

Submission to the
Productivity Commission –
National Transport Regulatory Reform



Introduction

We welcome the opportunity to make a submission to the National Transport Regulatory Reform draft report to assist the development of a holistic approach to transport regulation and policy that includes electric vehicles.

This submission will particularly focus on issues relating to heavy electric vehicles.

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.

We are a cross sectoral organisation whose engagement with a wide range of stakeholders supports the advancement of a strong domestic electric vehicle industry.

Electrification is a priority for road reform

Electric vehicles are penetrating every segment in the vehicle market. Consumer pressure for corporate action on climate change is impacting the way people travel, goods are distributed, and infrastructure is planned. Cities and countries are shifting away from including petrol and diesel, facilitating the uptake of electric vehicles across vehicle segments.¹ Though limited domestically, international trends show that sustainability policy in the corporate sector is impacting fleet management decisions.² Global initiatives, such as EV100, are recognising corporate commitment to electrification.³

Notably, there are significant domestic and global commitments to fleet electrification by logistics and freight companies. The Electric Vehicle Council advocates for the uptake of electric vehicles across all segments, including heavy vehicles, given that 18.9% of all greenhouse gas emissions in Australia come from transport.⁴

The benefits of electric vehicles can be found at the individual, community, industry and national level. Increased use of electric trucks can have a positive impact on city planning and road infrastructure. Low noise levels of electric trucks mean businesses can operate outside of existing curfews – improving transport logistics and reducing daytime road congestion. Zero emissions vehicles reduce carbon emissions and air pollution, reducing the future impacts of climate change.

The adoption of electric vehicles in will:

- reduce noxious pollution and associated health impacts
- create new jobs, including in the mining, infrastructure, manufacturing, sustainability and renewables sectors
- encourage sustainable transport and energy choices
- reduce transport costs for consumers and businesses
- increase fuel security
- lower Australia's carbon emissions

Electric vehicles are relevant to the following topics outlined in the draft report:

- Automation
- Harmonisation
- Safety
- Productivity
- Australian Design Rules

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.

¹ <https://www.bloomberg.com/news/articles/2019-07-26/a-dead-end-for-fossil-fuel-in-europe-s-city-centers>

² *Global Outlook 2019*, IEA (2019)

³ <https://www.theclimategroup.org/ev100-members>

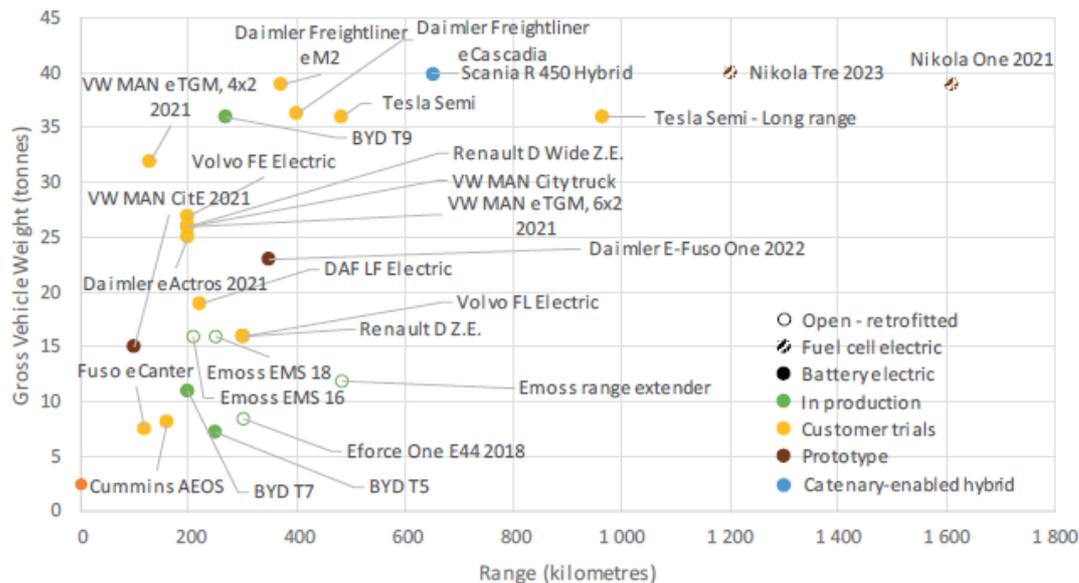
⁴ <https://www.environment.gov.au/system/files/resources/8d47dec2-cd70-4a67-a7ab-85d67f3d53be/files/nggi-quarterly-update-jun-2019.pdf>

Road reform in Australia, including the review of heavy vehicle ADRs, should facilitate the adoption of electric trucks through mass limit exemptions and waivers.

