

**Submission
No 40**

**INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE
VEHICLES IN NSW**

Name: Mr Mark Umbers

Date Received: 2 May 2025

My family owns 2 EVs and have 3 houses with solar panels and one with a home battery. I run a superannuation fund and have followed the transition to EVs and renewables very closely for the past 5 years and encourage the committee to consider my thoughts. Firstly private and commercial transport is not just transitioning to electricity it is becoming computers on wheels. This means, any company or country has the ability to remotely disable them with an over the air update. This should be a national security concern because a hostile nation could order a firm at gun point to disable a significant percentage of a countries cars, trucks and buses creating chaos in times of conflict. Next, Tesla has the most reliable fast charging network in the world by a long way. Tesla's head office is in an allies country, it makes supercharging hardware at a competitive price and they have proven to be very reliable over many years. This is in stark contrast to the mishmash of smaller efforts scattered about the country that can be very unreliable to say the least. I would encourage the committee to put political differences aside and consider Tesla and help them in every way possible to design and fit out Australia's vehicle charging infrastructure. Stand up to them though and make them have all of their superchargers compatible with all EV's. Lastly The batteries used in EVs and home and grid storage are predicted to fall in price by around 50% over the next 4 years. I encourage committee members to research what CATL and BYD are doing in China with sodium Iron. CATL announced just last month they have developed a sodium iron battery that will go into production in December. It has a better fire safety rating than lithium, has the same energy density, operates in much colder and warmer temperatures, is the same price but will be guaranteed for 10,000 cycles. Currently Lithium is only guaranteed for 4,000 cycles. This equates to a 66% drop in price for home and grid scale storage. Just a 50% drop in price means, for home owners, it will be 30% cheaper to be off grid in Australia than on grid. Additionally solar panels are also predicted to reduce in price by a further 50% as well. This battery price reduction means the upfront cost of an EV will be the same or less than an ICE vehicle but running costs on the EV will be more than 10 times less. These price changes mean there could be significant deflation and certainly a reduction in fuel tax revenue. I encourage the committee to wait before imposing larger registration fees on EV motorists though. By 2030 EVs should be cheap enough for a gradual increase in taxation to occur and it should because whenever there is an economic vacuum created in Australia all that seems to happen is the price of real estate goes up. Now even though CATL have already announced it, you may think that the price of solar panels and batteries will not go down by 50% but if you have studied economics and understand wrights law then for every doubling of manufacturing output there is a 20% drop in price. Battery production will double 6 times over the next 10 years. It has been predictable for the past 10 years, This new technology is a moving target though, for those trying to plan, because it is not just about new tech it is also about prices getting lower creating trigger points for unexpected change. I do not think governments can or should try and out think it. I think, for Australia they should work closely with Tesla and look to Europe and the U.K. for guidance. The Chinese manufacturers are well ahead on this. Way out in front of even Tesla but there are national security concerns. This is a shame because the Chinese have been fantastic at leading the way with the large scale manufacturing required. If there is a way to safely control the software used in the Chinese made products then I would include them in to the mix but not until that assurance can be verified. This is the biggest economic change in world history and will create an incredible advance in productivity and efficiency, however, that means new jobs will need to be created and I believe that in the short to medium term they should come from increased government revenue distributed to the private sector for building infrastructure or for the health services needed for our aging population. Good luck with your work.