

Central Perth location for WA's first public green hydrogen refuelling station

HIGHLIGHTS

- Frontier Energy and City of Perth to develop WA's first publicly available green hydrogen refuelling station in West Perth
- Proposed location of refuelling station is approximately 2km from Central Perth
- WA Government has identified domestically produced green hydrogen as a key to reducing WA's reliance on diesel imports
- There is vast potential for reducing WA's emissions by replacing diesel and petrol with green hydrogen in transport and bulk haulage

Frontier Energy Limited (ASX: FHE; OTCQB: FRHYF) (Frontier or the Company) is pleased to announce it has reached an in-principle agreement with the City of Perth for the development of WA's first publicly available Green Hydrogen Refuelling Station (**Refuelling Station**).

Frontier and the City of Perth have identified and selected a convenient and accessible location for this refuelling station on City of Perth-owned land at Thomas St, West Perth. This location is approximately 2km from Central Perth, near the Mitchell and Kwinana Freeway access points. Hydrogen powered vehicles have faster refuelling times and the ability to travel longer distances carrying larger loads before refuelling.

Development of this refuelling station is subject to final approvals, as well as a Final Investment Decision by Frontier.



Image 1 – Map of Refuelling Station location and surrounding infrastructure

Perth City Lord Mayor Basil Zempilas commented: *“Hydrogen-fuelled cars are predicted to grow in popularity over the coming years so having a city-based refuelling station forms an important part of our sustainability plan.*

“Frontier Energy is working to become one of the first companies in Australia to produce green hydrogen commercially and will be an important partner for the City as we strive to create a healthy city where environmental, social and economic systems are in balance.”

Frontier Managing Director, Sam Lee Mohan, commented: *“The displacement of diesel by hydrogen, most notably in the long haulage industry, is likely to be a major market for hydrogen in the future. Critical to the development of this industry is not only the development of the green hydrogen product, but also the development of critical associated infrastructure such as refuelling stations.*

“This initiative aligns with Frontier's long-term ambition to become a vertically integrated producer across the renewable energy sector, including green hydrogen. The Company would like to thank the City of Perth for its work in arriving at this point and we look forward to developing this exciting project together.”

Using green hydrogen to replace diesel and petrol

Hydrogen can be used as fuel to power Fuel Cell Electric Vehicles (FCEV) including cars, buses, trucks, and trains. Refuelling hydrogen cars, buses and trucks requires a network of refuelling stations, similar to the existing petrol station network.

Benefits:

FCEVs are more efficient than conventional internal combustion engine vehicles and produce no harmful tailpipe emissions. The advantages of hydrogen powered vehicles compared to battery electric vehicles include faster refuelling times and the ability to travel longer distances carrying larger loads before refuelling.

This is perhaps most apparent in long-haul road transportation, which is hugely important to WA's economy, where the combination of battery weight, extended recharging times and limited range are impediments for purely electric solutions. On each of these factors, FCEVs offer an attractive alternative.

When energy contained in fuel and engine efficiencies are accounted for, hydrogen in a FCEV drive is approximately equivalent to 4 - 6 times diesel on a \$/kg basis. This implies that a \$8-12/kg hydrogen price is equivalent to a ~\$2/kg diesel price (in line with current prices), as measured by equivalent output in a diesel car or a FCEV. Additional premium for zero emissions is likely to accrue to hydrogen used in transport.

Refuelling station technology and FCEV technology is maturing, with stations and fleets being rolled out globally.

WA Opportunity:

Currently, there are no publicly accessible refuelling stations in WA and only a very small FCEV fleet.

The development of the Refuelling Station in West Perth will be the first of its type in WA. Publicly available green hydrogen refuelling stations are already developed in other major cities in Australia and are commonplace throughout Europe, Asia and the United States.

WA Government Objectives:

Current emissions in WA from diesel and petrol are vast, as each of the roughly 9.6 billion litres¹ consumed every year produces more than 2kg of CO₂. The WA Government has identified domestically produced green hydrogen as a key part of the strategy to reduce the reliance on diesel, which is currently all imported. Currently WA imports approximately 7.8 billion litres of diesel per year, which contains the energy equivalent to 2 billion kg of hydrogen.

