8th November 2022

NSW Electric Vehicle Strategy
Environment, Energy and Science
Department of Planning and Environment
Locked Bag 5022
Parramatta NSW 2124

Via email: info@environment.nsw.gov.au

To whom it may concern,

Re: NSW Electric Vehicle Strategy

The 2021 NSW Electric Vehicle Strategy set a high bar for other states and territories and the Federal Government. Bicycle NSW supports the strategy but urges the NSW Government to include micromobility. Bicycles are vehicles[i] and e-bikes, by extension, are EVs. By including e-bikes, the strategy's aims of providing affordable, clean transportation are not only supported, but algorithmically enhanced. This is due to the abundant opportunities to strengthen and accelerate the strategy's capacity to decarbonise the transport network and enhance the economy, opportunities that micromobility is uniquely placed to magnify.

Our position is endorsed by a combined submission to the National EV Strategy, written by Australia's lead active transport advocacy groups. Bicycle NSW would like to thank Stephen Hodge from We Ride whose systematic research and dedication has enabled each state's group to contribute to this effort. We would also like to acknowledge and thank our interstate partners: West Cycle, Bicycle Queensland, Pedal Power ACT, Bicycle Network, Bicycle SA, AusCycling and the Amy Gillett Foundation.

Bicycle NSW applauds the NSW Government's recognition of the climate emergency and its commitment to reach net zero CO_2 emissions by 2050. It aligns with TfNSW Future Transport Strategy and the international pivot from internal combustion engines (ICE) towards EVs including micromobility. Just as there are catastrophic environmental, economic and reputational consequences of failing to act, there are tremendous opportunities for coordinated action.

In its Climate Change Policy Framework, the NSW Government stated that it endorses the United Nations Paris Agreement on Climate Change[ii] and aspires to achieve net-zero greenhouse gas emissions by 2050. Transport accounted for 20% of NSW's total greenhouse gas emissions, making it the second largest source of greenhouse gas emissions. Of that, road transport accounted for 88% or 23 million metric tonnes CO_2[iii].

We submit that consideration of a more diverse range of interventions that include e-bikes and light electric vehicles should inform the future development of the NSW EV Strategy.

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Other countries are already far ahead of Australia in developing multi-modal, active and affordable transport systems with incentives for adoption of new technology across the board.

Spurred by Russia's invasion of Ukraine, the need to find alternative, cleaner transport has vastly accelerated. The EU Transport Commissioner is negotiating major infrastructure to boost active transport to replace 12% of fuel needed for road transport by growing use of active travel modes, walking, cycling and public transport.

E-bike sales in the US[iv] are outpacing that of ICE and EV cars. While 608,000 electric cars and trucks were sold in 2021, more than 880,000 e-bikes were purchased, almost doubling the number purchased in 2020. This is largely due to increased affordability of e-bikes, socially progressive e-bike subsidies and the rising cost of fuel. As one of the few reliable suppliers of rare earth minerals vital for componentry including semiconductors and Lithium Ion batteries, Australia can level up from quarry status to becoming a vertically-integrated renewables powerhouse.

Other advantages for incorporating e-bikes into the NSW EV strategy, include the strength of the domestic industry and growing demand for clean, affordable active transport. In 2021, roughly 60,000 e-bikes were sold in Australia, three times the electric vehicle sales. A concerted effort to nudge e-bike purchases could have profound impacts for facilitating mode shift and achieving the goal of reducing emissions through affordable transportation.

Almost half a billion dollars in tax cuts and incentives over the next four years will help drive uptake and reduce barriers for EV purchases. In addition, and to accelerate the pace of decarbonisation and harness economic opportunities, we urge a pivot to e-bike subsidies. Let's consider the unique value proposition of the e-bike for its inclusion in the NSW EV Strategy.

Why include e-bikes?

E-bikes are the cheapest, most accessible EV

E-bikes are, on average, 40 times cheaper to purchase than an EV. Even with a subsidy, EVs will remain out of reach for most Australians struggling heavily with the cost of living. The cheapest EV in Australia is currently around $49 000. Even with an unfeasibly generous 30% ($14 700) subsidy, that's a $34 300 personal debt and an enormous burden on the tax base in subsidies. A much smaller e-bike ($2500) subsidy or loan-to-own scheme enables anyone to purchase an excellent e-bike.

Subsidies make e-bikes available to those most likely to benefit from them. Many more people could access the program including those who cannot drive. This supports TfNSW Future Transport Strategy 2061[v] which preferences car-free mobility, essential for reducing the 70% of trips under 2km that are taken in a car. The more e-bikes in the system, the less cars are clogging roads and the faster we can get to a cleaner, prosperous and active society.

