

27 July 2019  
COAG National Hydrogen Strategy  
via [online](#) portal

## **Roads Australia Submission**

### **Issues Paper 8 – Hydrogen for Transport**

#### **Introduction**

Roads Australia (RA) is Australia's peak body for roads within an integrated transport system. We bring industry, government and the community together to lead the evolution of Australia's roads, integrated transport and mobility networks.

The nation's only roads champion, Roads Australia's 150+ members include all of Australia's road agencies, major contractors and consultants, motoring clubs, service providers and other relevant industry groups. Roads Australia strives to achieve a robust integrated transport system that values and invests in all land transport modes, including roads, vehicles, freight, public transport, rail, cycling and walking. Roads Australia upholds the principles of a safe, inclusive, sustainable, economic and socially valuable roads industry for all Australians.

#### **Roads Australia and Hydrogen for Transport**

RA welcomes the opportunity to continue our support for the COAG Energy Council development of a National Hydrogen Strategy. This submission provides general comments which may assist the Hydrogen Working Group in their deliberations on the benefits, risks and barriers to using hydrogen as a transport fuel in Australia by 2030, as outlined in *Issues Paper 8*. Recommendations are reiterated in the conclusion of the submission.

Roads Australia agrees with the Issues Paper finding that service station owners and franchisees may have limited interest in investing in hydrogen fuel cell electric vehicle (FCEV) refuelling, particularly in the low demand, early market development period. However, for road transport, the interest by traditional international fossil fuel companies in hydrogen should not be discounted. Rather than being seen as a potential competitive barrier to the introduction of FCEV in Australia, these companies are likely to have a strong influence on service station infrastructure and fuel delivery if they see FCEV as a future part of their vertically integrated businesses.

As an example, in the USA, Shell has a network of 35 refuelling stations in California which is likely to increase to 100 in the next two years.

In Germany, Shell is part of a joint venture with industrial gas manufacturers Air Liquide and Linde, car manufacturer Daimler and energy companies Total and OMV, to develop a nationwide network of 400 hydrogen refuelling stations for new hydrogen car models by 2023<sup>1</sup>.

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*Roads Australia recommends that early engagement with international fossil fuel companies, in the development of the Hydrogen production and delivery value chain, will be a critical success factor.*

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Roads Australia has been a strong advocate for progressing national economic road reform initiatives. In 2018 Roads Australia led a delegation of senior government and industry leaders on a study visit to Japan, South Korea and Singapore to investigate how major Asian national and city governments were developing their city transport networks to cope with population growth, liveability, changing demographics and the introduction of autonomous vehicles on their networks.

The delegation found that while the introduction of electric vehicles is strongly supported in Japan and South Korea, these are seen as a stepping-stone to a future Hydrogen Fuel Cell powered fleet, particularly for buses and heavy transport. Recommendation nine of the study visit report, [Cities for the Future](#), outlined that Australia has an opportunity to collaborate with Japan and Korea on fuel cell technology for use in buses and trucks and to consider the potential production of Hydrogen as a fuel for use in transport.

The Cities for the Future report also notes Australia has energy sources that could be used to produce hydrogen as a next generation sustainable fuel. Projections show that there will be a significant impact on the electricity grid and demand in Australia as use of electric vehicles grow. Hydrogen production could potentially offset this pressure on the distributed electricity grid, with heavy transport the likely first adopter.<sup>2</sup>

Roads Australia's [submission](#) to the 2019/20 Commonwealth budget process emphasised the imperative to move to a fairer, more efficient road pricing and investment model, where road reform is applied equitably to all vehicles<sup>3</sup>.

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<sup>1</sup> <https://www.shell.com/energy-and-innovation/new-energies/hydrogen.html>

<sup>2</sup> <https://www.roads.org.au/LinkClick.aspx?fileticket=j7u2FMiSClg%3d&portalid=3>

<sup>3</sup> Roads Australia submission to the Commonwealth Budget 2019 to 2020  
[https://www.roads.org.au/Portals/3/Policy/Submissions/Roads%20Australia%20Commonwealth%20Budget%20Submission%202019\\_2020\\_web.pdf?ver=2019-02-15-144355-300](https://www.roads.org.au/Portals/3/Policy/Submissions/Roads%20Australia%20Commonwealth%20Budget%20Submission%202019_2020_web.pdf?ver=2019-02-15-144355-300)

Roads Australia notes with interest the reported views in early July of Dr Felix Gress, head of corporate communications and public affairs at automotive technology firm Continental, that electric power “has its limits” and future passenger cars will use hydrogen. In Dr Gress’ opinion electric cars represent poor value for money compared to petrol or diesel alternatives.<sup>4</sup>

The National Hydrogen Strategy should take account of the present, and likely future, approaches to road reform to ensure adequate attention is given to assessing its impact on the economic case for hydrogen in Australia. For example, if the present Fuel Excise system is not taken into account, where Road User Charges (RUC) apply only to fossil fuel vehicles, this would unfairly skew the running cost comparison in favour of Fuel Cell (and Battery) EVs.

