Cynulliad Cenedlaethol Cymru
Pwyllgor yr Economi, Seilwaith a Sgiliau
Ddatgarboneiddio trafnidiaeth
EIS(5)DT18
Ymateb gan Individual response B

National Assembly for Wales
Economy, Infrastructure and Skills Committee
Decarbonisation of Transport

Evidence from Individual response B

About you
Individual response B

Your opinion

1. **Are the transport emissions reductions targets, policies and proposals (set out in Prosperity for All: A Low Carbon Wales) achievable and sufficiently ambitious?**

No

1.1 Please outline your reasons for your answer to question 1

The "Prosperity for All: A Low Carbon Wales" document is dated March 2019. This was prior to the Welsh Government's adoption, on 11th June 2019, of a new target to reduce greenhouse gas emissions by at least 95% by 2050. As such, the proposals being consulted on are based on the previous target of an 80% reduction in greenhouse gas emissions by 2050.

The 80% target and therefore the Low Carbon Wales document was insufficiently ambitious given the need to limit warming to below 1.5°C. Although the new 95% reduction target is based on the official advice, I understand that these pathways only give a 50:50 chance of avoiding warming in excess of 1.5°C. No target is therefore too ambitious; emissions should be reduced as quickly as is achievable

2. **Is the Welsh Government's vision for the decarbonisation of transport sufficiently innovative, particularly in terms of advocating new technologies?**

Don't have a view

2.1 Please outline your reasons for your answer to question 2

It would seem that, if innovation is unnecessary, it should not be considered important. Heavy reliance on cutting-edge technology could be a cause for concern, as problems could arise in the implementation of such innovations.

Such problems could delay the decarbonisation programme. What matters is decarbonisation, not whether it is achieved using novel technologies

3. **What action is required, and by whom, to achieve the targets, policies and objectives?**

A wide range of actions are needed and I will not attempt to provide an exhaustive list.

Behavioural change, in the form of modal shift from private cars to buses, trains and active travel is of course critical. For long-distance journeys in many rural areas, buses are the only plausible alternative to private cars. A huge amount of work needs to be done, both to make bus travel more attractive and to tackle the problem of people who will not use buses for social status reasons (e.g. 'buses are for working class people').
It is claimed that the policy of moving to zero-emission buses will make bus travel more attractive. However, this alone would not change the experience of bus travel to any great extent. More frequent services (including later evening trips) and more routes are also needed. TrawsCymru routes are currently hampered by lengthy detours to serve towns off the direct route. Increased services would allow faster, more-direct, options to be introduced without cutting services to the off-route towns. For long-distance services (such as TrawsCymru) vehicles need to be more-comfortable with additional legroom etc. and routes in busy areas would benefit from more bus lanes and other priority measures. Facilities at interchange points should also be significantly improved. This will be an expensive undertaking.

The transition to zero-emission buses will necessitate the installation of refuelling/charging infrastructure and, presumably, re-training of maintenance staff. Prior to that, the relative costs, advantages, drawbacks and feasibility of hydrogen fuel-cell buses compared with battery-electric options should be investigated. It may be that the vehicle type most appropriate for urban services is different from that best suited long-distance inter-urban services.

According to the Low Carbon Wales document, a 25% reduction in CO_2 from rail is expected with the new fleet, but is there scope to go further? The core ValleyLines are to be electrified and this significant improvement may be masking an increase in CO_2 from other routes, where new diesel trains are proposed. The new diesel units are likely to be heavier than the bulk of the existing fleet; this together with stricter regulations on emissions harmful to human health (such as particulates) may well result in increased fuel consumption.

The proposed new diesel fleet would not be readily modifiable to other power sources. Given the 30 year life typical for trains, they are likely to still be burning diesel into the 2050s. This cannot be rational. Moving to a diesel-electric design instead (where the diesel engines generate electricity to run

electric motors) might reduce fuel consumption and would open the possibility of converting the trains to battery hybrids (similar to the small fleet of refurbished trains planned for the Wrexham-Bidston route). If suitable space is allowed in the design, the trains could even have equipment added in future to allow them to run off electricity from overhead wires if electrification is extended.

4. How should the new Wales Transport Strategy reflect the actions needed to decarbonise transport?

My response to question 3 mentioned some example measures that could make bus services more attractive. However, behavioural change might be more achievable if 'sticks' were used to discourage motoring alongside 'carrots' for encouraging the use of public transport. At the very least, the government must stop encouraging increased road traffic. The journey time benefits of bypass schemes largely apply only to private motorists. To avoid cutting bypassed towns and villages off the network, bus services must continue to operate through them.

This disadvantages buses by increasing the difference between bus and car journey times. As well as cutting towns off, buses using bypasses would miss out on revenue from the settlements in question. New roads are a 'carrot' for motorists and induce more traffic.

Assuming domestic air travel falls into the 'other transport' category, the carbon footprint of the Cardiff - RAF Valley air link is relatively small. However, a government subsidy for any air service cannot be helpful for behavioural change, as it implies that flying is encouraged. Efforts to reduce international aviation emissions are encouraged by the Welsh Government, but why not start at home and remove all subsidies for air services?
On a more constructive note, schemes to radically improve the attractiveness of public transport should be progressed. Examples include the South East Wales metro (which should be extended to include Swansea, making passenger use of the current freight lines to Gwaun-Cae-Gurwen and Glyn-neath). Another is the proposal to introduce faster services from Cardiff to Pembrokeshire and Carmarthen by using the Swansea District Line. Introduction of such services should be aligned with the introduction of the new trains in order to seize the opportunity of retaining the best of the existing trains alongside the new fleet to provide the larger fleet necessary to operate additional services without procuring more new trains.

5. Do you have any other points you wish to raise within the scope of this inquiry?

It might be interesting to embark on a research project to establish whether carbon capture technology could be employed on vehicles. Storing exhaust emissions may be an insurmountable challenge, but perhaps science could propose a radical innovation.

There has been much discussion about the use of bio-diesel (and bio-ethanol) to power cars, buses and trains. Figure 6 on page 33 of the "Prosperity for All: A Low Carbon Wales" document, shows 'alignment between decarbonisation and air quality' and 'Biomass' is listed under 'beneficial to decarbonisation'. This is concerning since forests are being cleared in some parts of the world to release land for the production of biofuels. The resulting deforestation is a significant drawback to biofuel use and as such the use of biofuels should be avoided.