



HEAVY VEHICLE
INDUSTRY AUSTRALIA



HVIA Submission

On the proposed 109/00 (Hydrogen-Fuelled Vehicle Safety Performance) and 110/00 (Electric Power Train Safety Requirements) Australian Design Rules.

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Heavy Vehicle Industry Australia
Represents and advances the interests of manufacturers
and suppliers of heavy vehicles and their components,
equipment and technology.



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Background

Heavy Vehicle Industry Australia (HVIA) represents and advances the interests of the entire industry involved in the design, manufacture, importation, distribution, modification, sale, service and repair of on-road vehicles with a gross vehicle mass or aggregate trailer mass over 3.5 tonnes as well as their components, equipment and technology.

The industry directly employs over 70,000 people and provides some of the world's most efficient, safe, innovative and technologically advanced vehicles. HVIA seeks to work with government and industry stakeholders to promote an innovative and prosperous industry that supports a safe and productive heavy vehicle fleet operating for the benefit of all Australians.

A significant number of HVIA members are involved in the design, engineering, manufacture, importation, and service/repair of Electric Vehicles (EVs) and Hydrogen-fuelled Fuel Cell Vehicles (HFCVs), both commonly referred to as Zero Emissions Vehicles (ZEVs).

Proposed new Australian Design Rules for EVs and HFCVs

The Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the Department) has conducted an impact assessment to examine the case for introducing two new Australian Design Rules (ADRs). Both are intended to ensure the safety of vehicles when supplied as new to the Australian market. They are:

- ADR 109/00 - Electric Power Train Safety Requirements
- ADR 110/00 - Hydrogen-Fuelled Vehicle Safety Related Performance

The new ADRs align with the equivalent international regulations, being UN Regulation No. 100 and UN Regulation No. 134, respectively, and would apply to all vehicle categories on a "must comply, if fitted" basis.

The Department's proposal has been reviewed and approved by the Office of Impact Assessment (OIA), which considered it unlikely to have a 'more than minor' regulatory impact, based on the following reasons:

- almost all light ZEV suppliers and most heavy ZEV suppliers already meet those UN regulations
- US-certified heavy ZEVs may need to be locally certified under these standards, however, these costs are anticipated to be marginal in the overall costs associated with certification for supply to the Australian market that are already required for other standards

The Department also notes that if regulatory action is not taken, the future is likely to involve fragmented state/territory safety standards for 'in-service' use of ZEVs.

HVIA response

HVIA has reviewed the Department's proposal from four perspectives:

- whether the design and performance requirements outlined in the two proposed ADRs are sensible and appropriate in terms of the safety risks proposed by EVs and HFCVs, and
- the feasibility of the proposed testing and evidentiary requirements.
- the feasibility of the proposed timelines.
- consistency with other relevant legislation.

With respect to the design and performance requirements, HVIA is satisfied that the proposed ADRs represent best practice requirements for vehicle safety.

However, with respect to the testing and evidentiary requirements HVIA has concerns regarding practical implementation. The main concern centres on the local availability of suitable test facilities. In that context, HVIA **does not** agree with the Office of Impact Assessment (OIA), which considered it unlikely to have a 'more than minor' regulatory impact, as the local manufacturers of ZEVs may be considerably disadvantaged.

Any testing requirements related to complete vehicles or vehicle subsystems must be able to be completed wholly within Australia. Tests included in ADRs as mandatory must not necessitate the international transport of complete vehicles, nor vehicle subsystems, for certification tests. Doing so would impose prohibitive costs on local manufacturers.

HVIA has examined the proposed ADRs and is concerned that some tests necessitate the international transport of either complete vehicles or vehicle subsystems. Two examples are the water immersion tests described in Annex 7B of ADR 109/00, and the crash tests and subsequent hydrogen gas monitoring outlined in Section 7 of ADR 110/00. In both examples, no test facility with those capabilities exists within Australia.

An alternative pathway may be offered by demonstration of safety compliance through individual components or their critical parts. Two examples relevant to the above are component-level water ingress, and 'sled style' deceleration tests. HVIA seeks confirmation from the Department that manufacturers will be able to demonstrate compliance with the requirements of both ADRs by individual tests on vehicle components.

Further to the above:

- If compliance by component-level testing is allowed, HVIA seeks greater clarity on any specific requirements the department would have to avoid whole of vehicle testing, and on the evidence that the department will require to satisfy itself that vehicles are compliant when tested on a component by component basis. HVIA is happy to work with the Department on the development of suitable guidance material.
- If compliance by component-level testing is not allowed, HVIA strongly advocates for the revision of the testing requirements.

HVIA also recommends that care should be taken to avoid any unintended compliance issues created by the introduction of these ADRs. One example is the reference to the vehicle's 'exhaust' system made in Section 7.1.3.2 of ADR 110/00. The position of exhaust outlets is also covered separately under ADR 42/05. The 'exhaust' outlets of HFCVs differ from those of Internal Combustion Engines (ICE) as they contain no harmful gases. It is therefore arguable that the position of exhaust outlets on HFCVs should not be subjected to the restrictions outlined in ADR 42/05.

With respect to the implementation timelines, HVIA members have expressed a view that the timelines may be too ambitious in view of the testing requirements.

Questions have also been raised about the transition arrangements in relation to buses where the chassis may already have been imported but the bus may not be completed and registered until after the new ADR comes into force.

There has also been a suggestion that some of the provisions of ADR 110 may be inconsistent with other legislation such as dangerous goods legislation and worksafe requirements, particularly in Queensland. HVIA suggests the Department should conduct a review to ensure there are no inconsistencies.

Summary of HVIA position

- HVIA **does not** agree with the Office of Impact Assessment (OIA) that the proposed ADRs are unlikely to have a 'more than minor' regulatory impact, due to the potential need for local manufacturers to transport vehicles overseas for 'whole vehicle' certification tests.
- HVIA seeks confirmation from the Department that manufacturers will be able to demonstrate compliance with the requirements of both ADRs by individual tests on vehicle components.
 - If component-level testing is allowed, HVIA seeks greater clarity on the evidence that the department will require to satisfy itself that vehicles are compliant.
 - If component-level testing is not allowed, HVIA strongly advocates for the revision of the testing requirements.
- HVIA seeks a clarification of the transitional arrangements for busses where the chassis is imported prior to the commencement of the legislation.
- HVIA also requests that the department investigate whether there are inconsistencies between the proposed ADRs and dangerous goods and worksafe legislation across the country.