The assessment of the potential for using hydrogen, as a transport fuel in Australia by 2030, should include a scenario that a level playing field exists in a future economic reform environment where a RUC system is place for all road users.

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*Roads Australia recommends that the National Hydrogen Strategy should take into consideration, and be consistent with, national road reform initiatives progressed over the Strategy assessment period.*

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RA contends that there will need to be significant investment in public transport infrastructure in Australia over the next 30 years<sup>5</sup>. Bus transport networks are a significant component in passenger transport for all Australian cities and major towns. Therefore, State and Territory Government support will be a key factor in potential transition to FCEV in this important sector. The interest and influence by city and urban Local Governments in advancing the take-up of zero emission vehicles, particularly for bus fleets, should not be underestimated.

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*Roads Australia recommends that State and Territory Governments, in partnership with Local Government Authorities and private operators (as represented by bus and coach industry associations, fleet owners and operators), should take the lead in the transition of bus and coach fleets to FCEV and in provision of refuelling infrastructure for regional and long-distance services.*

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<sup>4</sup> <https://www.autoexpress.co.uk/car-news/107297/hydrogen-cars-will-overtake-electric-cars-expert-claims>

<sup>5</sup> RA Cities for the Future 2018 Report

<https://www.roads.org.au/LinkClick.aspx?fileticket=j7u2FMiSClg%3d&portalid=3>

Federal, State, Territory and Local Government light vehicle fleets, together with national car rental fleets offer significant opportunities for introduction of FCEV into the broader Australian market. Australia's public sector is the largest buyer of vehicles in Australia with an estimated 50,000 vehicles of the 1.25 million new vehicles sold in Australia per annum bought by agencies and authorities at all levels of government<sup>6</sup>. The car rental industry in Australia is estimated to purchase up to 40,000 new vehicles every year<sup>7</sup>. These fleets have relatively high turnover, compared to the general vehicle market, resulting in potential for building greater early market penetration through subsequent aftermarket sales.

As previously discussed, State and Territory Governments will also have a strong influence in the procurement decisions for bus fleets, long haul freight and coach services, and the potential for FCEV growth in that sector. We note that regional infrastructure will be a key pressure point impacting the pace of transition.

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*Roads Australia recommends that the National Hydrogen Strategy should quantify the likely Government and Rental Company light vehicle, bus, and coach fleet purchases, as well as long haul freight, over the forecast FCEV introduction period, as a precursor to developing the market for involvement of these fleet owners in early adoption of FCEV.*

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Roads Australia takes an active interest in international transport development, including a current RA study visit by senior government and industry members on "Future Transport: Smart Cities" to the US and Canada from 22 July to 4 August 2019. There are likely to be observations that will be directly relevant to this Issues Paper, which will be forwarded as a report when available.

## **Conclusion**

To summarise, Roads Australia makes four recommendations:

1. Early engagement with international fossil fuel companies, in the development of the Hydrogen production and delivery value chain, will be a critical success factor.
2. The National Hydrogen Strategy should take into consideration, and be consistent with, national road reform initiatives progressed over the Strategy assessment period.

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<sup>6</sup> <https://www.governmentnews.com.au/22647/>

<sup>7</sup> <https://www.goldsteinresearch.com/report/car-rental-market-australia>

3. State and Territory Governments, in partnership with Local Government Authorities and private operators (as represented by bus and coach industry associations, fleet owners and operators), should take the lead in the transition of bus and coach fleets to FCEV and in provision of refuelling infrastructure for regional and long-distance services.
4. The National Hydrogen Strategy should quantify the likely Government and Rental Company light vehicle, bus and coach fleet purchases, as well as long-haul freight, over the forecast FCEV introduction period, as a precursor to developing the market for involvement of these fleet owners in early adoption of FCEV.

Roads Australia commends the significant efforts of Working Group 2: Hydrogen for Transport, in producing the comprehensive *Issues Paper 8* in a very short period. We look forward to continued involvement as the National Hydrogen Strategy progresses.

For more information about this submission please contact Natalie Collard at [natalie@roads.org.au](mailto:natalie@roads.org.au) or 03 9821 5255.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M Kilgariff', is written on a light blue rectangular background.

**MICHAEL KILGARIFF**  
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