E-bikes and light electric vehicles increase participation and inclusion for people who rely on personal mobility devices. This provides a transport option that's accessible to more people due to lower costs and less barriers to participate than driving.

E-bikes are 40 times less carbon-intensive to produce

The full conversion from ICE to EV will take time. The National EV Strategy surmises that it will take 10 years to fully commission a national EV fleet[vi]. But when it comes to the climate emergency, time is a luxury we cannot afford.

In addition, EVs are carbon-intensive to produce. A Tesla Model S electric vehicle, charged on the Victorian grid, emits 209.1 grams of CO_2 per kilometre travelled (PKT), whereas an e-bike emits only 6 grams of CO_2 PKT[vii] or 40 times less carbon to produce (Figure 1).[viii]

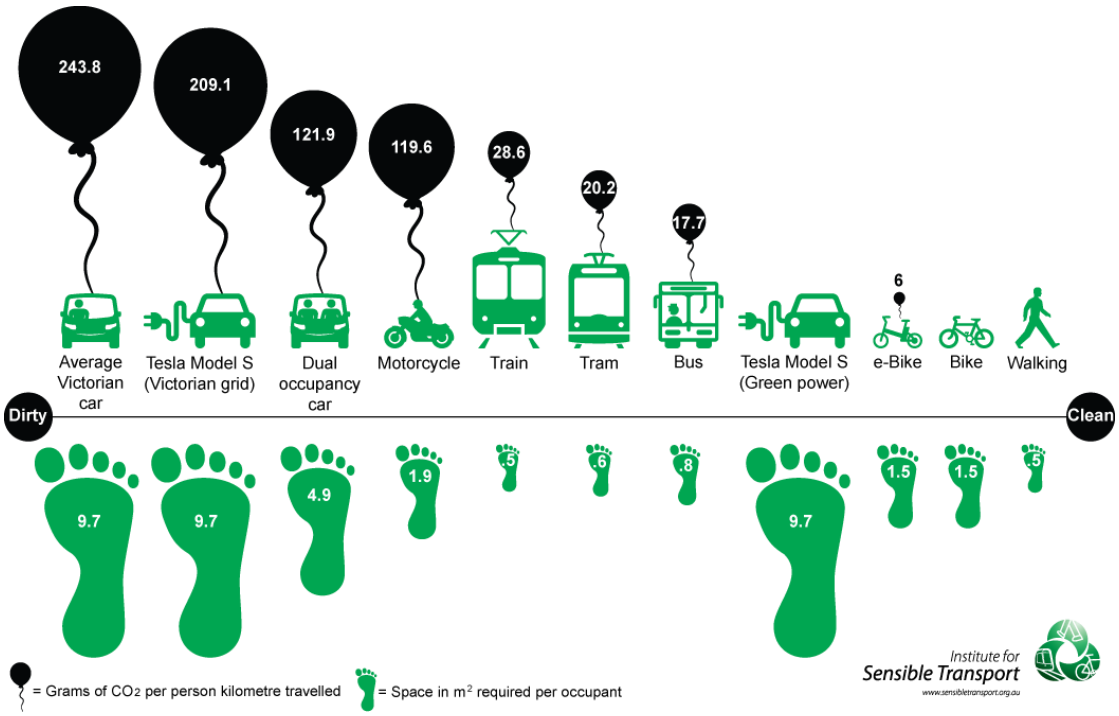


Figure 1: Graphic from the Institute for Sensible Transport[ix]

E-bikes reduce traffic congestion

Traffic congestion is a dead weight upon the economy and society. EVs don't address the multibillion dollar social and economic burden created by traffic congestion, or the human toll. In each state of Australia, up to 2 million trips under 2 km are made every day. In 2019 congestion cost $19 billion nationwide and is estimated to cost 38.9 billion by 2031[x]. We need to address this issue because we can't just replace every vehicle with an EV and keep building roads. This is an opportunity for a mode shift and e-bikes are an incredibly efficient option for millions of short daily trips.

Case study 1, **Family car replacement:** Tien's second family car is an e-bike. 'I use it all the time for shopping, commuting, morning and afternoon school runs. The kids love sitting on the back. They can see everything. It's quiet, we never have to worry about parking and we can ride through beautiful parks.'

Figure 2: Tien and her e-cargo bike, Sydney (Source: Bicycle NSW)

Case study 2, Urban commute: Loretta completes her Monday to Friday, 12.5 km (one-way) commute into Sydney's CBD in 35 minutes. She doesn't have to wait in traffic or worry about parking. Loretta can generally get anywhere in the city, regardless of the weather, in less time than a car or public transport. 'It lets me travel further and over more challenging terrain. It's just so convenient and I'm saving heaps every year on transport and fuel.'

