

Standards Australia Limited  
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www.standards.org.au



Friday, 7 December 2018

**Committee Secretary**

House Standing Committee on Infrastructure, Transport and Cities  
PO Box 6021  
Parliament House  
CANBERRA  
ACT 2600

Via email to: [ITC.reps@aph.gov.au](mailto:ITC.reps@aph.gov.au)

Dear Secretary,

**RE: Inquiry into automated mass transit**

Standards Australia welcomes the opportunity to provide this submission to the Standing Committee on Infrastructure, Transport and Cities regarding the Australian Government's role in the use of automation and new energy sources in land-based mass transit.

Standards Australia seeks only to respond to matters raised in this inquiry that are considered relevant to our work and engagement as Australia's peak standards development body. We also thank the Committee for its earlier, and highly commendable report '*Building Up, and Moving Out.*'

Standards Australia is intent on widening and deepening our engagement on important issues for the Australian community including automated mass transit. We believe that a coordinated and measured approach, which prioritises standardisation activities, should be undertaken to support cross-functional planning, implementation, and government policy objectives.

Standards Australia:

- Recognises the importance of new approaches to mass transit in enabling mobility of capital, goods and people, to access core amenities and services when and where people need them.
- Is responsible for overseeing the development of Australian Standards and other products that can provide solutions for increased uptake of mass-transit solutions.
  - These are commonly referenced in legislation and regulation at the Federal, State and Local government to support government policy objectives.
- Provides a platform for the participation of Australian stakeholders including government, industry and research, in the development of relevant Australian and International Standards.
- Has a number of technical committees and Standards that could play a pivotal role enabling new mass-transit solutions.

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- Seeks this Standing Committee's support for this objective, through the development of an Australian program of work.

### Key Initiatives

There are many areas where Standards Australia is actively contributing to the development of discrete work streams in relation to automated mass transit. More broadly, and in areas related to smart mobility solutions, Standards Australia has:

1. Led the development of Electric Vehicles Operations Standards to support the sustainable market adoption of Electric Vehicles in Australia.
2. Constituted a Mirror Committee to develop standards for Intelligent Transport Systems (ISO/TC 204) which uses advanced technologies to promote safe and sustainable transport solutions.
3. Constituted a Mirror Committee in the area of Internet of Things and related technologies (ISO/IEC/JTC1/SC41) to provide standardisation guidance for Australian and international entities who may be developing Internet of Things (IoT) related technologies and applications.
4. Constituted a Mirror Committee to provide Australia's voice and vote to International Standardisation work in the area of Artificial Intelligence (ISO/IEC/JTC1/SC42).
5. Worked with Infrastructure NSW and the Department of Finance, Services & Innovation (DFSI) to support the development of a Smart Places Strategy for NSW, and to demonstrate the importance of standards as foundational elements of smart cities infrastructure.

### Future mobility

There is a growing focus on mobility at not only Federal level, but at State and Territory level too. The NSW *Future Transport 2056 Strategy*, for example, signals a commitment to mobility defined by on-demand transport and a more advanced transport infrastructure generally, powered by smart technologies. The adoption of these technologies, and modalities, at-scale, can be supported by the development and adoption of standards that enable interoperability and ensure safety.

Standards Australia has already played a significant role in the adoption of ISO and IEC Standards concerning electrical vehicles, ranging from recharge points to safety measures. These International Standards provide a basis for a common infrastructure for electrical vehicles in Australia, whether funded by private sector partners or different levels of Government.

During consultation processes in NSW, with Infrastructure NSW and the NSW Department of Finance, Services and Innovation, stakeholders expressed a desire for a balanced approach to future mobility infrastructure. This should position the private sector to lead, through deployment of particular technologies, and enable Local, State and Federal Government to utilise common standards to guide investments and decisions, where appropriate.

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### Adoption of new technologies in the transport sector

Currently, the adoption of new technologies in vehicles such as electric and hydrogen fuel cell are limited in Australia. In New South Wales, Transport for NSW has commenced trials of Connected and Automated Vehicles (CAV) in 2017, with the State's first Smart Shuttle at Sydney Olympic Park. Transport for NSW has extended the testing of the CAV's to regional areas to include Armidale and Coffs Harbour.<sup>1</sup>

Despite hydrogen fuel cell vehicles being commercially available overseas, Australia is still in the early stages of adoption, with trials of hydrogen fuel cell vehicles to commence in the ACT this year.<sup>2</sup> As with any new technology, companies both overseas and in Australia have the challenge of policy, and regulatory, certainty. The industry needs policy certainty to plan for technology transitions including government incentives and support.<sup>3</sup>

Interestingly, Australian companies like Transit System have played a significant role in the international market, with the introduction of their hydrogen buses to the UK's Transport for London network in 2011. This initiative was part of the UK government's Clean Hydrogen in European Cities (CHIC) Project.<sup>4</sup> Transit System is also due to commence trials of electric buses in Sydney's Inner West from mid-2019<sup>5</sup>, which seems to signify the willingness of companies to adopt new technologies where government support is evident.

