

Blind Citizens Australia

Position Statement on the Impact of Silent Vehicles

19th November 2019

Blind Citizens Australia (BCA) calls on state and federal governments to take a strict approach to the regulation of minimum noise emissions from hybrid and electric vehicles in order to maximise the safety of pedestrians who are blind, deafblind or vision impaired. This would mean mandating the installation of an Acoustic Vehicle Alerting System (AVAS) in all electric and hybrid vehicles registered in Australia. This extends to all electric or hybrid cars, buses or any other road-using vehicle. Further, we encourage Australia to be a signatory to UN regulation 138-01 relating to silent vehicles.

# Background

The use of hybrid and electric cars on Australian roads is steadily increasing, due to growing public concern regarding climate change and fuel scarcity. Although these vehicles may present significant environmental benefits, they also have the potential to severely compromise the safety of pedestrians and, in particular, pedestrians who are blind or vision impaired.

A natural consequence of an ageing population will also be increased prevalence of hearing loss in addition to vision impairment. For those with partial hearing loss, the issue of hybrid and electric cars being silent is particularly pertinent.

Historically, the sound emitted by road traffic has enabled pedestrians who are blind or vision impaired to travel safely and independently when crossing roads and using footpaths. People who are blind or vision impaired are able to safely navigate roads and areas with vehicles due to listening to the noise of engines and to the sound of the traffic moving in relation to themselves. The rise of hybrid and electric vehicles thwarts this attempt to use noise to safely and independently navigate in areas with traffic due to their silent approach. These vehicles are impossible to detect audibly at a safe distance, thereby increasing the risk of pedestrian injury or death.

This issue has started to gain momentum internationally, as evidence of the strong correlation between pedestrian accidents and hybrid and electric vehicles starts to mount. Recent research conducted by Monash University in conjunction with Vision Australia revealed the following, based on a survey of 246 participants with blindness or vision impairment:

* 75% of participants regularly walk, daily or almost daily. Out of these participants, 42% walk outside unassisted and 58% walk outside assisted. The majority of those walking outside assisted do so by using a white cane.
* 35% of participants experienced a collision or near collision with an electric or hybrid vehicles;
* 74% of participants reduced confidence due to the introduction of electric or hybrid vehicles.[[1]](#footnote-1)

The World Blind Union (WBU) and the European Blind Union (EBU) are two major organisations who represent people who are blind or vision impaired globally. Both organisations have been campaigning for a mandate to have a minimum sound emitted by electric or hybrid vehicles to alert pedestrians to their presence in areas with traffic. Due to this campaigning, the European Union has created a minimum standard for noise emittance by hybrid and electric cars, the Regulation of Sound Level of Motor Vehicle (EU 540/2014). This EU standard legally prescribes installation of a system, the Acoustic Vehicle Alerting System (AVAS) in electric and hybrid vehicles. It is a mandatory prescription, with implementation commencing on July 1, 2019.

The WBU urges all member nations to push for a Global Technical Regulation to have a minimum sound standard that:

1. Is similar in character to the sound emitted by an internal combustion engine;
2. Requires sound be emitted whenever the vehicle is in operation, including when stopped;
3. Applies to any quiet vehicle including electric, hybrid electric and quiet internal combustion engines; and
4. Prohibits the inclusion of a driver controlled on/off switch.

In relation to point d), both WBU and EBU have advocated against the pause switch for the AVAS system, which is not prohibited by the EU regulation (540/2014). They have since been successful in having the pause switch installing prohibited and ensuring that car manufacturers or drivers will no longer be able to install a pause switch for AVAS.

UN regulation no.138 covers the “uniform provisions concerning the approval of Quiet Road Transport Vehicles with regard to their reduced audibility.” In 2017, amendment no.1 to this regulation specified that an off-switch for the AVAS is prohibited. Australia is not currently a signatory to this amended regulation (138-01).

In Australia, the Vehicle Noise Standard ADR83/00 stipulates the limits on external noise emitted by light and heavy vehicles. This needs to be extended to include hybrid and electric vehicles, to place a requirement for all hybrid or electric vehicles to have a minimum noise emission for auditory detection when being driven or when idling, e.g., on driveways, crossings, or intersections.

In 2019, bipartisan support was secured to develop a regulatory statement in relation to a minimum noise emission for hybrid and electric vehicles. Plans are underway to mandate a minimum sound requirement in these vehicles. A Regulation Impact Statement is now being developed by the government for the AVAS to be implemented in all hybrid and electric vehicles.

# Context

The Australian Government has signed and ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and Australia has agreed to comply with its obligations. Article 9 of the UNCRPD requires that parties undertake measures to allow people with disabilities to participate fully in all aspects of life, through the “identification and elimination of obstacles and barriers to accessibility”. This requirement is further reinforced within the National Disability Strategy 2010-20.

# Position

Blind Citizens Australia encourages state and federal governments to take a strict approach to the regulation of hybrid and electric vehicles in Australia in order to maximise pedestrian safety. It is important that this matter is not left to the discretion of car manufacturers and is driven by government, to ensure a consistent approach to pedestrian safety across the industry.

Blind Citizens Australia recommends the mandatory legislation based on the UN standard for minimum sound requirements for all hybrid and electric vehicles. This requirement must be included in the Australian Design Rules and referenced in the Motor Vehicle Standards Act 1989 (Cth). The AVAS must be a mandatory requirement for hybrid and electric vehicles. This system would require a noise to be emitted from car start-up to travelling 20 km/hr, either in a forward direction or in reverse. Further, it must be mandated that the requirement is implemented without the capacity to switch off the function. Finally, Australia is encouraged to become a signatory to UN regulation 138-01. These measures would ensure the continued safety and independence not only of Australians who are blind or vision impaired, but for all pedestrians.

1. Vision Australia (2018, 15 October). Electric and hybrid cars putting pedestrian at risk. Retrieved from <https://www.visionaustralia.org/community/news/2019-08-23/electric-and-hybrid-cars-putting-pedestrians-risk> [↑](#footnote-ref-1)