ECONOMY, ENERGY AND FAIR WORK COMMITTEE

ENERGY INQUIRY

SUBMISSION FROM Stephen Biggerstaff

Electric Vehicles

1. The impact of increasing numbers of EVs on electricity generation, transmission and distribution?

When paired with smart tariffs and meters from Energy companies, a very high percentage of EV users actually charge their cars at night, when peak demand is lower. See Bulb, and Octopus Energy for examples of the most common tariffs I see on the Tesla Owners Group discussion boards. There are also home batteries that can effectively store energy when convenient to use during peak times. EG: A Tesla power wall or Nissan / Panasonic battery does similar I believe.

2. The role of EVs in balancing electricity transmission and distribution networks. Are new battery and grid technologies being adequately supported and rolled out to enable this?

I do not think so. My personal experience of smart meter rollout has been atrocious at best. I currently have an electric smart meter connected and working - however my gas smart meter cannot send statistics so I cannot be switched to a smart tariff. My energy supplier blames my grid distributor, who in turn blame my energy supplier.

I think smart meters, home battery incentives, and personal home renewables like wind/solar are in need of being further incentivised.

3. Are enough and the right type of EV charging points delivering accessible charging, and keeping up with consumer demand?

Absolutely not. The most common type of “charge on the road” chargers are 50kW+ Rapid chargers. From Finnieston stretching out to Dumbarton on the north side of the river has exactly 3 of these units. One of which is in the Hydro car park which requires payment to enter without knowing if it is in use (the Chargeplace Scotland app doesn’t update for this unit). For this to be feasible, 7kW chargers are needed at destinations, such as car parks, office blocks, and shopping centers) whereas there is also a large need for rapid charging for longer journeys. My car takes two hours to charge to full on a rapid charger, which is just about bearable by charging every day for around 20-30 minutes. Charging during longer journeys by 7kW would simply take hours to charge.

The 7kW chargers should be available at places where people leave their cars for hours at a time, and should have time restrictions to match - No penalty for staying up to 8 hours or so. Ideally at places like office blocks and car parks.

50kW+ chargers should all have a time limit with penalties for overstaying. My guess is this should be two hours as that’s about the time it takes for most electric cars to charge 0-90% on them. These are ideally suited in places easy to get to from main roads and routes, such as the current one at the Riverside Museum in Glasgow.

Anecdotally I've had many experiences of rude EV drivers leaving their car on a rapid charger for 8+ hours without it even charging the vehicle. When trying to talk to security at the car park (Hydro) they said they cannot enforce any fines or penalties for this behaviour. This essentially puts 1/3 of the rapid chargers of North West Glasgow out of commission for a day. The network cannot cope with that. As an EV Owner I implore there to be penalties for overstaying at rapids. Ideally using the proceeds to fund expansion of the charging network.

4. Given the declaration of a climate emergency, what more needs to be done to promote a change in culture where EVs are the preferred alternative to fossil fuelled vehicles?

Low emissions zones, cheaper parking, bus lane use and other suggested in the action plan are all great incentives. EVs are currently a little more expensive to buy than a comparable regular car, so further relief at the point of purchase would be very welcome too. Similar to Norway, where the State effectively cuts the costs so they are comparable. At this point a potential buyer has the choice of the two cars costing the same, but cheaper parking, bus lane usage, and usage of low emissions zones, make this a much more attractive proposition.