



Keir Mather MP
Parliamentary Under-Secretary of State
Department for Transport
Great Minster House, 33 Horseferry Road
London, SW1P 4DR

Dear Minister,

Fuelling the Future: Hydrogen as a Growth Engine for UK Land Transport

In advance of the planned refresh of the UK Hydrogen Strategy this autumn, the Hydrogen Energy Association (HEA), in partnership with the Road Haulage Association (RHA) and the Construction Plant-hire Association (CPA), recently convened a cross-sector workshop to assess and quantify demand for hydrogen fuel in land transport.¹

The workshop concluded that the UK's heavy transport sector faces urgent decarbonisation challenges, having shared experience and knowledge on use cases where battery-electric solutions alone are not providing a practical or affordable transition pathway. As a high value² market for hydrogen demand, the applications present a strategic opportunity for the United Kingdom, particularly in the hardest-to-electrify sectors, safeguarding productivity and enabling long-term economic growth.

Participants identified several gaps in government policy, messaging, and infrastructure planning that could limit the potential of hydrogen to play a role in the decarbonisation of the land transport sector. These are outlined below and, if not addressed in the near term, significant growth opportunities may be lost to international competitors.

We note that the ongoing [ZEHID](#) trials will gather vital experience and data on zero-emission solutions for heavy duty freight and logistics, including hydrogen, and we therefore urge that policy and support decision are explicitly kept open while project results and other uses cases are fully examined.

We would welcome the opportunity to share detailed findings, including use cases where hydrogen, based on what we know today, is likely to be demonstrably superior to battery-electric technologies, from a practical and ownership cost basis, as well as examples from countries already advancing in this field. We have also identified a set of near-term, low-cost measures that could mitigate immediate risks and align with the ongoing review of the Hydrogen Strategy and infrastructure investment planning.

¹ Land transport includes road (particularly fleet vehicles), off road applications, rail, transport associated with ports and airports. The focus of this letter is land transport, although the HEA recognises the role of hydrogen in supporting the decarbonisation of other transport sectors including maritime and aviation.

² Competitively priced hydrogen as a replacement to diesel in transport applications is expected to deliver a higher rate of return than in fuel switching for industrial use

A summary of the workshop's principal findings is set out below:

The Case for Hydrogen Fuel – Practicality and Affordability

- **Sectors most affected:** High-utilisation HGVs, heavy duty use vans (particularly in utilities), long-distance coaches, heavy use construction equipment, specialist vehicles, and emergency service fleets, as well as hard to electrify parts of the rail sector.
- **Operational requirements:** Rapid refuelling, high uptime, cold-weather reliability, payload efficiency, operability in off-grid locations, fleet flexibility, and power take-off.

Economic value: Hydrogen potentially offers cost advantages over BEVs in several sectors. In utilities, exclusive reliance on BEVs risks higher customer costs and inflationary pressures. For long-range transport, hydrogen avoids the need for major grid upgrades. Hydrogen may also provide stronger machine resale value and reduces temporary infrastructure and material waste (e.g. cabling) in off-road applications such as construction.

Infrastructure Gap

- **Current provision:** 4–6 UK refuelling stations, compared with approximately 100 in Europe.
- **Immediate need:** 12–13 strategically located stations along freight corridors, plus back-to-base hubs linked to hydrogen production projects.
- **Advantage:** Faster deployment than BEVs, given grid connection delays of up to 10 years.

Short-Term Barriers

- Limited funding for early-stage vehicles and infrastructure.
- Current national and local policies are fragmented, with inconsistent regulations and no common standards. This creates uncertainty around different transport needs (gas vs. liquid, depot vs. public refuelling, geographic deployment) and slows progress on hydrogen deployment.
- Limited hydrogen awareness among decision-makers.
- Planning and insurance barriers for operators.

Recommended Policy and Funding Measures with Immediate Impact

1. Recognise the economic value of hydrogen's role in land transport as a significant route to deliver energy security, job creation, and industrial growth and ensure consistent cross-departmental messaging to demonstrate this.
2. Develop a road map for the growth of hydrogen fuel supply and refuelling infrastructure both regionally and in designated national freight corridors, to provide a clear signal to the market and facilitate focussed investment initiatives.

