ECONOMY, ENERGY AND FAIR WORK COMMITTEE

ENERGY INQUIRY

SUBMISSION FROM DR ALAN ROBERTSON

Electric Vehicles

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

Appropriate tariffs and smart chargers to encourage those that charge at home to do so overnight (when grid loads are low) should markedly help in this regard.

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?*

Grid-level battery storage is, I believe, being planned/underway in the West of Scotland. To date there has been very little by way of vehicle to grid (V2G) activity, mainly I believe as limited to Chademo connections and even then only a limited subset of vehicles. Most new EVs use CCS – I believe V2G is not expected for that standard for another 5 or so years. (https://insideevs.com/news/342354/charin-ccs-combo-standard-to-offer-v2g-by-2025/)

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

This is my main area of concern and reason for making a submission. Developments such as the charging hubs in Dundee are excellent – in particular the installation of large numbers of rapid chargers at one location, combined with solar panels, canopies and battery storage. In comparison the setup in Edinburgh and Glasgow is atrocious – mostly just single rapid chargers which means they are often already in use by the increasing number of electric taxis (by comparison in Dundee there's always some 'turnover' of vehicles due to the large number of chargers).

However, there is a general move to paid-for tariffs being introduced, often at much higher rates for rapid chargers. Although this is understandable given the cost of the equipment, great thought needs to be given to those members of the public that do not have access to home charging. Many people do not have a driveway or a way of installing a charger at their home or workplace. Therefore they are totally reliant on public charging – to then price this at 25-35p/kWh is vastly more expensive than the pricing available to those that charge at home, where it can fall as low as 5p/kWh overnight (or even into negative figures on some tariffs!). The public charging infrastructure needs to be accessible on a cost efficient for all. A massive increase in slow AC charging availability would potentially be useful for many, especially as the lower cost of the equipment would allow for lower tariffs. Developments such as the Urban Electric pop-up chargers would also allow for these installations to not lead to an increase in 'street furniture'. Funding and logistical support also needs to be done to encourage factors and residents' associations to install home charging for those living in flats.

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?*

I would strongly support continuation of support for the current EST 0% loan programme, along with providing backing for roll-out of more charging options (see Q3). However this should not solely focus on cars there needs to be legislation and support for the move of delivery vans, lorries and buses to EVs. Hybrid vehicles should not receive the same support/grants as full battery electric vehicles.

Local Energy

1. *The appropriateness and achievability of the 2020 and 2030 community and locally owned energy targets. What are the key issues impacting the viability of relevant schemes?*
2. *Whether it is appropriate to incorporate community and locally owned schemes in the same target and policy area? What more could be done to encourage and support community owned schemes?*
3. *Do CARES Grants and Loans adequately support relevant projects?*
4. *The role of Distribution Network Operators in connecting community and locally owned projects. What more could be done by DNOs to encourage and support projects?*
5. *What role can smart, decentralised local energy systems play in ensuring security of supply and supporting a just transition to net-zero by 2045?*
6. *The role of local authorities in delivering community and locally owned projects. How can these be integrated into local energy systems?*
7. *What systemic and behavioural changes are needed to increase the use of smart local energy systems? Has public engagement to date been successful and what more could be done?*

My only comment in this section would be the need to ensure adequate regard is given to those that live in apartments (rather than houses) and to ensure sufficient efforts are made into them being able to take advantage of local energy generation/storage and charging. Apartment blocks would be ideal locations for solar panels given the large areas of roof space, along with battery storage for communal power – however the processes for installation are unclear and could do with more support.