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The Safer Freight Vehicles project

The Federal vehicle regulator is working on a Safer Freight Vehicles reform package of design rule changes. A Discussion Paper was released in April 2021. Some progress has been made but final decisions have not been made two years later. The main considerations concern: maximum width, exhaust emissions standards, devices for indirect vision and monitoring devices to detect other road-users, twin-steer axle group spacing limits, the prescribed transition mass for liftable axles and 'normalisation' of quad-axle groups.
Australia is currently experiencing a major lift in heavy vehicle technologies and it is only going to get more complex. The Australian market takes product from three key sources – Europe, Japan and North America. There are also a small but growing group of Korean and Chinese brands. Each market source has their own way of doing things. Different, but not necessarily good or bad, just different, and these differences are aligned with their home market requirements, which have a political aspect. Having said that, my September article described Australia's policy of harmonising with ECE Regulations. The European Union has led with the adoption of these regulations.
An important 'carrot' in this Safer Freight Vehicles project is to allow heavy vehicle width to be increased to 2.55m or maybe even to 2.60m, subject to the mandatory fitment of additional safety technologies. The current Australian 2.50m limit is out of line with Europe, which allows 2.55m. The maximum legal width in the USA is 102" (2.59m) and in Japan 2.50m. The case exists for allowing 2.6m wide refrigeration vans to allow for wall insulation thickness. The width is measured with the mirrors folded in. AustRoads, which is a research and service organisation that is owned by the state road agencies, supports changing the Australian width limit to 2.55m. AustRoads pointed out four years ago that New Zealand adopted this maximum width in 2017 and there is no evidence that higher crash rates resulted. Australian regulators have been considering this modest change of width for more that a decade. Some 2.55m wide vehicles were trialed across the Nullarbor Plain in the early 2000s, but the trial did not lead to regulation change. Admittedly the heavy trailer industry has opposed the 2.55m change because it was concerned with the likely added competition from European trailer builders. However, the trailer industry is very busy supplying Australia's high productivity industry and now is the time to allow wider heavy vehicles.
Furthermore, a significant European trailer manufacturer, Schmitz Cargobull is active here. Quad-axles are routinely used on PBS vehicles, but have no ADR status. The issues arising about including a steerable axle in the group and about road friendliness status need to be sorted out. The discussions about more sensible transition masses for liftable axles have been going on for more than a decade. The Safer Freight Vehicles project is a welcome development; but it is taking too long!
Each of the three key markets is ahead of Australia in the domain of engine gaseous emission regulation. Australian Design Rule (ADR) 84/00 requires all new Australian heavy motor vehicles to meet the next level of gaseous emission standards by 1 November 2025. This rule requires compliance with Euro VI Stage C, US EPA Tier 4 or JIS (2016). The next European gaseous emissions standard Euro VII, a combined light and heavy vehicle emission standard, is expected to apply from 1 July 2025 for new light-duty vehicles, and two years later for heavy vehicles. Australia will be about ten years behind Europe. The additional cost of this technology could be 3-5 per cent of truck cost. Each of the three key markets have active programs or rules that require significant portions of zero emission trucks to be supplied according to a schedule. Australia has no announced plans to mandate zero-emission motive technology in Australia. The focus of Safer Freight Vehicle package is mainly focused on a few safety technologies — conspicuity markings, lane departure warning, blind spot warning and enhanced indirect vision technologies, wide angle mirrors. Despite being the world leader in the multi-combination domain, Australia seems to play catchup in the technology space. Sometimes it is sensible to let the technologies mature overseas; however, Australia has a lot to contribute because of our experience of A- and B-doubles on metropolitan roads. It's impractical for Australia to dictate unique requirements in the ADRs or for operational requirements on products coming into Australia, particularly when we are collectively buying just 1 per cent of the world's trucks. Australia is a taker of HV technology and an adopter of configuring vehicles for high productivity. Australia's linehaul fleet runs on average at higher speeds, with higher GCMs, under higher ambient temperatures, engulfed in more dust and often on potted hole or rutted roads, which all adds up to unique demands on the equipment. So inevitably, there will be Australian developments. The proposal to delete the option of fitting flat mirrors to prime movers is a case in point. Multi-combination drivers universally want flat-mirror rear vision to allow good depth perception. They also need curved mirrors to give angle-of-view. A hybrid solution is needed.
There are already significant safety developments in the regulatory pipeline. ADR 108/00, Reversing Technologies, cameras, and sensors for rigid trucks becomes mandatory for all new vehicles on 1 November 2027. While this technology has merit, it continues to ignore the simple technology of reversing lights and buzzers on trailers. ADR97/00, Advanced Emergency Braking for Omnibuses, and Medium and Heavy Goods Vehicles becomes mandatory from 1 February 2025. Great technology but drivers need to be trained to get the best out of the system.
The Federal Regulator is developing ADR 109 – Electric Power Train Safety Requirements; and ADR 110 – Hydrogen Fuelled Vehicle Safety Related Performance. These are Australian developments of UN ECE Regulations 110 and 134 respectively. The purpose of these rules is to provide minimum safety standards for electric- and hydrogen-based traction systems. These technologies will cause significant change in workshop practices and electrical safety regulators will become active in the heavy vehicle space.
The National Heavy Vehicle Regulator has released a Heavy Vehicle Productivity Plan 2020-2025. It has three stated objectives, which are: 1 - Provide Certainty and Consistency by targeted elimination of access permits. 2 – Partner with local government to build capacity to provide greater access for high-productivity vehicles. 3 – Promote safer and more productive vehicles that are better for the environment and for communities, by implementing an uptake plan with incentives. This is in partnership with the State road agencies and the Federal vehicle regulator. The Safer Freight Vehicles project is part of item 3. Also in item 3 is delivery of the revised PBS scheme called PBS 2.0.
All these three objectives require road access for high productivity vehicles to be clarified and extended. The NHVR is the key regulator to liaise between the three levels of government to achieve reasonable outcome in a timely way.
The NHVR plan does not have specific goals for safety and productivity improvements. It does have the goal of improving heavy vehicle data acquisition and 'enrichment'. ARTSA-i has a particular interest in this goal because of our industry-leading data project, ARTSA-Data. ARTSA-i has recently worked with the NHVR to better understand the make-up of the PBS fleet. Hopefully ARTSA-i can contribute further by assisting the NHVR to quantify the productivity and environmental potential of the Australian heavy vehicle fleet. It could do this by adding further value to the ARTSA Data collection by better quantifying the body types and the safety technologies used in the Australian heavy vehicle fleet.
The timeframes for change in our industry seem to be reducing.
The imperative to improve safety, productivity and environmental performance are obvious. The Australian commercial vehicle sector is innovative and adaptable. It is capable of coping with the rapid pace of change, but there are significant challenges arising to find and train staff for the next decade.
The need for clarity in the regulation development plan is an important factor. The need to develop an industry-recognised career progression path with milestones and status for drivers and technicians is urgently needed.

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MGM Bulk's 32-metre PBS sidetipper.