

# Submission to National Transport Commission on the Heavy Vehicle National Law Review



The Electric Vehicle Council (EVC) is the national peak body representing the electric vehicle industry in Australia. We represent members involved in providing, powering, and supporting electric vehicles, and strive to accelerate the electrification of road transport for a more sustainable and prosperous Australia.

The Electric Vehicle Council welcomes the opportunity to make a submission to the National Transport Commission on the Heavy Vehicle National Law Review.

We commend the National Transport Commission on promoting flexibility in reforming the Heavy Vehicle National Law and suggest that consideration to the role of future transport technologies be noted.

## **Electric vehicles and climate change**

Zero emissions vehicles (ZEVs) reduce carbon emissions and air pollution, reducing the future impacts of climate change. All state and territory governments in Australia have committed to Net-Zero by 2050. This target is only attainable by decarbonising the transport sector – which currently makes up 19% of our total emissions<sup>1</sup>- the road freight sector alone contributes 38% of our total transport emissions.<sup>2</sup>

To enable growth of electric vehicles in the heavy vehicle transport sector, the Heavy Vehicle National Law Review should consider the implications of Australian Design Rules, while recognising the need for harmonisation across states and territories. Further consideration should be paid to the role of electric vehicles as an agent of safety and productivity in the transport sector.

The adoption of heavy electric vehicles will reduce noxious pollution and associated health impacts; create new jobs in the mining, infrastructure, manufacturing, sustainability, and renewables sectors; encourage sustainable transport and energy choices; reduce transport

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<sup>1</sup> <https://www.industry.gov.au/sites/default/files/2020-07/australias-emissions-projections-2019-report.pdf>

<sup>2</sup> <https://www.climateworksaustralia.org/wp-content/uploads/2020/04/Decarbonisation-Futures-March-2020-full-report-.pdf>

costs for consumers and businesses; increase fuel security, and lower Australia's carbon emissions.

Heavy electric vehicles are critical in achieving the objectives of the Heavy Vehicle National Law Review, as they are equipped with the latest safety technology and driven by efficient powertrains. The future Heavy Vehicle National Law should facilitate the introduction of heavy electric vehicles to the freight, logistics and transport sectors

Given that electric vehicles are the transition technology to automated vehicles it is important to consider the positive impacts they can have on Australian road safety, and this should be used to incentivise and accelerate uptake of them.

Heavy vehicle road reform will significantly impact the operations of the freight and logistics sectors. It is important to consider that the industry intends to electrify.

## Safety

The Heavy Vehicle National Law Review recognises the need for telematics and fatigue management in creating a safe workplace for truck drivers and transport network for Australians. The Electric Vehicle Council suggests the review recognise the safety and health benefits of future transport technologies, including electric vehicles, and advocate for measures to increase their uptake – to enable safer conditions for drivers.

Driver feedback suggests that electric trucks improve driver experience in the freight and logistics sector – with low level cab vibration; no petrol or diesel fumes; drive assist; lower levels of stress; regenerative braking, and instant torque.

In an article for Commercial Carrier Journal<sup>3</sup>, several logistics operators in the United States remarked on the benefits of electric trucks for heavy vehicle drivers and the positive feedback they received:

- Brandon Taylor, GSC Logistics director of transportation: “I was waiting for the complaints to come but they never came...The guys are just really happy with — they're really quiet, there's a lot less vibrating in the tractor than a diesel tractor. I think it's taken less toll on their bodies than the diesel tractors. They're all happy with the air conditioning and the heater. That worked great. Obviously, no diesel fumes to deal with all though diesels have cleaned up quite a bit in the last few years.”
- Paul Rosa, senior vice president of procurement and fleet planning at Penske Truck Leasing: “A driver even said, 'I'm in awe of this. I love it. It's exciting to drive.... Other

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<sup>3</sup> <https://www.ccidigital.com/fleets-see-electric-trucks-as-driver-retention-tool/>

drivers have praised the trucks' quick acceleration, smooth ride, ability to easily climb hills and "no diesel smell. They get happy about that,"

- Jim O'Leary, vice-president of fleet services for NFI: "When our drivers first went into the trucks they were amazed with the power and how good the ride was: no vibrations, not losing any power on hills—and there's not that many hills—but there are bridges going into the port and things like that...the other thing that I heard from the drivers is not having to deal with the fueling process. Having the trucks cleaner. The truck doesn't smell. They don't come home smelling like diesel. They don't have to deal with the fuel lines. They don't have to deal with fuel spills. All of those things that you don't really think about—it's almost like a quality of life kind of thing that the drivers have been really happy with."

In Australia, ANC is a market leader in last mile delivery services. Their website notes the benefits of heavy electric vehicles for drivers:<sup>4</sup>

- Improved driver experience through less noise, heat, vibration, and a roomier cab.
- Supports Chain of Responsibility (CoR) objectives, including fatigue and last mile customer experience.

In addition to improved driver health, electric trucks can have significant positive health impacts on communities. Electric heavy vehicles reduce noise pollution and do not produce emissions.

ANC notes that heavy electric vehicles<sup>5</sup>:

- save an estimated 36 metric tonnes of CO2 annually per truck
- produce less noise in metropolitan urban environments

The Electric Vehicle Council estimates \$3 billion is spent on public health costs as a result of air pollution from vehicles in the Sydney-Newcastle-Wollongong region alone. Additionally, sixty per cent more people die from vehicle emissions than car crashes.<sup>6</sup>

Decarbonisation of the whole transport sector will improve air quality in urban centres, on regional roads and in rural communities. Fewer vehicle emissions related deaths and illnesses will give resources and money back to the health sector.