Standards Australia recently convened a forum on hydrogen, with partners, to explore the standardisation needs in this area. As with any emerging area of activity, the safe storage, transportation and adoption of hydrogen, including in relation to mobility solutions, will necessitate some form of industry-driven standards activity. Standards Australia has recently published an outcomes report 'Hydrogen Standards Forum' to help inform stakeholders of the strategic direction of future standards development and international participation in the hydrogen sector.

The Hydrogen Roadmap will inform the future of standards activities in the hydrogen sector, ensuring there are appropriate standards in place to support the development of each stage of the hydrogen supply chain. Through international standards harmonisation, Australia will be able to achieve business efficiencies and enable international trade. Standards serve as a vital public policy and regulatory tool in the sector, to support its evolution.

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<sup>1</sup> Transport for NSW, (2018). *CAV Study Trial*. Accessed 30/11/2018 from

<https://www.transport.nsw.gov.au/data-and-research/nsw-future-mobility-prospectus/nsw-future-mobility-case-studies/connected-and/cav>

<sup>2</sup> For example, see <https://www.hyundai.com.au/hyundai-info/news/2016/august/hyundai-secures-order-for-20-next-generation-hydrogen-fuel-cell-vehicles-in-australia>

<sup>3</sup> Webb, A. (2016). *Hydrogen rising: US corporates drawn to fuel cells*. Accessed 30/11/18 from <https://reneweconomy.com.au/hydrogen-rising-us-corporates-drawn-to-fuel-cells-49352/>

<sup>4</sup> Transit Systems, (2018). *Electric and Hydrogen vehicles*. Accessed 30/11/18 from <https://www.transitsystems.com.au/electric-hydrogen-buses>

<sup>5</sup> Ibid.

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### International Standards Activity

Standards Australia is responsible for coordinating the attendance of Australian experts at International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). In areas related to automated vehicles and mass transit, there are a range of international technical committees developing Standards. This includes, but not limited to:

- **IEC/TC 69 – Electric road vehicles and electric industrial trucks**  
This Committee is charged with developing international standards for road vehicles, totally or partly electrically propelled from self-contained power sources, and for electric industrial trucks.
- **ISO TC 197 - Hydrogen technologies.** This Committee is concerned with systems and devices for the production, storage, transport, measurement and use of hydrogen. Its full scope of work is visible [here](#).
- **ISO/IEC/JTC1/SC42 – Artificial Intelligence**, which co-ordinates activity across IEC and IEC concerning AI. Its full scope of work is visible [here](#).

We are pleased Australian stakeholders, including industry participants, are increasingly expressing their desire to participate in the work of these International Technical Committees, through our processes.

### Recommendation

*Any strategic Australian Government response to automated mass transit should consider an integrated standards development roadmap, including International Standards participation through ISO and IEC.*

### Further contact

For further questions in relation to this submission, please do not hesitate to contact Dr Jed Homer, Policy Manager,

Yours sincerely

Dr Bronwyn Evans  
Chief Executive Officer

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## Appendix

### **Standards Australia: Who we are and what we do**

Standards Australia is recognised by the Commonwealth as Australia's peak non-government standards body. Founded in 1922, it is an independent and not-for-profit organisation and is the Australian member of the International Organisation for Standardisation (ISO), International Electro technical Commission (IEC) and the Pacific Area Standards Congress (PASC). At the international level, Standards Australia is committed to representing the views of stakeholders, government and consumers in standards development and related activities. Domestically, standards are developed for the net benefit of Australia and enhance economic efficiency, increase community safety and sustainability, and improve industry and international competitiveness.

Standards Australia facilitates standards development through technical committees, by bringing together relevant stakeholders to develop standards documents through a process of consensus. Our current catalogue consists of approximately 6000 voluntary standards across 12 sectors of the Australian economy, including energy and electrotechnology, ICT, manufacturing and consumer products & services. The building and construction sector is a standards development priority for Standards Australia and involves engagement with legislative authority at all levels of Australian government.

Standards Australia works with all tiers of government, industry and the wider Australia community, such as the Federal Chamber of Automotive Industries, Australasian Railway Association, The Australian Industry Group, Engineers Australia and others. Our standards development process creates opportunities for a robust exchange of knowledge, expertise, and perspectives in the development of consensus based standards and other solutions to improve performance, productivity, as well as health and safety outcomes for all Australians.