

Section 11.2. Contrary to what the text says, it is WELL known amongst experts that “hydrogen-fuelled vehicles will “NOT” become cost competitive with “LIGHT” EVs”. That became obvious a couple of years ago when the very expensive commercially available hydrogen cars failed to sell in quantity and the subsequent trends of lack of investment in refuelling infrastructure (vs mass roll-outs of EV charging infrastructure), mass announcements of upcoming light EVs by manufacturers, exponential drops in cost/range of released light EVs, and exponential drop in cost of home PV systems. Hydrogen is possibly an option for heavy vehicles, as the section entitled “The role of other low-emission vehicles Hydrogen fuel-cell vehicles” mentions, although many of the positive conclusions in it and F11.12 are going to date quickly due to the exponential decrease in cost and increase in volume density of batteries.

R11.1 is excellent.

The answer to Q11.1 is at least 2030, preferably earlier.

R11.2 is excellent. In addition, referring to table 11.2, the scaling should be non linear to ALSO discourage the use of large SUVs which are proven to cause widespread negative externalities due to the dangers they pose to the safety of the occupants, cyclists, pedestrians, and other motorists.

The answer to Q11.2 is of course. Policies should also emphasise reducing road transport and increasing rail transport.

R11.3 is weak. It should be extended as follows: The document says 15% of people don't have access to off-street charging. Therefore the Government should force councils to allow off-street charging which currently some don't because they see this as suggesting an entitlement of EV owners to “own” parks on the street which is not a good enough reason.

R11.4 is excellent. Simply exposing people (in this case government workers) to EVs has a massive positive effect on uptake.

F11.14 is disingenuous because the studies do not consider the result of having decent cycling infrastructure and incentives that reflect the full benefits to society which would result in massive uptake on long trips, not the tiny levels and short trips considered in the studies quoted. This is what actually happens overseas.

R11.5 is excellent, not that any government will have the balls to do this.

R11.6 Sure, but pretty vague.

Chapter 13 makes no mention of substituting gas (or even coal) applications for locally generated carbon-neutral hydrogen for industrial process heating (it can also be used for cooking and water heating in industrial and domestic applications). Such a substitution produces no emissions, is relatively simple and cheap, and retains all of the benefits of gas such as extremely cheap control of extremely high power levels (in contrast to substituting with electricity) and, if required, cheap transport (and storage) via conventional pipelines. The hydrogen generation is done on site and powered by

renewable energy (typically PV but also wind), avoiding the cabling costs and grid-impact of a substitution with electricity. This technology has been demonstrated at field sites by Callaghan Innovation for the past 5 years.