Submission No 56

INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE VEHICLES IN NSW

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EV Charging Infrastructure

In NSW, there are a lot of holes in the EV charging infrastructure where there are no or very few chargers on busy routes. This is from my personal experience. I have a 2.5 year old Volvo EV with a, theoretical, range of 430 km.
Checking a map of the chargers will easily show where there are no or inadequate numbers of chargers on busy routes.
Travelling south to Victoria from my home in Port Stephens via the Hume Motorway, there is adequate infrastructure up to Yass, which has a large bank of (open to all) Tesla chargers. There are very few easily accessible, reliable non-Tesla chargers between Yass and Albury. In the south, Tarcutta is a popular destination but it has only two chargers, where both are rarely working. When I went there a week or so before Xmas, there was only one charger working and a queue of, maybe 10 EVs - probably a minimum 5 or 6 hour wait. There has been a bank of Tesla chargers proposed for Tarcutta since 2023. Nothing at all has happened and there have been no updates since the announcement. This is a desperately needed piece of charging infrastructure. Someone in the NSW government needs to be responsible for the planning. I and many others had to take a big detour to Wagga where there is a big bank of Tesla chargers but Wagga is a way off the Hume highway.
There is a big bank of Tesla-only chargers at the busiest roadside stop on the Hume Highway, Gundagai. There's pretty much nothing for non-Teslas. Again there is a bank of 12 EV chargers proposed for the Gundagai Library but no sign of it happening. The latest speculation on this is that the chargers will be installed 20 km away from Gundagai at Coolac where there are, pretty much, no facilities. That would be pretty stupid and people would go elsewhere, if possible, so it would be a waste. When you charge an EV, you usually want to go for a coffee or lunch - boosting local small business. A charger at Gundagai needs to be in the town or the highway rest stop. If the council is opposing this, they are ensuring that the town continues to lose most of its cafe business to the roadside stops.
We also travel back home via Gippsland and the South Coast. There is also, pretty much, no infrastructure on the Pacific Highway between Cann River, in Victoria and Narooma, a very busy town, which only has 4 chargers. Any charger needs to be at least 50 kW to be at all useful for people on the road. Preferably, it should be 150 kW or more, so that the wait time isn't hours. There is a VERY slow NRMA charger at Bega, which is useless unless you are desperate.
Queuing theory tells us that we need to have a bank of, at least, 6 chargers and preferably more on these busy routes. Stops with one or two chargers are not useful, except in remote areas where there's not so much demand. A bank of chargers means that wait time is zero or a short period of time. A faulty charger won't cause as much problem either. Where there is only one or two chargers off a busy road, the odds of finding them working or vacant aren't good. Few chargers, broken chargers cause a lot of wasted time where people either have to wait for hours or detour where they could run out of charge if they haven't been conservative.
Whoever is planning the infrastructure needs to make a map of NSW, with the thickness of the road representing how busy it is. You then need to mark the charging infrastructure according to the number of chargers at each site. You then need to ensure that there is adequate charging infrastructure at regular intervals based on traffic.

In summary:

1) There are large holes in the charging infrastructure on busy routes
2) Chargers need to be very fast chargers of a minimum 100 kW or more
3) The number of chargers needs to be 6 or, preferably, more and based on the potential traffic. That is, there are locations which are already rest stops that a lot of people use (eg Gundagai), therefore they need bigger numbers of chargers.
4) The chargers must be near facilities, such as toilets, cafes, etc.
5) Councils that approve charging infrastructure can expect a lot more business at nearby shops.