Submission No 44

INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE VEHICLES IN NSW

Organisation: Blue Mountains City Council

Date Received: 2 May 2025

2 May, 2025

Reference File: 25/090080

Ms Lynda Voltz MP
Legislative Assembly Committee on Transport and Infrastructure
Parliament of New South Wales
Parliament House, Macquarie Street
SYDNEY NSW 2000

Dear Ms Voltz

SUBJECT **Submission to the Committee on Transport and Infrastructure enquiry into infrastructure for electric and alternative energy source vehicles in NSW**

Thank you for the invitation to make a submission to the Committee on Transport and Infrastructure enquiry into infrastructure for electric and alternative energy source vehicles in NSW.

Blue Mountains City Council (BMCC) would like to submit the following, addressing each of the points (a)-(e) of the Terms of Reference of the enquiry below.

a) funding and location of electric vehicle chargers or infrastructure for other potential energy fuel sources

- NSW State Government ('State') grants have historically determined areas eligible for EV charges.
- There is currently exempt pathway for EV charger approvals – resulting in limited visibility of locations.
- Therefore there is a need for central coordination and mapping of all EV chargers available. Related to this there needs to be statewide, region based and LGA specific coordination of where chargers are needed and of what capacity given assumed EV uptake trajectory. These should all flow into each other and provide consistent macro and micro direction for charging locations.
- Charger locations need to consider grid capacity and anticipate increasing charger technology speeds and EV numbers whilst also factoring in an increasing move to electrification of other appliances that impact on the grid capacity. Related to this infrastructure must be scalable and able to grow and adapt to future demand.
- Charger locations need to consider broader economic context for towns and villages.

- Local factors for the Blue Mountains region, such as our status as the most visited national park in NSW (with over 6 million visits annually), our location as the transport corridor between Sydney and the Central West, and mountainous terrain (with significant ascents and descents) need to be considered in EV charger planning/coordination.
- Grant funding and subsidies for EVs, including heavy vehicles, and EV chargers and necessary grid upgrades, to continue to facilitate transition. These should be co-designed with stakeholders including NSW councils, regional organisations of councils and peak bodies.

b) the viability of alternative energy sources for freight, heavy vehicles and other licenced vehicles in regional communities

- The State partly justified the proposed widening of the Great Western Highway in the Blue Mountains LGA on the basis that the detrimental impacts of increased numbers and size of heavy duty vehicles will be mitigated by EV transitions. The State therefore has a responsibility to enable and ensure (via policy, regulations, penalties and incentives etc.) that heavy duty EV transition occurs.

    - The uptake of heavy duty EVs is currently being hampered by the high capital costs and limited range of offerings. State needs to work with industry to both increase the range of models available while supporting the deployment of appropriate charging infrastructure for these vehicles to avoid a slow uptake.
    - Consideration of traffic flows and potential for gridlock at charging sites given likely longer recharge time and larger size of heavy vehicles.
    - Heavy vehicle energy requirements are far larger than light EVs, and for vehicles transiting between Sydney and the Central West, likely to be reliant on extreme high energy/ fast charging infrastructure. This likely has implications for grid capacity to support this.
    - Similarly charging requirements for local heavy duty vehicle EV fleets, including Council fleet, will increase grid demand and potentially require expensive, local site electricity infrastructure upgrades. This can be cost prohibitive in regional areas
    - In addition to stakeholders the State has already been working with to date to expedite EV transition, large haulage/freight companies will also need to be consulted and be part of the heavy vehicle solution, including funding models such as public/ private partnerships for infrastructure requirements.
    - Alternative hydrogen transport technologies, and underpinning green hydrogen supply, appear to be still underdeveloped and it is not clear whether they will become viable.

- Additionally significant challenges relate to the required hydrogen infrastructure, and ensuring green hydrogen is available where needed. It should not be assumed these requirements are the same as LPG gas, petrol or diesel due to different characteristics of the gas. Hydrogen gas presents a greater challenge to store, transport and refuel requiring a greater amount of space to store relative to petrol and diesel given its lower energy density by volume. Unlike petrol/ diesel, hydrogen is also highly flammable at ambient, outdoor temperatures, and has very low ignition energy which also requires consideration in the planning for hydrogen fuelling infrastructure.

c) use of existing infrastructure and measures to ensure a competitive market, including 'ring fencing' policies

- With the increase in private charging, and increased demand on the grid, it is increasingly likely that household and businesses will have to pay to upgrade the grid for developments in regional areas. Therefore there is a need to maintain grid capacity for community development or not penalise community for residential type development with grid upgrade costs. This may require working with the Australian Energy Regulator (AER) to ensure rural connection rules at network providers are changed accordingly (these are usually only free where there is existing network capacity).
- Similarly, there is a need to consider impact on high tourism areas for both charging capacity and impacts on the grid.
- Petrol stations will have to continue to increase their EV charging offering and can potentially play an important role in enabling heavy duty freight EV transition in particular.
- Need to maintain a diverse range of competition in the sector to avoid future price gauging.
- Consideration of avoiding pushing all EV charging to town fringes along the highway, and instead have a mix to encourage economic activity in town centres.

d) **measures to ensure the transition of workers from affected industries and industry standards; and e) any other related matters.**

- Consider a targeted change program in the mechanical industry.
- Need State of Federal funded, accredited courses to enable mechanics to acquire necessary skills to maintain, service and repair EVs and support EV transition. These should be free, and ideally available in local TAFEs and training institutions.
- Consider including EV accreditation in all mechanic apprenticeships so we are training apprentices to be ready for the industry they will be entering.

- Warranty servicing of EVs often cannot be carried out locally, which is a disincentive to transition to EVs, particularly in regional areas. Therefore there is a need to work with EV manufacturers to ensure this EV training enables warranty approved servicing by local accredited mechanics (including Council mechanics).
- EVs potentially have lower maintenance requirements, which has human resourcing implications.
- There are potential local grid benefits, such as local grid resilience, increased integration with solar renewable energy and reduced GHG emissions, from interaction of Work From Home (WFH) policies and Vehicle to Grid (V2G) technology. Specifically, WFH facilitates EVs charging from the grid during low demand, daytime hours, and potential for supporting powering the grid/ homes during peak early evening hours.

BMCC submission authorised by
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