

Submission to the Joint Select Committee on Road Safety



Introduction

The Electric Vehicle Council (EVC) welcomes the opportunity to make a submission to the Joint Select Committee on Road Safety. Underlying our recommendations are the safe system principles of safer people, safer roads, safer speeds and safer vehicles.

There is a strong link between the electrification of road transport and automation, where electric vehicles are the transition technology to autonomous vehicles. The new safety features that are available in new vehicle models have some level of automation already, many of these features are regularly updating remotely by software updates (similar to that of a computer or phone). Preparing for electric vehicles will help prepare for autonomous vehicles and their integrated safety systems, reaping their benefits along the way.

Our submission highlights how advancements in vehicle technology, found in electric vehicles today, and the automated vehicles of tomorrow, will improve road safety.

Our recommendations to the Joint Select committee focus on increasing electric vehicle uptake to support safer Australian roads through coordinated government investment, a more cohesive approach to road trauma and road transport related deaths, and integrated policy development.

Road safety

Electric vehicles should be considered in relation to the following policy areas to improve road safety outcomes:

- **Health**

Road safety and health policy should be considered in a more integrated manner, so as to accurately depict the number of road transport related deaths.

Electric Vehicle Council research shows that in the Newcastle-Sydney-Wollongong region, there are 60% more transport related deaths from road vehicles than road tolls¹. A holistic approach to health and road safety would ensure the total impacts of vehicles are mitigated across sectors, including public health. There should be equal consideration given to deaths resulting from vehicle pollution as to deaths resulting from road accidents.

Additionally, the positive health impacts of electric vehicles can be experienced by the driver, where lower vibration in vehicle cabs and lower sounds from electric motors reduces stress and fatigue, which can lead to a more alert and calmer driver.

¹ Electric Vehicle Council (2019) *Cleaner and Safer Roads*
https://electricvehiclecouncil.com.au/wp-content/uploads/2019/06/EVC-Cleaner-and-Safer-Roads-for-NSW_V3-Single.pdf

- **Education**

Educating consumers on the developments in vehicle technology is necessary to allow them to make informed decisions when purchasing vehicles.

All electric vehicles tested in Australia in the last 5 years received 5-star ANCAP ratings.² In the United States, the Tesla Model 3 achieved the lowest probability of injury ever tested.³

Many of the safety features found in electric vehicles are autonomous, where the vehicle corrects a human error. These features include: lane assist, conditional speed limits, pedestrian avoidance, vehicle to vehicle and vehicle to infrastructure communication, blind spot monitoring and autonomous emergency braking. Given that approximately 90% of crashes involve some form of human error,¹ education on the driving and safety benefits of electrification and automation is necessary to advance road safety and driving behaviour.

- **Industry:**

There are whole industries that are impacted by road safety issues including freight and logistics, taxi and ridesharing, and public transport, all of which have indicated movement towards fleet electrification.

Encouraging the uptake of new vehicle technologies in these sectors will reduce the number of collisions on roads and injuries to passengers, pedestrians and drivers. Telematics can be harnessed in the heavy vehicle sector, as can autonomous emergency braking and other safety technologies in all sectors, to reduce human error when driving.

- **Transport:**

Transport policy should look to account for and integrate future transport models and technologies, as demonstrated by international trends.

Australia is currently lagging developed countries in electric vehicle uptake. Given that electric vehicles include the latest safety technology (as they are often designed so that they are a steppingstone to autonomy), Australians are not getting the same safe vehicle options as our international counterparts.

Integrating transport policy and road safety with electric vehicles will allow Australia to utilise safety technologies currently being used overseas.

Road safety technology development

Road transport technology is advancing at a rapid rate. In the last ten years, we have seen an increase in electric, automated, connected and service driven transport options to support future mobility.

² Electric Vehicle Council (2019) *Cleaner and Safer Roads*
https://electricvehiclecouncil.com.au/wp-content/uploads/2019/06/EVC-Cleaner-and-Safer-Roads-for-NSW_V3-Single.pdf

³ https://www.tesla.com/en_AU/blog/model-3-lowest-probability-injury-any-vehicle-ever-tested-nhtsa

Electric vehicles are the transition technology to automated and connected vehicles. Given that there is a need to integrate road safety into health, education, industry and transport policy, there is opportunity to include electric vehicles as an important part of the process. An inclusion of electric vehicles, and their automated safety systems, is an important consideration in the review of Australia's road safety.

Upon establishing the Office for Future Transport Technologies, the Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development, the Hon Michael McCormack was quoted:

"While representing an emerging business opportunity for the national economy, these technologies also have great potential to reduce the \$27 billion cost of road crashes in Australia each year.

