

**Submission
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INQUIRY INTO DEVELOPMENT OF A HYDROGEN INDUSTRY IN NEW SOUTH WALES

Organisation: APA Group
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NSW Parliament

Legislative Council's Standing Committee on State Development

Macquarie Street, Sydney, NSW

The development of a hydrogen industry in NSW

To the Director, NSW Legislative Council Standing Committee on State Development,

About APA

APA is a leading Australian energy infrastructure business listed on the ASX – APA owns and/or operates assets across Australia, including 15,000 kilometres of gas transmission pipelines.

Our transmission pipeline network delivers about half the nation's natural gas usage.

APA is currently the sixth largest commercial owner of renewable power generation assets in Australia.

Supporting the energy transition

While gas will continue to play a critical part in our nation's energy mix, APA also understands that there are opportunities in supporting the development of technologies that can assist with Australia's transition to a low carbon economy.

The recent inclusion of APA's Technology and Transformation function within the business's operating model is aimed at enabling APA to effectively respond to the opportunities of decarbonisation, decentralisation, and digitisation.

This function will drive the identification of emerging market opportunities while delivering business transformation, continuous improvement initiatives and technology solutions within our day-to-day business.

The role of hydrogen

With hundreds of billions of dollars already invested in gas networks and infrastructure, it makes sense to explore the potential opportunities to use Australia's existing gas transmission and distribution infrastructure to distribute clean molecules, such as hydrogen, as one of those pathways.

A Frontier Economics' study has shown that continuing to use gas infrastructure can reduce emissions at half the cost to customers than electrifying the services provided by gas.

Transmission of hydrogen at scale is also a critical part of the Australian government's hydrogen economy ambition. But there is a long way to go to both prove the technology and to deploy it at scale.

To that end, we welcome commitments by Australian governments to set hydrogen blending mandates, such the Western Australian Government's goal to blend 10 per cent hydrogen by 2030.

This an important step to enable the commercialisation of hydrogen technologies and bring-forward the work required to solve some of the regulatory challenges associated with conversion of gas infrastructure.

APA's support for hydrogen

APA is actively exploring the potential of hydrogen in the Australian context. APA's gas pipelines are linked and adjacent to the best geographical areas for both blue and green hydrogen production in Australia.

We have already commenced work in Western Australia to demonstrate the safety of hydrogen transmission pipelines and support the development of Australian standards under our new Pathfinder Program.

APA's new Pathfinder Program, which will be a key enabler in our pathway to our new ambition for net zero operations emissions by 2050, will seek out opportunities to extend our core business, including into pilot projects, equity investments and R&D.

This will help us unlock the innovation, technology and new opportunities that will make us world-class in energy solutions.

Our initial focus will be on clean molecules, off-grid renewables and storage. Our first Pathfinder project, which is in partnership with Future Fuels Cooperative Research Centre and Wollongong University, proposes to enable the conversion of around 43-kilometres of the Parmelia Gas Pipeline in Western Australian into Australia's first 100 per cent hydrogen-ready transmission pipeline.

This project carries enormous significance for APA and the entire industry, facilitating research and development to progress Australia's hydrogen economy.

As a proud Australian business, APA is excited to be bringing international best practice to Australia in this national first, which we expect will test and prove the capacity of the existing gas transmission pipeline network to transport hydrogen in pure form or blended with natural gas.

If successful, this will be one of only a few such hydrogen-ready transmission pipelines in the world and will be a real game-changer for Australia.

The 43-kilometre section of the Parmelia Gas Pipeline in Western Australia supplies the Kwinana industrial precinct in south Perth, where a number of existing customers already rely on hydrogen for industrial processing, as well as natural gas.

It will create a significant opportunity for the development of a hydrogen hub, linked to a large industrial base and transport hubs, with the potential to one day service export markets.

Following the completion of the pilot project, the results will support decision-making for the potential transition of other APA assets to be hydrogen-ready.

APA is also involved in a cutting edge partnership with Southern Green Gas to develop a renewable methane pilot at Wallumbilla in Queensland.

This carbon neutral project, with support from the Australian Renewable Energy Agency (ARENA), is investigating whether it is possible to create methane using solar powered electricity (water and CO₂ from the atmosphere on an industrial scale).

Renewable methane is in effect indistinguishable from the methane that currently fills our natural gas pipelines and therefore offers a potential solution to creating a new export industry for Australia.

The reason we have chosen methane as the carrier for renewable energy as part of this pilot project is the ability to use the existing gas infrastructure system.

It would be one example of how you can decarbonise methane while making the most of existing infrastructure.

APA's transmission gas pipelines are located in key strategic positions across Australia and NSW, including in close proximity to NSW Renewable Energy Zones where access to renewable electricity could support the production of green hydrogen.

There are significant opportunities for the development of clean molecules in NSW, which will help drive investment, commercialisation of hydrogen and job creation.

APA is committed to exploring new technologies and potential opportunities of how we can adapt our infrastructure and expertise to accommodate new energy such as renewable methane and hydrogen.

We would welcome the opportunity to discuss our interest in this area with you further.

Yours sincerely,

Hannah McCaughey

APA, Group Executive, Transformation and Technology