



## **AEVA POLICY RECOMMENDATIONS: ELECTRIC BICYCLES AND MICRO-MOBILITY**

**APPROVED BY THE BOARD: 26 JUNE 2024**

### *Policy statements*

**[1]** AEVA supports harmonised legislation around electric bicycles, scooters and other personal mobility devices.

**[2]** AEVA recommends that any personal mobility devices such as e-scooters comply with the following criteria:

- Weigh less than 30 kg, or 15 kg if foldable
- Be less than 750 mm wide
- Have a functioning, proven-effective brake system
- Have a front facing white light, and rear facing red light which must operate whenever the vehicle is in motion
- Have side facing reflectors
- Be limited to a verifiable powered top speed of 25 km/hr.

**[3]** AEVA supports any measures aimed at increasing the uptake of electric bicycles, stand-up scooters and other electric rideable devices. This can include financial assistance for low-income households to buy an electric bike or cargo bicycle, as well as initiatives to motivate greater participation in active transport.

**[4]** AEVA encourages governments to increase the active transport infrastructure spend to a defined minimum percentage of transport budgets, allowing for protected bike lanes, connected cycling routes and establishing low traffic neighbourhoods.

**[5]** While continuing to support a 25 km/hr speed limit for e-bikes on roads and shared paths, AEVA recommends increasing power limits to 500 watts. This will enable e-bikes to be used for load carrying trips that might otherwise require a car, and foster greater uptake of e-bikes.

**[6]** AEVA believes state public transport agencies should make provision for appropriate bike racks on buses and in suburban rail carriages. E-bikes and scooters make end-of-journey transport easier for patrons and should be encouraged.

## Commentary

Electric bicycles and personal electro-mobility devices are any lightweight power-assisted vehicle which is not required to be licensed with a transport department. Generally, they have power outputs of less than 250 W, and have a powered top speed of 25 km/h. The electric bicycle is the world's most efficient EV. No other technology can move a person as far on so little energy. E-bikes are also very good for the environment; requiring a battery one-hundredth the size of most electric car batteries, their resource impact on the planet is miniscule. They are also the best-selling EV on the planet, with e-bike sales beating electric car sales by about three-to-one<sup>1</sup>. Cycling (electric or human-powered) is arguably the best way to decarbonise our daily commute<sup>2</sup>, considering the costs associated with it are so small and the societal benefits so immense.

In addition to supporting and promoting electric bicycles, governments must back up their statements with infrastructure required to genuinely boost active travel. The United Nations Environment Programme explored national commitments to non-motorized transport infrastructure<sup>3</sup> and recommended 20% of all transport funding be allocated to cycling and walking. Considering the engineering associated with paths designed to support cyclists (as opposed to hundreds of tons of road traffic) this would be transformative for our cities.

While many Australians live too far from their regular daily commuting destinations for cycling to be a popular choice, at least one third of the population could conceivably ride a bike on a daily basis. Efforts to motivate participation include paying residents to ride a bike to work, which has shown remarkably positive results<sup>4</sup>.

Investment in safer urban cycling infrastructure pays dividends for retail businesses. Adding weight to the old adage that "cars don't spend money, people do", cities like New York<sup>5</sup>, Salt Lake City<sup>6</sup> and Vancouver<sup>7</sup> have seen significant improvements in retail trade after the removal of cars and construction of protected bike paths. The human-human interactions we've largely eliminated through motoring are re-kindled with cycling and walking – essential precursors for high street trade.

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<sup>1</sup> eBikes.org's data driven insights into the e-bike market, 21 February 2024.

<https://ebikes.org/general/e-bike-market-insights>

<sup>2</sup> Christian Brand. The Conversation, 30 March 2021. <https://theconversation.com/cycling-is-ten-times-more-important-than-electric-cars-for-reaching-net-zero-cities-157163>

<sup>3</sup> Global outlook on walking and cycling, September 2016.

