

Written evidence submitted by Mr Michael Cope (EVP0022)

ZERO EMISSIONS VEHICLES ~ ROAD FUNDING POLICY

SUMMARY:

As an ex-Electrical Power Engineer, I am familiar with Generation, Transmission, Distribution & Supply to end point, of Electricity, so can only comment on the problems of meeting the requirements of an “All Electric System”.

“All-Electric” sounds ideal but achieving a Goal of 100% Zero-Emissions Vehicles by target Date requires massive Investment. Vehicles (whether Emission-free, Low Emission, or Carbon Fuelled) put Wear & Tear on Road Networks, so a ‘Fair Funding Policy’ is needed to continue Maintenance of existing Roads, new Highways Construction & building of Infrastructure for modern, sustainable UK Transport.

Generation:

The UK, along with other Countries, is currently moving towards ‘Green Energy’, but Projects to Instal Wind, Wave, Solar, Hydro & Geothermal Alternatives to Carbon based Generation costs £multi-millions in Investments and take many Years to complete. North Sea Gas & Coal Fired Power Stations will still be needed, until the ‘Eco-Systems’ can make up the deficit between Supply & Demand.

Transmission:

Existing High & Low Voltage Networks were constructed to handle Long-Term forecast requirements. Overhead & Underground Systems are Designed with extra Capacity in mind, but not the additional burden of Millions of Electric Vehicles on the Roads in the timescale given. Many Overhead Lines, Underground Cables, Substations & Control Equipment will have to be upgraded to cater for increased demand. Economics of Energy Supply are such that Projects need to be viable within a certain period, so Energy Prices will generally increase to cover the Capital Investments made by Energy Companies.

Distribution:

Recharging Points will generally be required in built-up Areas, where Lower Voltage Networks will take the strain of providing additional Power. The Streetworks involved to upgrade Cables in Towns & Cities will be immense and cause major disruption to Footpaths, Roads & Highways during Installation. In Rural Areas changes to outdated Overhead Line Systems will cause further problems in & around Properties, where Recharging Points are required.

Recharging Points/Stations.

Recharging Posts & Allocated Recharging Spaces will be required in many Locations to cater for the number of ‘Boosts’ to Vehicles passing through, or ‘Charging Overnight’. As well as the Investment required for the Manufacture & Installation of the Electro-mechanical Equipment for such Projects, many changes to Parking Arrangements will be required.

Conclusion:

To prevent a major deficit in Govt. coffers, due to an imbalance between existing Fuel Revenue/Road Tax, a 'Road User Charging System' must be Introduced, as soon as possible. Otherwise, Investors from Private Companies will not be willing to get involved in expansion of truly Green Energy Production and Supply of Networks to feed Electric & Low Emissions Vehicles.

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