

Where is our delivery? Political and socio-technical roadblocks to UK road freight decarbonisation

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The problem

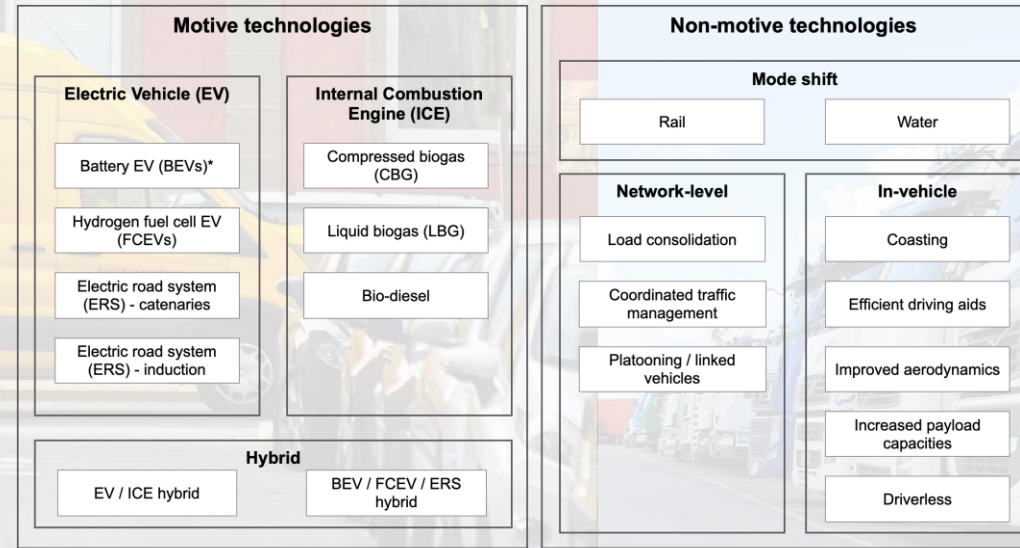
- Road freight represents approximately 8.5% of UK carbon emissions
- Must be abated to achieve UK government's objective to reach net zero carbon by 2050
- Competing motive and non-motive technologies
- Literature on road freight dominated by techno-economic and quantitative research
- Limited research taking a political or socio-technical perspective
- Little social science engagement or qualitative research with UK road freight operators and participants

Research conducted

- Wide-ranging review of road freight and transitions literature
- Semi-structured interviews with 15 senior freight operators, shippers, freight logistics experts and policy experts
- 157 opinions coded using NVivo software – 61 shared by 2 or more participants
- Detailed thematic analysis and identification of overarching viewpoints
- Alignment to transition perspectives (Cherp et al., 2018)

Reference

A. Cherp, V. Vinichenko, J. Jewell, E. Brutschin, B. Sovacool. Integrating techno-economic, socio-technical and political perspectives on national energy transitions: A meta-theoretical framework. *Energy Research & Social Science* 2018; 37 175-190.



*: Including powered 2 wheelers freight / cargo bikes and Paxters

Overarching viewpoints

- 57 of 61 shared opinions aligned to 6 overarching viewpoints:
1. Government leadership is necessary
 2. It must work economically and operationally
 3. Policy uncertainty is a significant barrier
 4. Non-motive technology opportunities should also be pursued
 5. Hydrogen may not be viable for road freight in the near term
 6. Responsibility for charging deployment and grid upgrade must be clarified

Headline finding

- While techno-economic factors are seen as important by participants, socio-technical and political factors are potentially even more so as transition roadblocks

Further research opportunities

- Deeper investigation of 6 overarching viewpoints
- Socio-technical and political exploration of transition
- Integrative, directional analysis

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