E-bikes dramatically improve logistics

By overcoming congestion with zero emissions, micromobility systems solve the wicked logistical problem of the last mile[xi]. This is because one e-cargo bike connected to a logistics hub can make 10 times as many trips as a truck battling through traffic[xii]. Megacities like Cairo and Dakar are leapfrogging[xiii] into micromobility and upending the assumption that pollution and congestion are essential by-products of economic development. Western examples of decarbonisation and decongestion facilitated by micromobility technology and infrastructure include:

- Toronto's bicycle network saw a 40%[xiv] increase in deliveries by bike from 2019-22.
- Micro-logistics hubs and last-mile services in London could reduce traffic volumes by 13% vehicle emissions by 17%[xv].
- A pilot project in New York resulted in a 109% increase in deliveries by cargo bikes.

For many, e-bikes and e-cargo bikes are viable substitutes for cars[xvi]. E-bike commutes compared to normal cycling tend to be further and more regular regardless of weather and conditions.

E-bikes support physical activity

Whilst private cars are convenient, the generational replacement of millions of short daily trips from active to passive modes has come at a tremendous social cost. 25% of Australian children aged 2-17 and 67% of adults are considered overweight or obese[xvii]. Obesity linked to physical inactivity is a major contributor to type 2 diabetes with estimates showing that eliminating obesity from the population can potentially reduce its incidence by over 40%. Type 2 diabetes is costing Australians up to $6 billion annually[xviii]. By providing incentives and increased transport options, millions of unnecessary daily car trips could be replaced by active transport.

NSW EV Strategy Actions and Bicycle NSW recommendations

1. Rebates for new electric vehicle purchases

Rebates of $3000 for the first 25,000 EVs sold for under $68,750. Designed to encourage EV uptake and targeted to the cars more people can afford.

As discussed, e-bikes are more affordable than EVs by multiples of ten. E-bike subsidies therefore, especially when indexed according to income, offer a much fairer, wider and more efficient distribution of EV Strategic funding. The following is a snapshot of highly successful e-bike subsidy schemes.

- **Case Study 3:** Green Square loan-to-own e-bike trial. TfNSW[xix], in partnership with the City of Sydney and three e-bike providers, offered a one month free e-bike trial to 160 residents after which they could opt to own. ‘E-bikes offer a different type of ride and can be helpful for families with children, or workers who don’t have time to change before they get into the office.’ Lord Mayor, Clover Moore.
- **Case study 4:** Denver, Colorado[xx] offers e-bike rebates of between $400- $1700 and cannot keep up with demand.
- **Case study 5:** Combined with championing safe bicycle infrastructure, France[xxi] is offering up to 4000 Euros to trade in the car and buy an e-bike.
- **Case study 6**: Irish families are being offered a 3000 Euro tax incentive[xxii] to buy cargo bikes.
- **Case study 7**: Stockholm[xxiii] has introduced the world’s most affordable e-bike share service that pays for itself through advertising.

2. Phase out of stamp duty for electric vehicle purchases

Removal of stamp duty from EVs under $78,000 purchased from 1 September 2021 and from all other EVs and plug-in hybrids from 1 July 2027.

Again, even without stamp duty, the purchase and maintenance cost of EVs will be out of reach for most Australians. The effectiveness of an EV strategy must be widespread and therefore include e-bikes/ e-cargo bikes (40x more affordable) and safe bicycle infrastructure. See Section 4. Infrastructure funding.

3. Electrify NSW Government fleet

NSW Government will invest $105 million via a competitive reverse tender auction process. Purchase of 12,000 cars by 2030, partly to create a second-hand EV market.

The combined state bicycle advocacy submission to the National EV Strategy recommends a 10% proportion of e-bikes in all government fleet purchases. E-bikes reduce traffic congestion and improve workforce health and morale. Additionally, this role models active travel and aligns with the NSW Government's Movement and Place framework and Future Transport Strategy. Consider the staggering success of Australia Post's 950+ e-bike fleet[xxiv] which managed to keep up with the COVID spike in demand through micromobility. Each EDV (electric delivery vehicle) can carry 100 small parcels and up to 1200 letters helping save delivery times and the planet.

4. $171 m of EV infrastructure funding

The NSW Government will invest $171 million into EV charging coverage to future proof the EV network over next 4 years. This includes $131 million into EV fast charging grants, which will co-fund charge point operators to install and operate charging stations at 100 km intervals across the state, and every 5 km in metropolitan areas.

