

OPENING STATEMENT: INQUIRY INTO AUTOMATED MASS TRANSIT

19 February 2019

My name is Claire Johnson and I'm the CEO of Hydrogen Mobility Australia. We are a membership-based industry association representing Australia's emerging hydrogen sector. Our objective is to realise a hydrogen society for Australia built upon clean hydrogen and fuel cell technologies.

HMA was co-founded by OEMs Hyundai and Toyota, both of which are members of the Federal Chamber of Automotive Industries. We support the FCAI's submission to this inquiry and work closely with them to foster the growth of alternative drivetrains in Australia. As transport advocates, we appreciate the opportunity to appear alongside them here today to discuss the exciting transformations taking place in our sector.

Since our establishment, Hyundai and Toyota have been joined by 23 other companies with interests across the hydrogen supply chain, including hydrogen production, export, storage, and of course mobility. Together, we recognise the significant opportunity the economy-wide application of hydrogen presents for Australia.

HMA participates in this inquiry as the industry representative for hydrogen fuel cell electric vehicles - otherwise known as FCEVs. As the name implies, an FCEV is an electric vehicle. However, unlike a battery electric vehicle or BEV, which stores its electricity in a battery, an FCEV produces its own electricity on-board and on-demand in a fuel cell. Both technologies, that is BEV and FCEV, are zero emission, and are expected to play important roles in the decarbonisation of transport.

HMA is focussed on accelerating the introduction of FCEVs to Australia, from buses, trucks, trains, passenger cars and forklifts, and establishing the necessary nationwide hydrogen refuelling infrastructure to support them.

While hydrogen technology is suitable for application across the entire transport spectrum, given the mass transit focus of this inquiry, HMA's submission presents the opportunity specifically for hydrogen buses and trains in Australia.

Hydrogen buses are one of the most mature fuel cell technologies in the market today with over 15 years of on road performance. They are currently operational throughout Europe, Asia and the US improving air quality, reducing CO2 emissions and minimising noise pollution.

Australian companies such as Transit Systems, the operator of the London hydrogen bus fleet, are actively looking at the opportunity to deploy hydrogen buses in Australia.

They and other companies are investing in hydrogen buses for many reasons, but the main factor is the ability to replace diesel or CNG buses without significant changes to operation or service. Hydrogen buses represent a pathway to zero emissions mobility with no compromise.

Additionally, they have been proven in real-world conditions and are a fully commercialised technology so present a tried and tested platform for the integration of connectivity features to support automation.

Hydrogen trains are equally another exciting opportunity. Similar to buses, they represent a direct replacement for diesel rolling stock. They also require significantly less infrastructure investment than electric trains where the electrification of existing lines is needed to enable their introduction.

What is holding this technology back from introduction to Australia is government coordination – coordination of infrastructure, vehicles and customers. Alignment is needed between these three aspects to realise a zero emission vehicle sector in Australia, as well as the connected technology these drivetrains can utilise.

To address this our submission calls for:

- Federal Government coordination of procurement across public and private mass transit operators to enable cost savings through mass purchase and flow on demand for refuelling infrastructure
- Introduction of zero emission vehicle targets for public operated or contracted mass transit fleets to stimulate vehicle up take and development of an initial customer base
- Introduction of a national light and heavy vehicle CO₂ emission standard to encourage zero-emission technology purchase and to accelerate the supply of vehicles to Australia
- Development of a zero-emission vehicle infrastructure strategy and development of suitable funding models, including approaches for the deployment of hydrogen refuelling stations to support back to base mass transit operators

We recommend the above is coordinated by a dedicated office for zero emission vehicles providing a centralised point for all mobility related policy and regulatory matters due to the complexity of the space.

Thank you for the opportunity to participate in this important inquiry and I look forward to taking the committee's questions.