3. Establish hydrogen fuel demand targets, which supports a range of production and supply chain pathways to ensure security of supply and incentivises the transition to clean energy in heavy use applications.
4. Implement mechanisms to bridge the early market gap in the current cost differential between hydrogen fuel and diesel.
5. Ensure all hydrogen transport and off-road solutions, including ICE hydrogen,³ are supported under the ZEV mandate and other similar policy initiatives targeted at driving change for decarbonisation and emission reduction including clean air and zero-emission zones, public procurement and Net Zero R&D support.

Risks of Inaction (5–10 Years)

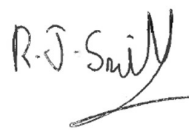
- Over-reliance on BEVs risks grid overload, rare earth dependency, reduced fleet productivity, and a continuation of diesel.
- A hydrogen-inclusive strategy enables more effective decarbonisation without compromising operational capability and productivity in what are essential and wide-ranging business services of our economy.
- The loss of the economic and significant growth opportunity to overseas innovation and manufacturing industries

We are consulting further with stakeholders and will provide a full report later this year. In the meantime, we urge a strong consideration of the role of hydrogen across heavy use land transport applications in the hydrogen strategy refresh to reflect and enable government's growth ambitions for this sector. **We would welcome the opportunity to convene a cross-sector taskforce with DESNZ and DfT to present case studies and investment needs directly.**

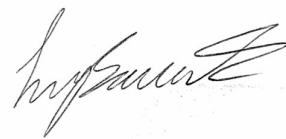
Yours sincerely,



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Richard Smith
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NB For transparency, we are also copying this correspondence to the policy teams at DfT, DESNZ and DBT, whose responsibilities include hydrogen and transport decarbonisation as well as Jane Toogood in her capacity as co-chair of the Hydrogen Delivery Council.

³ Assuming these are defined with minimum standards for H2 ICE engines (i.e. EU Stage V / Euro 6) on air quality and related emissions

Annex 1 – Workshop Attendees

Hydrogen Energy Association:

- Staff and members, representing the UK Hydrogen Supply chain.

Road Haulage Association

- Staff and members, include vehicles owners and operators.

Construction Plant Hire Association representatives

Invited stakeholders representing fleet operators, local authorities, technology providers and financiers.

Annex 2 – Executive Brief - Hydrogen Fuel for Heavy Transport

Authored by Hydrogen Energy Association (HEA), supported by the Road Haulage Association (RHA), Construction Plant-hire Association (CPA) & attendees of the recent HEA H2 Transport Workshop

Why Hydrogen Matters

- **Decarbonisation:** Heavy-duty transport cannot transition with battery-electric solutions alone.
 - **Focus sectors:** HGVs, long-distance coaches, heavy duty use vans, construction plant, emergency services, Special Types vehicles.
 - **Meets operational needs:** Rapid refuelling, high uptime, payload efficiency, cold-weather reliability, fleet flexibility, off-grid operability.
 - **Economic value:** UK supply chain growth, skilled job creation, permanent infrastructure, stronger export and investment potential.
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The UK's Infrastructure Gap

- **Current status:** Only 4–6 hydrogen refuelling stations in the UK, vs ~100 in Europe.
 - **Immediate need:** 12–13 strategically located stations on freight corridors & back-to-base hubs.
 - **Advantage:** Hydrogen can be deployed more quickly than BEVs, with grid connections waiting up to 10 years.
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Barriers to Growth

- Early-stage vehicles and infrastructure face funding shortfalls.
 - Misaligned national/local policies and fragmented regulation.
 - Low hydrogen literacy among key decision-makers.
 - Planning and insurance obstacles for operators.
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Immediate Policy Levers

1. Recognise hydrogen's economic and strategic value with clear, consistent cross-departmental messaging.
 2. A national roadmap for hydrogen fuel and refuelling infrastructure providing investor confidence.
 3. Establish demand targets and mechanisms to bridge the early cost gap with diesel.
 4. Ensure all hydrogen solutions, including ICE, are fully supported under ZEV and related decarbonisation and air quality policies.
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Risks of Inaction (5–10 years)

- Grid overload, reliance on rare earth imports, & reduced productivity with BEV-only approach.
 - Loss of competitiveness to international markets already investing at scale.
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Next Steps

- Convene urgent cross-sector taskforce with DESNZ and DfT.
 - Share case studies, investment needs, and international examples.
 - Publish full findings later in the year to guide the UK's hydrogen growth strategy.
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⚡ Key message:

Hydrogen offers a more sustainable, scalable, practical, and viable alternative to EVs for decarbonising heavy-duty transport. With swift government action, the UK can secure jobs, energy security, and global competitiveness.