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<sup>4</sup> <https://ancdelivers.com.au/electric-delivery-vehicles>

<sup>5</sup> <https://ancdelivers.com.au/electric-delivery-vehicles/#1577773637694-d5201f75-3b1f>

<sup>6</sup> *Cleaner and Safer Roads*, Electric Vehicle Council (2019)

Road reform should encourage the uptake of electric vehicles in the heavy vehicle sector for the health of drivers, communities, and the environment.

### **The Heavy Vehicle National Law Review and Performance based standards**

Recognising that amendments to Australian Design Rules are outside the scope of the Heavy Vehicle National Law Review, the Electric Vehicle Council supports that Performance-Based Standards can be reformed to allow for easier import of heavy electric vehicles that are in line with international standards.

In order to encourage the uptake of electric heavy vehicles, the Heavy Vehicle National Law Review should ensure that heavy electric vehicle manufacturers are not restricted in their ability to feasibly bring electric vehicles to market. The Review could align width restrictions within Performance Based Standards to align in line with international best practice.

It is well known that Australian is uniquely specific to our market. Often, this makes it difficult and economically unviable for heavy vehicle manufacturers to bring new models to our market, resulting in a lack of model availability and choice for transport and logistics operators.

Given that the heavy vehicle sector has demonstrated its intention to electrify<sup>7</sup>, this is particularly frustrating. The intention of the Heavy Vehicle National Law to promote flexibility requires that some consideration be paid to the fact that the current PBS and ADRs provide no flexibility to manufacturers in bringing heavy electric vehicles to market.

Heavy electric vehicles are often manufactured in ways that are not comparable in structure - chassis, body, dimension, mass, component position- to internal combustion engine vehicles, which the Heavy Vehicle National Law is aligned to. The Heavy Vehicle National Law should be flexible enough to promote zero emissions vehicles.

Where Australian Design Rules were suitable to ensure safety for internal combustion engine vehicles, they are unsuitable in allowing the safest heavy vehicles to enter our market. It is our recommendation that the Heavy Vehicle National Law implement exemptions on Australian Design Rules for electric vehicle manufacturers while engaging with the electric vehicle and heavy vehicle industries to understand the implications of

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<sup>7</sup> EVC submission to the National Transport Regulatory Reform, Productivity Commission (2019)

Australian Design Rules and Performance Based Standards on the uptake of heavy electric vehicles and the need to reform them.

To highlight, ADRs and PBS are restrictive to heavy electric vehicle manufacturers in both mass and dimension, where:

### **1. Mass**

Electric heavy vehicles are powered by lithium-ion batteries, which are significantly heavier than petrol and diesel fuel tanks. The weight of the battery impacts the truck payload under mass vehicle limits. Due to current ADRs an EV battery may reduce a truck's payload.

The reduced payload decreases the economic viability for councils, government, and businesses to transition to electric heavy road vehicles, trucks, and buses, as companies need more vehicles for equivalent options.

To increase the viability of transition, the Electric Vehicle Council recommends introducing a harmonised national waiver scheme for electric heavy vehicles that would permit a higher mass vehicle limit than petrol and diesel counterparts, so that payloads remain the same, despite the total vehicle mass.

### **2. Dimension**

Currently, Australian Design Rules and Performance Based Standards are not in line with international regulation on heavy electric vehicle dimensions. This is a significant barrier for manufacturers to bring vehicles to market and ultimately means that Australia lags global adoption of heavy electric vehicles.

Electric heavy vehicles are manufactured differently to internal combustion engine equivalents, where the lithium ion battery may displace the traditional chassis configuration in a heavy electric vehicle.

Batteries may be embedded inside the chassis or sit in the roof structures of others. Often, heavy electric vehicles are harder to adjust than ICEVs. The EV industry particularly notes that the width regulation of heavy vehicles is a significant barrier to the import industry.

Tesla cites ADR 43/04 as the clearest and most immediate barrier in bringing heavy electric vehicles to market. Australia's unique 2500mm width limit is out of line with the U.S – 2600mm and Europe – 2550mm.

To accelerate the adoption of heavy electric vehicles, the Electric Vehicle Council recommends a review of the Australian Design Rules to account for the emergence of new vehicle technologies that ultimately do not sit within previously regulated frameworks comparably.

SEA Electric is an Australian company that converts trucks and vans to an electric drivetrain. Current ADRs restrict the capacity with which this internationally recognised EV leader can convert electric trucks domestically. The company references second stage manufacture and VSB-6 blue plate modifications as regulations that require review in the context of electric vehicles.

Other recommendations to support the uptake of electric heavy vehicles include:

- Ensure EVs are able to benefit from PBS (performance-based standards) guidelines. For example, EV's are silent and should therefore be able to obtain exemption from noise curfews.
- Commence scoping for heavy zero emission vehicles on tare weight/payload, chassis configurations and tunnel access.

Where ADRs are intended to ensure safe vehicles, Australia lags the rest of the world in adopting them because of the restrictions imposed by the law that is meant to encourage the procurement of them. The Heavy Vehicle National Law Review should ensure that reforms are made to the Performance Based Standards to support heavy electric vehicle uptake.

## **Conclusion**

Australia lags the world in electric vehicle uptake. A lack of policy support limits uptake, model availability, investment, and transition. This is despite that the decarbonisation of the transport sector – and the road freight sector inside of that – has the potential to dramatically reduce our emissions and set us on the right path.

The Heavy Vehicle National Law Review has a once in a decade opportunity to accelerate the adoption of electric vehicles in the heavy vehicle sector. Exemptions from ADRS and subsequent reform of them with the EV industry will enable manufacturers to supply our market with the vehicles that the freight and logistics sectors are asking for. We hope the National Transport Commission recognises the potential for reform that will contribute to a safer Australia.