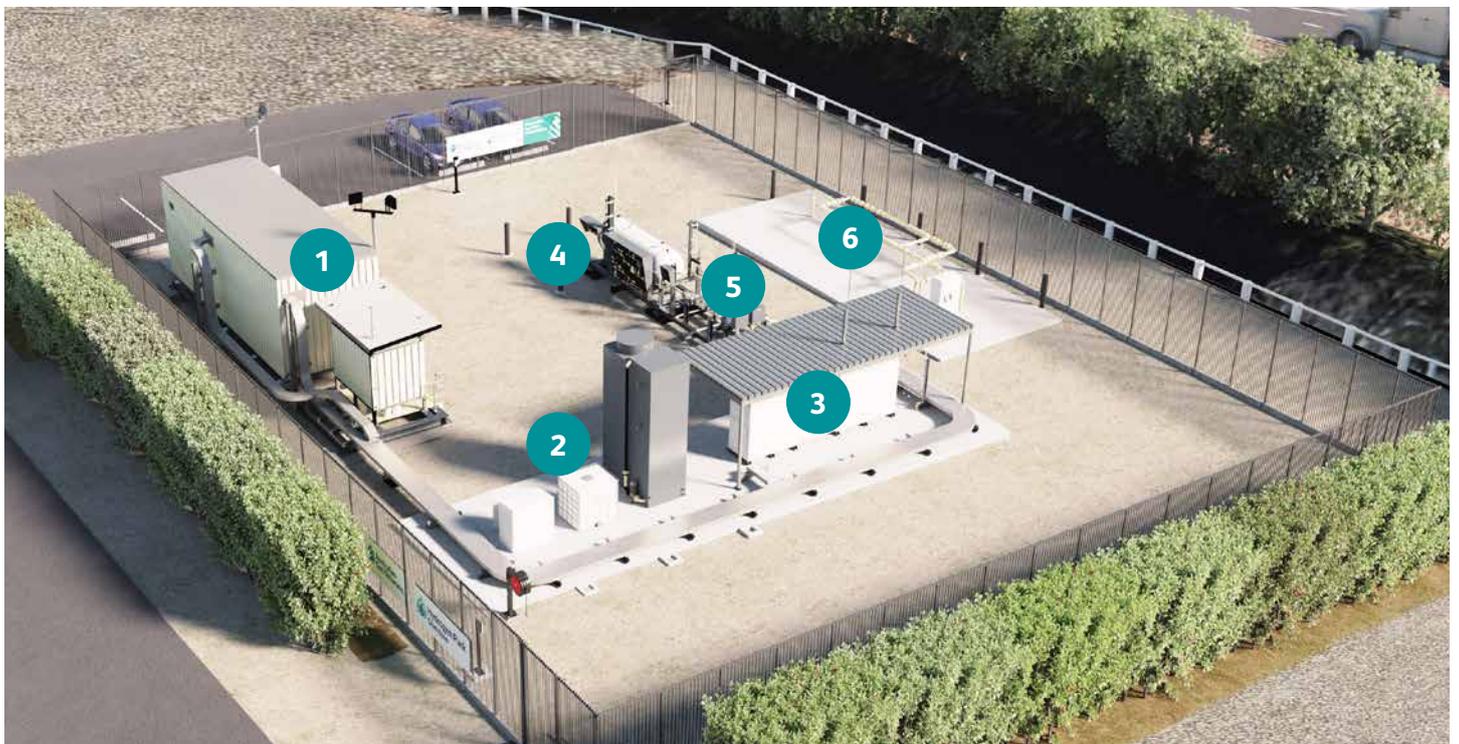
Safety is our number one priority. At AGN, we are experts in developing and operating gas infrastructure – the core elements of what we deliver are safe and reliable energy services.

At HyP Gladstone, only small volumes of hydrogen are proposed to be stored on-site (approximately 10kg) which is a similar amount of energy to four standard 8.5kg barbecue LPG bottles.

Hydrogen, like other fuels, is flammable and this is a key reason it can provide us with energy. It also means we need to treat hydrogen with respect, as we do natural gas, electricity, petrol and other energy carriers.

