Economy and Infrastructure Committee – Inquiry into Electric Vehicles – HMA opening statement

My name is Claire Johnson and I'm the Chief Executive Officer of Hydrogen Mobility Australia, a recently established national body representing the emerging Australian hydrogen sector.

Our membership comprises vehicle manufacturers, energy companies and infrastructure providers, specifically BOC, BP, Caltex, CNH Industrial, Coregas, Hyundai, ITM Power, Siemens, Toyota and Viva Energy.

Our members are involved in initiatives spanning the entire hydrogen value chain from hydrogen production, export, stationary power applications, energy storage and transport.

Hydrogen Mobility Australia's vision is a hydrogen society for Australia built upon clean and renewable energy, including hydrogen powered transport. We recognise that collaboration between industry and government will be essential to support this mission and take advantage of this exciting opportunity, and we're grateful for the opportunity today to appear at this inquiry.

While I understand the inquiry to date has primarily focused on battery electric vehicles, these represent only one technology option in the electrified vehicle field. Hydrogen fuel cell vehicles, similarly powered by electricity, present another genuine alternative for delivering reduced transport emissions both here in Victoria and nationally.

However, it's the position of Hydrogen Mobility Australia and our members that both battery electric and hydrogen fuel cell electric vehicles can co-exist and in fact complement each other with their differing characteristics.

Specifically, while battery electric cars may be more suited to city driving where shorter distances are the norm, hydrogen fuel cell vehicles provide longer range and efficient refuelling time of 3-5 minutes similar to a petrol or diesel car. And like a battery electric, hydrogen fuel cell cars also emit no carbon dioxide or pollutants meaning cleaner air. The only emission from a fuel cell car is water.

At the end of 2017, almost 6,500 hydrogen fuel cell electric vehicles have been sold globally, predominately in Europe, the US and Asia. Manufacturers with fuel cell electric cars in the market place at present include Toyota, Hyundai and Honda. Mercedes is also soon to launch a plug in hybrid combining hydrogen fuel cell and battery electric, demonstrating the complementary nature of the technology in a single vehicle.

In terms of the commercial transport segment, this is where hydrogen's advantages are particularly pronounced including range, short downtimes due to quick refuelling and reduced weight versus battery electric. Hydrogen buses for example have now been adopted by fleets across the world due to these benefits. Heavy-duty fuel cell trucks, forklifts and trains are also being rolled out globally.

In relation to Australia's progress in introducing hydrogen transport, both Hyundai and Toyota are committed to bringing this technology here and have introduced a small number of fuel cell cars for education and promotional purposes. For the past two or so years they have been sharing the technology with government, industry and the general public. Hyundai has also recently announced it will bring 20 units of its second-generation fuel cell car, the Nexo to Australia by quarter 1, 2019 which will be used by the ACT Government fleet.

What inhibits the introduction of fuel cell cars to Australia at this point in time is hydrogen refuelling infrastructure. We do see this changing however. Hyundai has a permanent hydrogen refuelling station at its headquarters at Macquarie Park in Sydney and Toyota has acquired a portable refueller which resides at its Altona facility in Melbourne.

In addition, in the last 12-24 months we have seen a number of state and local governments commit to hydrogen infrastructure projects in South Australia, the ACT and the City of Moreland in Melbourne. The City of Moreland project supported by the Victorian Government will see a fleet of hydrogen garbage trucks manufactured by Dandenong based company Iveco converted from diesel to a hydrogen fuel cell drive train.

We believe that these commitments demonstrate that hydrogen is set to play a growing role in the transport sector in Australia. They are also consistent with overseas practice whereby government support has been integral in the early stages of the technology to support the transition of the market through both infrastructure support and support for vehicle uptake via a range of financial and non-financial incentives.

We have also been working with the Federal Government as it develops its approach to encourage the uptake of zero emission vehicles through the Ministerial Forum into Vehicle Emissions, led by Minister Frydenberg and Minister Fletcher.

And we note recent statements from Minister Frydenberg calling for improved co-ordination of federal and state governments to encourage the adoption of zero emission vehicles which is very encouraging.

To ensure success in transitioning our fleet, we also believe that a co-ordinated plan at all levels of government will be needed to support the proliferation of green transport options in Australia, which as mentioned prior is consistent with approaches taken overseas where governments work in partnership with industry.

Finally, I should note that hydrogen doesn't just represent a transport fuel. As mentioned earlier, the mission of Hydrogen Mobility Australia is to realise a hydrogen society for Australia. This essentially means an economy where hydrogen is used as a major source of power.

The creation of a hydrogen society aims at achieving three major objectives. First is the reduction of the burden on the environment through reducing CO2 emissions. Second is the diversification of energy sources. Hydrogen can be produced with renewable energy, its use can also promote stability in the supply of energy and also reduce our dependence on fuel imports. Third, it will generate beneficial economic benefits. The shift to a new energy source will lead to new demand and new jobs.

Finally, the upcoming Tokyo Olympics in 2020 will be known as the hydrogen Olympics where the Japanese Government is aiming to realise a hydrogen society and showcase a multitude of hydrogen applications to the world. Australia has an opportunity to export this hydrogen to Japan. ARENA and CSIRO in particular announced in 2017 that the export of renewable energy (in the form of hydrogen) to countries such as Japan will be prioritised by both agencies in recognition of this opportunity.

Victoria specifically has an opportunity to play a significant role in this space. Through its existing wind and solar assets, the state could export clean energy to the world. And in parallel develop a domestic hydrogen energy sector that supports the roll out of a hydrogen powered transport fleet.

Once again thank you for the opportunity to engage with the Victorian parliament as it develops its approach to zero emission vehicles. We look forward to working with you and I also urge the panel to look at the opportunity the hydrogen economy presents more broadly to achieve Victoria's objective of net zero emissions by 2050.