Frontier Actions:

In addition to the City of Perth location, the Company envisages the development of several green hydrogen refuelling stations alongside major transport routes, with the hydrogen to be supplied from the Company's Bristol Springs Renewable Energy Project in the long term.

Frontier has engaged with major vehicle manufacturers about its development of green hydrogen refuelling stations. The Company will continue to work through the various approvals requirements, technical studies and financing options prior to making a Final Investment Decision.

Authorised for release by the Board of Frontier Energy Limited

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¹ 12 months to June 2023; source: <https://www.energy.gov.au/publications/australian-petroleum-statistics-2023>



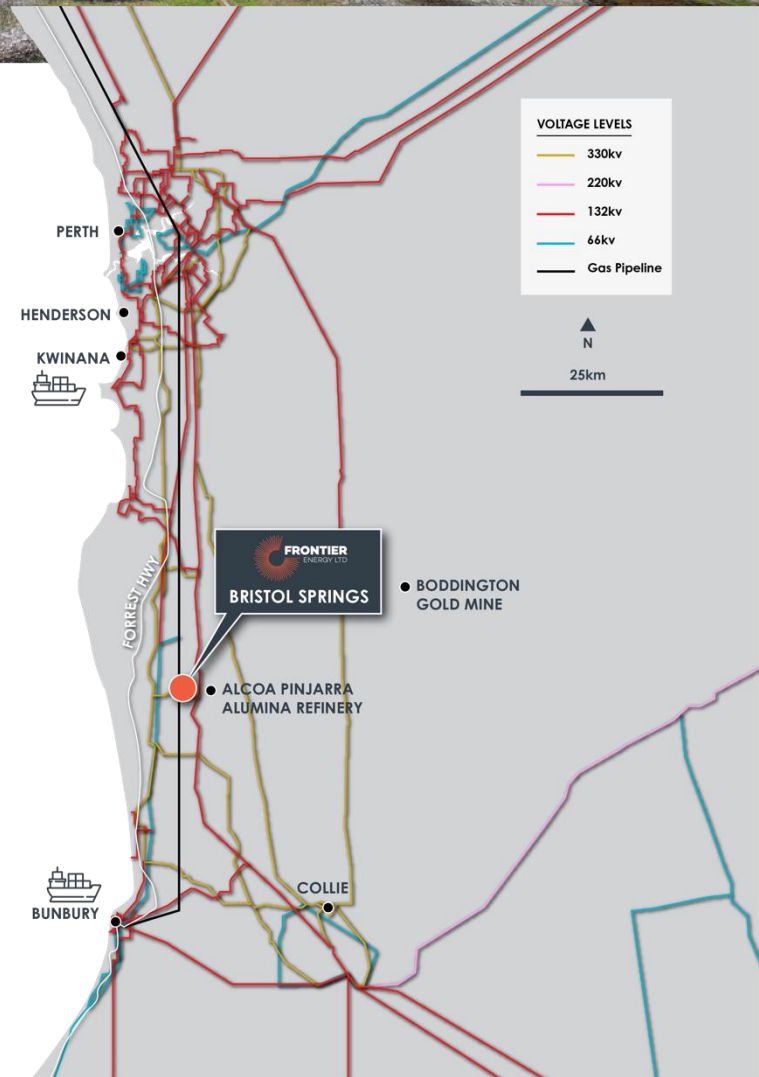
About Frontier Energy

Frontier Energy Ltd (ASX: FHE; OTCQB: FRHYF) is developing the Bristol Springs Renewable Energy Project (the Project) located 120km from Perth in Western Australia.

The Company recently completed a Definitive Feasibility Study¹ that outlined the Project's potential to be both an earlier mover and one of the lowest cost green hydrogen assets in Australia.

The Project benefits from its unique location surrounded by major infrastructure. This reduces operating and capital costs compared to more remote hydrogen projects, whilst also being surrounded by likely early adopters into the hydrogen industry in the transition from fossil fuels.

¹ASX Announcement 20th March 2023



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For a comprehensive view of information that has been lodged on the ASX online lodgement system and the Company website, please visit asx.com.au and frontierhe.com, respectively.