Decarbonisation and congestion are inextricably linked. Whether EV or ICE, the cost of congestion is crippling the economy. In addressing infrastructure, the NSW Government must apply its own Movement and Place framework and Future Transport Strategy to the task of EV infrastructure planning. The following must be considered to support more sustainable mobility:

- A cross-governmental integrated approach to infrastructure projects and land use design.
- Road User Space Allocation Policy
- Providing for Walking and Cycling on TfNSW Projects Policy.
- Actions in Future Transport Strategy to make transport safer, emissions-free and sustainable; develop 15-minute resilient communities; offer multimodal choices; give priority to active travel.
- TfNSW Cycleway Design Toolbox
- Austroads Part 6A
- Logistics: Focus on last-mile logistics hubs for micromobility
- Join the networks: accommodate bikes on buses, trams and trains to encourage multi-modal travel
- Rideshare, share bikes, e-bike libraries, and loan-to-own services
- End of trip facilities (EOTF)

These policies are inclusive of all road users and prioritise active transport due to the multiple environmental, health and economic benefits flowing from an emissions-free, decongested network.

5. Transit lanes: New regulations will apply to allow EVs to use transit lanes and priority parking spots to recharge.

This action is unlikely to encourage purchase of an EV and will only contribute to traffic congestion and undermine road safety for cyclists and public transport reliability.

6. Distance based road user charge

A road user charge of 2.5 cents per km (indexed to CPI) will apply to eligible EVs from 1 July 2027 or when EVs make up 30 per cent of all new vehicle sales.

Given one bicycle takes up a tenth of the space of a car and does no damage to the road network, this policy need not apply to e-bikes.

7. Electrify council and private fleets

Applies to non-profits, council and corporate fleets. Aims to increase EV sales to 52% by 2030-31 and see the vast majority of new car sales being EVs by 2035.

As with NSW Government fleets, BNSW recommends the same subsidies and incentives for e-bike purchases in all fleets.

8. Regional Tourism

$20 million will be allocated to EV destination charging grants. Eligible regional tourist locations such as motels, restaurants and attractions will be assisted to co-fund the purchase and installation EV chargers to attract EV drivers to their sites. The NSW Government is planning 'EV tourist drives' across the state to ensure regional communities share in the benefits of EVs.

The same can be provided for e-bike charging stations. Alongside bicycle infrastructure, this will provide a massive boost to regional transport networks, and tourism, particularly the accelarating rail trails movement.

Case study 8: Regional resilience: Transport is a major cost of living issue in regional NSW. Reducing trips in order to save on fuel bills compounds feelings of social isolation and mental distress. Seano from Lismore replaced his inundated van with an e-bike for daily trips and navigating damaged roads. 'My e-bike has been an absolute boon to my physical and mental health in this flood recovery landscape. It not only provides me with affordable mobility, but also a sense of adventure. Without it I would be trapped ... Now I quietly zoom through the fresh air and sunshine, riding to work, shopping and socialising.'

