

## **Transport Select Committee Inquiry: Strategic Transport Objectives Response submitted by the Centre for Energy Policy**

### **ABOUT THE CENTRE FOR ENERGY POLICY**

The University of Strathclyde's Centre for Energy Policy (CEP) works with research, government and industry partners to understand and address the pressing public policy challenge of ensuring transitions to mid-century Net Zero targets deliver sustainable and more equitable prosperity. Since its launch in 2015, CEP has established a solid track record of independent, rigorous and multidisciplinary research and timely and responsive knowledge exchange and policy engagement on energy and climate issues set in a wider public policy context. Focused on achieving real-world impacts, the Centre has helped shape UK and Scottish Government policy in areas including energy efficiency, industrial decarbonisation, heat decarbonisation and low carbon transport.

<https://www.strath.ac.uk/humanities/centreforeenergypolicy/>

### **RESPONSE**

CEP's response focuses on Question 4 posed by the inquiry, and is based on our work around understanding the wider economy impacts of the Net Zero transition, including low-carbon transport.

#### **Q4. How should wider economic, environmental and social impacts be appraised and valued, including when the gains will largely be felt in policy areas other than transport?**

4.1 Appraising the wider economic impacts of any change (policy or otherwise) affecting one or more sectors of the economy generally requires the use of a multi-sectoral economy-wide model (i.e., one that is general rather than partial equilibrium in nature). For example, HM Treasury have used computable general equilibrium (CGE) models to analyse the wider economy impacts of various economic disturbances and/or policy interventions, e.g., fuel duties.<sup>i</sup> Simpler economic 'multiplier' analyses to understand things like current contributions of sectors of interest can be conducted directly on the input-output tables constructed by the Office for National Statistics as part of national accounts<sup>ii</sup>, which also constitute the core structural database of more sophisticated modelling frameworks like CGE.

4.2 CEP's research investigating the potential wider economic impacts of the projected shift to electric vehicles (EVs) in the UK we have used both simple input-output (IO) and more complex CGE models. In 2017 we collaborated on work on a 2017 EPSRC H2FC Supergen Hub White Paper investigating potential sources of positive wider economy impacts as a result of shifting from traditional fossil fuel to hydrogen and/or electric battery-powered vehicles (BPVs).<sup>iii iv v</sup>

4.2 The White Paper considered the potential economy-wide impacts if the fuel supply associated with BPVs could replicate the strength of domestic supply chain linkages currently observed in the UK gas and electricity supply industries. Our insights focussed on findings around the relative import-intensity of petrol and diesel supply, and how service sector industries may play an important part in realising GDP and employment gains through a shift towards transport fuels with stronger domestic supply chain links. This is a crucial fundamental finding<sup>vi</sup> given the weight placed on developing strong and competitive domestic supply chains (and associated skills and employment) to support both existing and new economic activity in the UK Government's industrial policies.

4.3 CEP research has conducted full (dynamic) CGE scenario simulation analyses of both enabling and realising the projected EV rollout in the UK. Our motivation and focus in doing so is on understanding the type of price and income effects that not only condition and constrain actual expansionary processes in the economy but which are important in ultimately valuing gains in key indicators such as employment. Our work to date has focussed on exploring the importance of factors including infrastructure upgrade cost recovery through consumer energy bills in governing the magnitude and distribution of wider economy costs and benefits<sup>vii</sup> and how persisting worker shortages in the UK labour market are likely to play a dominant role in governing the extent and real value of wider economy gains, and the risk of displacement of other activities.<sup>viii</sup>

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<sup>i</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/303233/Analysis\\_of\\_the\\_dynamic\\_effects\\_of\\_fuel\\_duty\\_reductions.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/303233/Analysis_of_the_dynamic_effects_of_fuel_duty_reductions.pdf)

<sup>ii</sup> <https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/ukinputoutputanalyticaltablesindustrybyindustry>

<sup>iii</sup> <https://www.h2fcsupergen.com/download-economic-impact-hydrogen-fuel-cells-uk/>

<sup>iv</sup> [https://risweb.st-andrews.ac.uk/portal/en/researchoutput/the-economic-impact-ofhydrogen-and-fuel-cells-in-the-uk\(56f22556-eadc-4f38-b213-9ba430a13aff\)/export.html](https://risweb.st-andrews.ac.uk/portal/en/researchoutput/the-economic-impact-ofhydrogen-and-fuel-cells-in-the-uk(56f22556-eadc-4f38-b213-9ba430a13aff)/export.html)

<sup>v</sup> <https://pureportal.strath.ac.uk/en/publications/framing-policy-on-low-emissions-vehicles-in-terms-of-economic-gai-2>

<sup>vi</sup> <https://doi.org/10.1016/j.enpol.2018.05.011>

<sup>vii</sup> <https://doi.org/10.1016/j.enpol.2019.111117>.

<sup>viii</sup> <https://doi.org/10.1016/j.eneco.2022.106001>.