

Written evidence submitted by JouleVert Limited (EVP0025)

JouleVert has been involved with low carbon fuels, vehicle and technology since 2006. Colin Matthews who leads JouleVert has been involved in Alternative vehicle fuels and technologies since 1998. JouleVert sit on the Members Council of the LowCVP (soon to be Zemo) and its Fuels, Bus and Commercial Vehicle working Groups. JouleVert is a member of the Renewable Transport Fuels Association.

JouleVert believes we need an artist's palette of fuel, energy and technology solutions both in the short term and the longer term.

Our comments are:-

- DfT are fixated on zero emissions at the tailpipe as opposed to “net” zero emissions over the Well to wheel or better still Life Cycle analysis. This will lead to some painful and costly mistakes.
- The cost of electric cars and their current range constraints will become increasingly obvious as consumers buy them
- There is no protection for buyers of second-hand electric vehicles – there is no requirement to show the true life left in a battery nor how the vehicle has been recharged during previous ownership (rapid charging depletes battery life). This need addressing quickly before bad press stories appear.
- The cosy of recharging at public access stations needs to be displayed (in the same way as traditional forecourts do) so the consumer can make an informed choice.
- Fuel duty should be removed and replaced by a road pricing scheme so that the more miles you drive the more you pay which will drive down miles driven.
- There should be discounts where the fuel used can be shown to be lower carbon (or zero carbon on a well to wheels basis).
- Government should conduct a proper cohesive audit of the carbon saving from fuels and energy sources to ensure the consumer is getting what they think they have paid for – renewable electricity is sold to companies and consumers who think it is zero carbon when in fact the carbon saving has been given to BEIS and is wrapped up in the overall reduction of the carbon intensity of the electricity grid. We are fooling ourselves.
- Transport options should be split out by sectors i.e., Cars, Vans, Trucks and buses and then individual cohesive decarbonisation plans set for each.
- In the truck market there are low carbon traditional fuels and their Bio equivalents which can be used today to start the decarbonisation programme. Electric and hydrogen trucks for mass market are a good 10-15 years away.
- Some last mile and van deliveries can use electric in the next 5 years, but the wider market can't.
- Low Carbon renewable fuels should be encouraged over the next 15 years and then for the legacy fleet between 2035-2050.
- Grant funding of vehicles should be carefully thought through and have a limited life that is stated at the beginning. Grants tend to keep prices higher than they need be.

- Any Total Cost calculations should be well populated with real life data that includes the real cost of purchase, the investment costs of infrastructure and the energy/fuel costs for realistic vehicle range.
- Life Cycle Analysis should be done on all energy and fuel options so that the true impacts are known at the beginning
- When looking at green hydrogen production the electrical energy required at the start point needs to be properly assessed so that we know what level of renewable electricity will be needed (otherwise zero tailpipe will in fact be high in carbon on a well to wheel basis).
- The amount of de-ionised water needed for electrolytic hydrogen production and the energy cost to make it need to be assessed. (each kg of water gives just 110g of hydrogen).
- Recharging trucks during drivers 45 minute breaks needs to be carefully thought out as to get a 300 mile range on a 26 tonne plus truck will need a input close to 1MWh which will be very expensive and complex and impacts on the grid in that area.
- The UK has a strong Biofuels industry that operates in a very tightly controlled sustainable way. This should be further encouraged with E10 introduction and moving B7 to B10.
- Battery production needs to have similar tight socio-economic and environmental requirements placed on it to ensure a fair and level playing field and no unintended consequences.
- Biomethane production should be further encouraged as this fuel can play a significant role in decarbonising trucks over the next 15 years in a economic way that supports freight operators.
- Any duty changes or road pricing should be directly linked to the carbon savings which will drive developments to maximise the carbon savings to the benefit of society and value for money.

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