Heavy electric vehicle market

The market for medium and heavy electric trucks is small when compared to other vehicle segments. However, strong investment in 2018 by Original Equipment Manufacturers (OEMs) signals a shift toward full scale product line electrification globally.⁵

Figure 2.2. Heavy-duty electric truck models announced for commercialisation



Notes: Heavy-duty electric trucks here have a gross vehicle weight > 15 tonnes. Model launch in 2019 or before if no other year indicated.

Sources: E Force One - E Force One (2018). EMOSS - EMOSS (2018) and Allison Transmission (2018). Cummins AEOS - Baumann (2018). eFuso and eActros - Daimler (2018b; 2018c). MAN - MAN (2018a; 2018c). Volvo FL Electric and FE Electric - Volvo Group (2018). Tesla Semi - Tesla (2019b); Ayre (2018).

Despite this, we have not yet seen wholistic electric vehicle policy that supports the heavy vehicle industry. In 2019, the Australian Logistics Council (ALC) criticised the Senate Select Committee on Electric Vehicles for not setting national targets for electric freight vehicles, signalling that the industry is willing to move towards greater EV use in freight delivery with government leadership.⁶ In an effort to consider the impacts of electric vehicles on the logistics sector, the ALC formed an Electric Vehicles Working Group.⁷

Global commitment from corporate logistics fleets, such as IKEA’s commitment to global fleet electrification, has encouraged the transition and adoption of electric trucks in domestic distribution networks. IKEA suggest that “switching to just one electric truck is estimated to save 36.3 metric tonnes of carbon dioxide each year.”⁸ IKEA distributors

⁵ DAF, Daimler, MAN, Navistar, Nikola, PACCAR, Tesla, Thor Trucks, Volkswagen, Volvo have announced plans to electrify medium and heavy trucks. IEA 2019

⁶ <https://www.afr.com/companies/retail/ikea-says-electrical-vehicles-inevitable-as-it-switches-to-electric-trucks-20190308-h1c62w>

⁷ <http://www.austlogistics.com.au/about-us/electric-vehicles-working-group/>

⁸ <https://www.afr.com/companies/retail/ikea-says-electrical-vehicles-inevitable-as-it-switches-to-electric-trucks-20190308-h1c62w>

such as ANC, All Purpose Transport and Kings have integrated electric vehicles into their fleets so as to service IKEA's needs.

Other companies with electrification plans in Australia include Woolworths, DHL Express, Linfox and Australia Post.⁹ Globally, companies include FedEx, Amazon, Walmart, Pepsi, Anheuser-Busch and BT Group.

Therefore, it is recommended that further engagement with relevant stakeholders in the logistics and electric vehicle industry form part of the reform draft report review.

Health and safety

The draft road reform 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 reform additionally consider the safety and health benefits of electric vehicles.

In the freight and logistics sector, driver feedback suggests that electric trucks improve driver experience:

- low level cab vibration
- no petrol fumes
- drive assist
- lower levels of stress
- instant torque.

ANC notes that the benefits support Chain of Responsibility (CoR) objectives, including fatigue and last mile customer experience.¹⁰

Volvo Trucks Global reports positive feedback from drivers, noting "drivers ... are particularly impressed by the responsive driveline, seamless acceleration and how quiet the trucks are."¹¹

In addition to improved driver health, electric trucks can have significant positive health impacts on communities.

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.¹²

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

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

⁹ <https://www.energy.gov.au/business/large-businesses/industries/road-transport/road-transport-overview>

¹⁰ <https://ancdelivers.com.au/electric-delivery-vehicles>

¹¹ <https://www.volvotrucks.com/en-en/news/press-releases/2019/nov/pressrelease-191106.html>

¹² *Cleaner and Safer Roads*, Electric Vehicle Council (2019)

Australian Design Rules (ADRs)

Electric trucks 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 reduces a truck's payload.

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

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

Australia is home to SEA Electric, a 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.

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

- Reform ADRs to align with international standards and ease current restrictive import regulations
- Simplify heavy vehicle classifications
- Regulate heavy vehicle emissions standards in ADRs to Euro VI standards.

Automation

This report outlines the role harmonisation will play for autonomous vehicles, without giving credence to electric vehicles.