<https://wedocs.unep.org/bitstream/handle/20.500.11822/17030/globalOutlookOnWalkingAndCycling.pdf>

<sup>4</sup> Micah Toll. Electrek, 3 February 2022. <https://electrek.co/2022/02/03/these-countries-pay-people-to-ride-bicycles-and-e-bikes-to-work-shouldnt-the-us-too/>

<sup>5</sup> Clive Thompson. Wired, 24 January 2023. <https://www.wired.com/story/the-battle-over-bike-lanes-needs-a-mindset-shift/>

<sup>6</sup> Michael Andersen. StreetsBlog USA, 6 October 2015. <https://usa.streetsblog.org/2015/10/06/salt-lake-city-cuts-car-parking-adds-bike-lanes-sees-retail-boost>

<sup>7</sup> Steve Frothingham. Vancouver dealer tour, July 2015.

[https://www.bicycleretailer.com/sites/default/files/downloads/resource/vancouver-dealer-tour\\_july2015.pdf](https://www.bicycleretailer.com/sites/default/files/downloads/resource/vancouver-dealer-tour_july2015.pdf)

Electric motorised scooters – the type you stand on, rather than sit on – are hugely popular around the world. Trips exceeding 10 km can be completed with ease, and the space required to accommodate them is miniscule. Most jurisdictions allow these to be ridden under the same rules and regulations which apply to electric bicycles – In Australia, no more than 200 watts, and no faster than 25 km/h. Several Australian states have made owning a private electric scooter illegal, although there are moves to address this<sup>8</sup>. Currently several corporations operate a sophisticated hire scheme which have had various degrees of success, but attracted plenty of criticism primarily around the public storage of scooters. Needless to say, privately owned scooters would not be left on the streets unlike some other private property<sup>9</sup>.

The main appeal of a privately owned electric stand-up scooter is its portability; riders can take it with them at the end of their trip or on the train for longer trips. The ‘last mile’ segment of transport is frequently described as an impediment to increased public transport use, so being able to bring your wheels with you is a major advantage. There is a risk, however, when people charge their electric scooters in apartments or offices. More poorly built scooters are susceptible to battery damage, while questionable quality control on the manufacture might risk a fire. Electric scooters and ‘hover boards’ have attracted plenty of media attention with some high profile fires<sup>10</sup>. Emergency services strongly encourage users to always charge their scooters and e-bikes outside the home or office.

More powerful e-bikes can still be purchased in Australia, provided they are used off-road. Retailers simply inform the customer that riding such a machine on the road is illegal, and remains their responsibility. However many riders complain that 250 W limit is needlessly restrictive. Additional power enables e-bikes to be used for a greater range of load carrying trips such as carrying children and/ or shopping. In Canada, e-bikes may be up to 500 W and no faster than 32 km/h<sup>11</sup>, while in the USA it can be as high as 1000 W<sup>12</sup>. Enforcement of power limits is difficult, requiring suspected non-compliant bikes to be tested on a mobile dynamometer. Speed limits are rarely enforced on shared paths, although safe road design which naturally limits speeds in dense pedestrian areas would largely achieve the same goal.

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<sup>8</sup> Stephanie Richards. Indaily, 27 January 2023.

<https://www.indaily.com.au/news/2023/01/27/privately-owned-e-scooters-to-be-street-legal-under-opposition-plan>

<sup>9</sup> Brent Toderian. <https://mastodon.online/@BrentToderian/109615900150733540>

<sup>10</sup> See, for example: Grace Burmas. ABC news, 21 December 2022.

<https://www.abc.net.au/news/2022-12-21/lithium-ion-battery-fires-warning-issued/101569244>

<sup>11</sup> Rad power bikes, 5 February 2019. <https://www.radpowerbikes.com/blogs/the-scenic-route/ebike-laws-around-the-world>

<sup>12</sup> Quietkat. <https://quietkat.com/pages/united-states-electric-bike-regulations-guide>