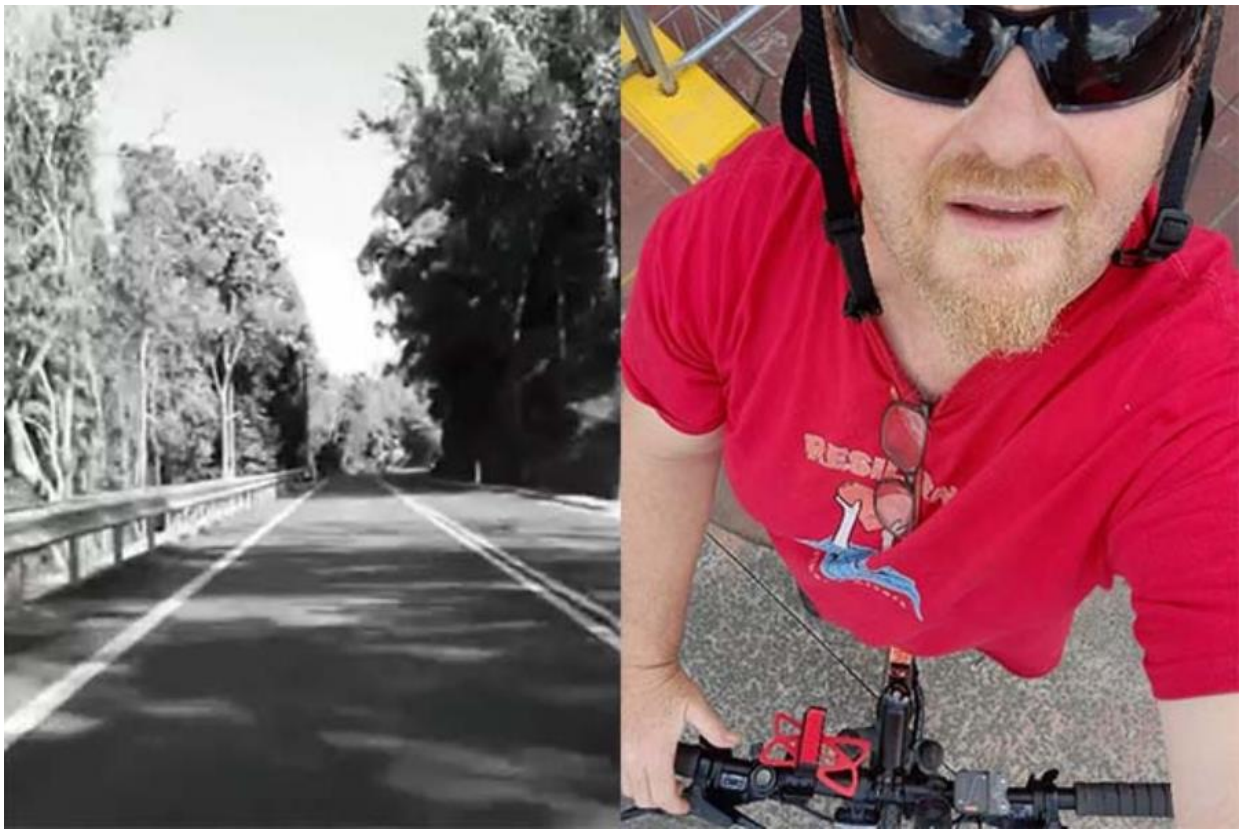


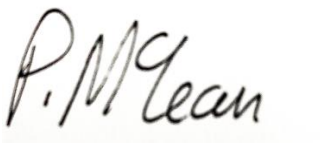
Figure 3: Seano and his e-bike bush commute in Lismore, NSW

Conclusion

In supporting the NSW EV Strategy, Bicycle NSW strongly encourages the NSW Government to incorporate e-bikes, EDVs and personal mobility devices, all of which are light electric vehicles. The inclusion of micromobility subsidies and infrastructure will affect a decarbonisation of the state's transport network far more rapidly and equitably than one that arbitrarily excludes light electric vehicles. Rather than focusing on the minority who can afford a new private EV, it would enable a much more diverse sector of the community to contribute to the goal of net zero by 2050.

A mode shift to active transport has multifactorial socio-economic benefits which are highlighted in NSW Government policies, plans and strategies. These advantages encompass decongestion, improved population health, and urban liveability - none of which are improved by car-sized EVs. Australia is uniquely placed to benefit from a strategy that supports a diversity of active travel types. The world is accelerating in this direction and, with a great home industry that is scalable, there is no reason to be left behind. We call upon the NSW Government to work with stakeholders including the Parliamentary Friends of Active Transport to prioritise micromobility in the NSW EV Strategy. We also ask that the NSW Government work with the Federal Government and stakeholders including bicycle advocacy groups to integrate micromobility into future federal EV strategies.

Yours faithfully,



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Peter McLean

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Bicycle NSW has been the peak bicycle advocacy group in NSW for forty-seven years, and has over 30 affiliated local Bicycle User Groups. Our mission is to 'create a better environment for all bicycle riders', from 8 to 80 years of age, and we support improvements to facilities for pedestrians and cyclists. We advocate for new cycling routes that provide connections to jobs, schools and services for daily transport and recreation trips. Bike riding provides a healthy, low-congestion, low-carbon, economical form of travel that is quiet, efficient and attractive for all ages with the correct infrastructure design.

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[i] https://roadsafety.transport.nsw.gov.au/stayingsafe/bicycle-riders/laws.html
[ii] https://www.energy.nsw.gov.au/sites/default/files/2022-08/nsw-climate-change-policy-framework-160618.pdf
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[v] https://future.transport.nsw.gov.au/sites/default/files/2022-09/Future_Transport_Strategy_lowres_0.pdf
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[viii] https://micromobilityreport.com.au/infrastructure/policy-and-funding/why-now-is-the-right-time-for-an-e-bike-subsidy-in-australia/
[ix] https://sensibletransport.org.au/project/transport-and-climate-change/, accessed 25/10/22
[x] https://www.infrastructureaustralia.gov.au/publications/urban-transport-crowding-and-congestion
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