The exclusion of electric vehicles in the reform is notable as they are the transition technology to autonomy. Autonomy will not flourish without electrification. In preparing for the latter without the former, reform will create challenges further down the track.

Electrification today brings levels of automation that reduce the risk of human error and increases productivity.

The Electric Vehicle Council supports that the Australian Government should amend ADRs to allow for the import of new transport technologies, including electric and autonomous vehicles. Particularly, that the Australian Government should align ADRs with international regulation for a consistent application of law and regulation to ensure that Australia receives the most up to date technology and safety devices in vehicles.

Harmonisation

Harmonisation of heavy vehicle regulation can provide opportunities to facilitate the electrification of heavy vehicles.

As previously noted, harmonisation would allow for a national waiver or exemption scheme for electric freight and logistics vehicles, enabling them to remain competitive with their petrol and diesel counterparts.

In addition, harmonisation could:

- support wider access to fast chargers in regional areas with commercial partners
- facilitate open access fast-charging network along major regional routes
- encourage collaboration across all levels of government through information sharing of investment capacity and engineering expertise to simplify the application and approvals process for charging infrastructure installation
- ensure a consistent and reliable source of energy to power electric vehicles.

Telematics

Telematics has many useful applications including safety monitoring, driver behaviour, vehicle optimisation and fleet management. The mandatory use of telematics is supported by Linfox and the Australian Logistics Council as a safety tool. In addition to safety, the use of telemetry can be harnessed to support charging infrastructure deployment.

For electric vehicles, the collection of telematics data can allow charging infrastructure providers to analyse driver and vehicle behaviour to determine infrastructure allocation.

Given that the aim of the road reform is to increase productivity, there is potential to use telematics data collected as part of the review to inform future decision-making processes for EV charging infrastructure on our roads and highways. Including a provision to share telematics data would allow the government and private sector to monitor and allocate future resources to supply the heavy vehicle sector with the necessary infrastructure. There is additionally the opportunity to install charging infrastructure at truck stops to maintain productive freight movement.

Charging infrastructure is important to facilitating fleet electrification across all transport sectors. Data collected through telemetry can assist government and private sector investment on our highways and roads. If used properly, it has the potential to provide a coordinated network that is accessible for the freight and logistics sector. As noted by Linfox, electric truck adoption will be difficult until there are thousands of kilometres of charging infrastructure.¹³

¹³ <https://www.afr.com/companies/we-will-be-the-first-mover-on-electric-trucks-says-linfox-chairman-peter-fox-20180124-h0nppl>

Recommendations

The Electric Vehicle Council recommends:

- The National Transport Regulatory Reform include a more developed analysis of the impacts and opportunities of electric vehicles for the heavy vehicle sector in the final report for the Australian Government.
- Further consultation be undertaken with the heavy and electric vehicle industries regarding electrification.
- Further consultation be undertaken with the electric vehicle industry.
- A harmonised national waiver scheme be implemented for electric trucks that would permit higher mass vehicle limits compared to petrol and diesel counterparts.
- ADRs and in-service vehicle standards should be updated to allow for the uptake of new transport technologies, including electrification and automation.
- ADRs be aligned with international standards and ease current restrictive import regulations.
- ADRs be amended to regulate heavy vehicle emissions standards to Euro VI standards.
- Reform simplifies heavy vehicle classifications.
- Heavy vehicle regulation be harmonised to encourage collaboration across levels of government, to support investment in electric vehicle charging infrastructure across council, state, and national roads, and to ensure a consistent supply of energy for electric vehicles.
- Road reform should include reference to impacts of electric heavy transport on driver and community health and safety.
- Telematics data be stored and shared to inform deployment of electric vehicle charging infrastructure for a national EV highway.
- COAG and NHVR should work to expand and supply key freight routes with EV charging technology to support transition to electrification, such as at current truck stops/fatigue check

Concluding comments

Electric vehicles are a key player in reducing Australia's transport emissions. Reducing Australia's transport emissions will decrease climate change impacts on the environment, facilitate cleaner and healthier air quality, promote connected and mobile communities, attract investment, create jobs and stimulate new industries.

It is essential that road reform works to incentivise and accelerate electric vehicle adoption in Australia. The heavy vehicle sector suffers setbacks due to a lack of harmonised regulation and Australian Design Rules. Given that automation is referenced to increase productivity and safety on Australian roads, the Electric Vehicle Council recommends further consultation be undertaken with the heavy vehicle industry in regard to electrification.