"These advances can also help to reduce the significant social impacts that road deaths and injuries have on families and the wider community."

Mr McCormack said last month Roads Australia, in responding to the Inquiry into the National Road Safety Strategy, described automated vehicles and other new technologies as road safety "game-changers".⁴

Given that electric vehicles are the transition technology to automated vehicles, and that they are currently on our shores (arriving in increasing numbers), 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.

Road safety and health

The Electric Vehicle Council asserts that the number of deaths and injuries as a result of vehicles is much higher than currently reported, given that the number only takes into account physical instances of death and injury.

Vehicle emissions are detrimental to the environment, and also our health. The Electric Vehicle Council released a 2019 report, *Cleaner and Safer Roads for NSW*. This report details the impact that air pollution as a result of vehicle emissions has on the health of Australians, road safety, and the public health system.

Some compelling points include:

- 1,700 Australians die annually from air pollution from motor vehicles
- Air pollution disproportionately affects vulnerable members of society
- Annual health costs of air pollution from vehicles in the Sydney-Newcastle-Wollongong region is estimated at \$3 billion
- Estimated savings for each electric vehicle replacing an internal combustion engine vehicle is \$2400 in health costs.

The Electric Vehicle Council strongly emphasises that reducing vehicle emissions is a vital part of making our roads safer.

⁴ <https://minister.infrastructure.gov.au/mccormack/media-release/office-future-transport-technologies-revealed>

A recent study found that air pollution, particularly PM2.5, is getting worse and increases our risk of cardiac disease. The main sources of PM2.5 is smog from traffic, industry and bushfires.⁵ Transitioning to electric vehicles is a low-cost and already achievable way to reduce these harmful PM2.5 emissions from our roads, parks, schools and residential areas.

In preparing the *Cleaner and Safer Roads for NSW* report, the Electric Vehicle Council relied on the most recent NSW data available which was measured in 2005. As such, the following recommendations were made:

- 1) Include deaths due to vehicle emissions in NSW road toll
- 2) Increase availability of data regarding health impact of motor vehicle noise and air pollution in NSW.

While these recommendations are NSW focused, they are applicable nationally.

In addition to Electric Vehicle Council research, Infrastructure Victoria estimates there are \$735 million worth of health benefits from automated and zero emissions vehicles.⁶ The same report cites research from the United States, where vehicle automation could reduce crashes by up to 94%.

Infrastructure Victoria highlights the importance of continuing to prioritise vehicle and road safety initiatives until the full potential of vehicle automation can be proven. The Electric Vehicle Council argues that this includes preparing for electrification, so that the transition to automated and connected vehicles is as streamlined as possible.

Planning and investment in road safety

In realising the potential of electric vehicles and the safety technologies they bring with them, it is necessary that road safety encourages a collaborative approach to planning and infrastructure investment to support their uptake.

Much research has been done on the need for government investment in charging infrastructure to accelerate and facilitate uptake of electric vehicles. This government investment should be valued across sectors as a public health, safety and infrastructure investment. Given the numbers noted above for potential public health savings as a result of electrification, it is necessary to consider how the potential surplus can be spent to serve the community. The Electric Vehicle Council suggests that savings offset infrastructure investment to support a national electric vehicle highway.

The Australian Government's Climate Solutions Package includes the development of a National Electric Vehicle Strategy to 'ensure a planned and managed transition to new vehicle technology and infrastructure so all Australians can reap the benefits.' This demonstrates the need for inclusion of electric vehicles in all aspects of Australian transport and road safety sectors. The Electric Vehicle Council will continue to work with the Government on this strategy.

⁵ <https://www.smh.com.au/national/no-safe-level-study-links-pm2-5-pollution-to-increased-risk-of-cardiac-arrest-20200128-p53v98.html>

⁶ <https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Advice-on-automated-and-zero-emissions-vehicles-October-2018.pdf>

Recommendations

1. Integrate electric vehicles into transport, health, education, industry policy to support road safety.
2. Encourage the uptake of electric vehicles to promote safer vehicles on our roads, and cleaner air in our streets.
3. Include the number of annual deaths as a result of vehicle emissions in national road tolls.
4. Regularly collect data on the number of deaths as a result of vehicle emissions.
5. Invest in electric vehicle charging infrastructure on Australia's roads to facilitate the uptake of electric and autonomous vehicles.
6. Educate consumers on the safety benefits of new vehicle technology found in electric and autonomous vehicles.

Summary

The Electric Vehicle Council advocates that road safety includes all instances of death and injury as a result of a vehicle, including those as a result of vehicle emissions.

Therefore, a review into Australian Road Safety should not only consider what new electric and automated technology can do for reducing accidents, but also what it can do for saving lives beyond the instance of collision.