

## PROPOSED HYDROGEN REFUELLER @H2PERTH

Woodside Energy (Woodside) is a global energy company, founded in Australia. Our vision is to provide the low-cost, lower carbon<sup>1</sup> energy the world needs. Our focus is on three pillars – gas, oil and new energy – which all have a role to play. Our new energy portfolio includes the proposed Hydrogen Refueller @H2Perth.

We are proposing to develop the Hydrogen Refueller @H2Perth, a self-contained hydrogen production, storage and refuelling station.

The Refueller aims to supply renewable hydrogen<sup>2</sup> to local customers, stimulating and enabling hydrogen demand in Western Australia and demonstrating capability. The Refueller also helps to support the State Government objectives for hydrogen to be a significant fuel source for transport by 2030.

Hydrogen Refueller @H2Perth is proposed to be built on vacant industrial land in the Rockingham Industry Zone (RIZ), just south of Perth and adjacent to our proposed H2Perth project.

The facility would be located on the Gnaala Karla Booja (GKB) region of the Noongar Nation.

The GKB region refers to the Noongar language or dialectal groups of the Binjareb/Pinjarup, Wilman and Ganeang and Wardandi.

We acknowledge the connection of Noongar people to that Country, and their Elders - past and present.

### H2Perth

Woodside is also progressing a separate hydrogen opportunity, called H2Perth.

H2Perth is a proposed domestic and export scale hydrogen production facility, to be located within the RIZ.

H2Perth offers an opportunity for Woodside and for Western Australia, by making hydrogen available to local and international customers, creating employment and local content opportunities, as well as providing an opportunity to establish a new strategic export industry.

For more information, visit the Woodside website at: [www.woodside.com](http://www.woodside.com)



Figure 1 - Hydrogen Refueller @H2Perth schematic. Conceptual only, not to scale. Subject to commercial arrangements and regulatory approvals which may result in changes to the overall development concept.

1) Woodside uses this term to describe the characteristic of having lower levels of associated potential GHG emissions when compared to historical and/or current conventions or analogues, for example relating to an otherwise similar resource, process, production facility, product or service, or activity.

2) The Hydrogen Refueller @H2Perth proposes to use electricity sourced from the South-West Inter-connected System and to procure Renewable Energy Certificates from eligible renewable energy sources under the Renewable Energy (electricity) Act 2000.

## Project snapshot

<b>Proposed activity</b>	Production and storage of hydrogen for local supply
<b>Proposed location</b>	The facility would be built within an area of up to approximately 1.25 ha of vacant industrial land in the RIZ, which is located in the Rockingham and Kwinana Local Government Areas
<b>Approvals</b>	Woodside is in the process of obtaining necessary environmental and regulatory approvals
<b>Production methods</b>	Electrolysis, proposed via a 2.6 MW electrolyser powered by 100% renewable electricity <sup>2</sup>
<b>Estimated production</b>	Woodside is targeting an initial production of approximately 0.235 tonnes per day (tpd) of hydrogen, with the potential to scale up to approximately 1 tpd
<b>Project status</b>	Woodside took FID on the Hydrogen Refueller @H2Perth in May 2023 and is targeting supply of hydrogen to customers in 2025

### Hydrogen Refueller @H2Perth: helping drive development of a local hydrogen market

Hydrogen has many different uses. One of the expected uses of hydrogen includes heavy duty road transportation: diesel substitution where hydrogen can offer operational benefits compared to battery electric trucks. Vehicle manufacturers around the world are already developing fuel cell-based vehicles that need hydrogen as fuel.

We are intending to help accelerate the uptake of hydrogen fuelled vehicles in Western Australia, by developing the Hydrogen Refueller @H2Perth, a self-contained hydrogen production, storage and refuelling station.

This facility would supply renewable hydrogen<sup>2</sup> fuel to industrial customers and the public (subject to safety, security and operational procedures). This would help to stimulate and enable hydrogen demand in Western Australia, as well as supporting State Government objectives for hydrogen to be a significant fuel source for transportation by 2030.

### Intending to be net zero from the start of operations

Hydrogen can be produced through a variety of different methods, and although hydrogen does not emit carbon when it is used, some methods of making hydrogen do generate emissions.

At the Hydrogen Refueller @H2Perth, Woodside is proposing to produce hydrogen using electrolysis. This is a process where electricity is used to separate hydrogen (H<sub>2</sub>) from water (H<sub>2</sub>O). Depending on the source of the electricity used, electrolysis can have varying emissions profiles.

Woodside's intent is for the Hydrogen Refueller @H2Perth to be net zero Scope 1 and 2 greenhouse gas emissions from the start of operations. To achieve this, the Hydrogen Refueller @H2Perth is proposed to be powered by 100% renewable electricity<sup>2</sup>.

### Collaborating to make low cost, lower-carbon<sup>1</sup> energy available to local customers

A key part of our new energy strategy is to collaborate with potential customers, research organisations, governments and others to develop demand for new energy products.

In July 2023, Woodside entered into an agreement with the State of Western Australia for funding under the Western Australian Government's A\$10m Hydrogen Fuelled Transport Program for the Hydrogen Refueller @H2Perth.

Woodside has established a dedicated team to stimulate local demand and support offtake from the Hydrogen Refueller @H2Perth. Woodside is also proposing to lease a small fleet of passenger vehicles which are to be refuelled at the facility.

### Environmental assessment

The Hydrogen Refueller @H2Perth is proposed to be located in the Rockingham Industry Zone, which is subject to existing primary State and Commonwealth environmental approval requirements under the *Environmental Protection Act 1986* (EP Act) (Ministerial Statements 863 & 1043) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2010/5337), respectively. Woodside is engaging with both State and Commonwealth regulators so that the appropriate primary approval mechanisms are applied to the proposed development.

In addition to these primary environmental approval requirements, Woodside has also referred the project to the City of Rockingham under the *Planning and Development Act 2005* (WA), and has submitted a Works Approval to the Department of Water and Environmental Regulation (DWER) under Part V of the EP Act. Following the completion of construction, Woodside will seek to licence the Hydrogen Refueller under Part V of the EP Act.

These will be available for public comment via usual public comment processes.

### Environmental and social considerations

A number of environmental and social studies have been undertaken as part of the environmental assessment and approval process for the proposed facility.

This includes the completion of a noise attenuation study, a bushfire risk assessment, a traffic and transport assessment, as well as archaeological and ethnographic surveys.

These studies have informed environmental baselines, identified environmental and social sensitivities, helped guide the concept designs and operational planning for the Hydrogen Refueller @H2Perth, as well as informed mitigation strategies.

### Further Information

For further information or request to be consulted by Woodside on this activity please see contact details below:  
Email: [Feedback@woodside.com](mailto:Feedback@woodside.com) Toll free: 1800 442 977

1) Woodside uses this term to describe the characteristic of having lower levels of associated potential GHG emissions when compared to historical and/or current conventions or analogues, for example relating to an otherwise similar resource, process, production facility, product or service, or activity.

2) The Hydrogen Refueller @H2Perth proposes to use electricity sourced from the South-West Inter-connected System and to procure Renewable Energy Certificates from eligible renewable energy sources under the Renewable Energy (electricity) Act 2000.