We are subject to regulation by government bodies, which are designed to ensure our commitment to safety, reliability and service continues. We will have all necessary approvals in place before production begins.

FACILITY SNAPSHOT



1 Communications Room and Gas Analyser Hut

2 Water Purification Unit and Services

3 Electrolyser Unit (under shelter)

4 Hydrogen Storage Vessel

5 Hydrogen Blending Skid

6 Gladstone City Gate

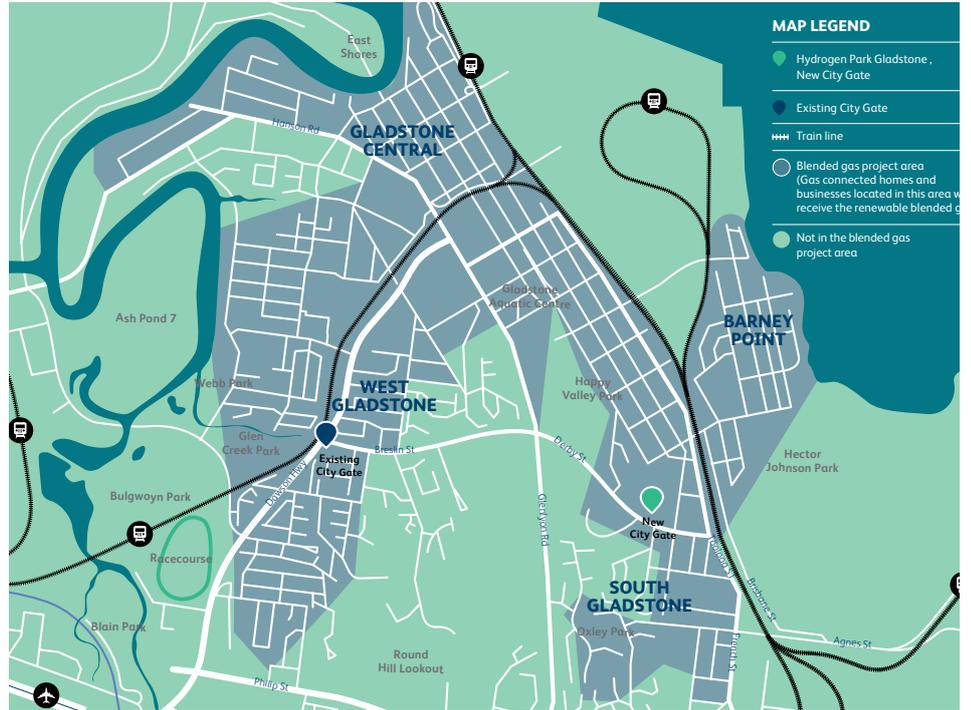
WHAT IT MEANS FOR CUSTOMERS

Residents and businesses connected to the gas distribution network in Gladstone Central, Barney Point, South Gladstone and West Gladstone will receive the 10% renewable gas blend.

These properties were first informed by way of a letterbox drop, local paper notices and social media advertising in August 2021.

If you are in the blended gas project area and connected to the natural gas network, you are not required to do anything as part of the project. You will not notice any difference to the quality of the gas you receive.

Furthermore, the project will not impact any existing arrangements you have in place with your gas retailer, the amount you pay for blended gas will be no different to the cost of 100% natural gas.



HYDROGEN PARK GLADSTONE TIMELINE

<p>Phase 1: Planning and Design Mid 2020 to Mid 2021 Planning and design of onsite infrastructure at Hydrogen Park Gladstone</p> <p>2020</p>	<p>Phase 2: Engagement and Approvals Mid 2021 Development application lodged, Gladstone community introduced to project with support through ongoing engagement</p>	<p>Phase 3: Construction and Commissioning Early 2022 to September 2022 Construction and commissioning of the Hydrogen Park Gladstone facility</p>	<p>2022</p> <p>Phase 4: Blended Gas Flows Commence September 2022 Properties on the Gladstone gas distribution network will receive 10% renewable blended gas</p>
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Find out more

-  Go online and visit blendedgas.agn.com.au
-  Email our project team at communityengagement@agig.com.au
-  Call 1300 001 001 and press option 8 to speak to our friendly team