

PRESS RELEASE

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Ricardo helps the UK Government assess the route to zero emissions for heavy duty goods vehicles

Ricardo is applying its world-leading expertise in hydrogen and battery electric technology for heavy goods vehicles and vehicle emissions testing to enable the UK Government assess options to decarbonise the nation's long-haul road freight sector

Ricardo, a global strategic environmental and engineering consulting company, has been selected by the UKRI to provide the technical evaluation of the projects funded under the Zero Emission HGV and Infrastructure Programme.

The projects funded under this programme will run real-world trials of battery electric and hydrogen fuel cell technologies for the largest categories of heavy goods vehicles side by side and at scale over a five-year period.

This will provide the UK Government with the essential evidence needed to make strategic, long-term national infrastructure decisions to decarbonise the nation's road freight sector and provide required greenhouse gas emissions savings. The project has been awarded through UK Research and Innovation (UKRI) and is administered by Innovate UK.

Roads Minister, Richard Holden said:

"Freight and logistics are the beating heart of our economy and it is only right that we celebrate the sector so that it gets the recognition and support it deserves.

"From boosting zero emission tech across freight to attracting the future generation of talent to the industry, we are working hard to drive innovation, create jobs and grow the economy by building a brighter, more innovative future for one of our most crucial industries."

Decarbonisation Minister, Jesse Norman said:

"The UK is at the forefront of the global transition to net zero, and today marks another important milestone to decarbonise freight, one of the economy's most vital industries.

"That's why I'm pleased to reveal that we're investing £200 million to roll out 370 zero emission trucks, and a further £2.4 million to pioneer green tech through the Freight Innovation Fund, as we work closely with the sector to create new jobs, grow the economy and reach net zero by 2050."

The most recent figures on greenhouse gas emissions from transport indicate that the sector produced 27% of the UK's total emissions, with over 540,000 heavy goods vehicles (HGVs) contributing 18% - some 19.5 MtCO₂e of the emissions from road transport.

The UK Government has recognised that whilst smaller vehicles are anticipated to be electric, there is a lack of clarity around which zero emission technologies to adopt for larger vehicles operating over longer-distances which, combined with currently high vehicle purchase costs, uncertain operational impacts and lack of infrastructure, is holding back private and public investment in research and development (R&D), business model development, infrastructure, and vehicle adoption. This lack of a clear path risks delays to zero-emission HGV deployment at scale and therefore endangering the potential to meet the UK's commitments around decarbonising the road freight sector.

To ensure that the UK's road freight fleet can sufficiently contribute to meeting the UK's net zero objectives by 2050, and that sales of new non-zero emission HGVs are phased out by 2035/40, the UK needs to decide by the mid-late 2020s which technology and infrastructure mix will decarbonise long-haul road freight. The Zero Emission HGV and Infrastructure Programme, which is a seven year major new R&D programme, has been created to address this. For the technical evaluation project, Ricardo will work with partners Costain and the Centre for Sustainable Road Freight (SRF) to provide independent monitoring and technical evaluation of the projects awarded under the programme. The projects will trial at scale the priority technologies of battery electric and/or hydrogen fuel cell HGVs which are proven options for decarbonising the most difficult to decarbonise long-haul heavy goods vehicles, 40 – 40 tonne trucks.

Nikolas Hill, Head of Vehicle Technologies and Fuels at Ricardo and Project Director of the technical evaluation project said:

“If the UK is to meet its commitment of getting its road freight fleet as close as possible to net zero by 2050, the Government needs trusted evidence and analysis which will guide investment and infrastructure decisions to support zero emission vehicle deployment well in advance of the proposed 2040 phase out dates for the sale of all new non-zero emission HGVs.

For the Zero Emission HGV and Infrastructure Programme, Ricardo brings world-leading expertise in hydrogen and battery electric technology, vehicle emissions testing, data collection and assessment, building upon our deep knowledge of the heavy duty sector. This will help both the Government and industry accelerate their path to safe and sustainable zero emission road freight. For Government, we will provide that trusted, independent assessment to inform the strategic, long-term, national decisions on decarbonisation of the road freight sector. For industry, we will support and enhance the value of the projects to provide an independent monitoring and assessment of the real-world operation of the technological options across all the projects funded under this programme. This will help to deliver the valuable insights needed to freight operators, vehicle manufacturers and other stakeholders, giving them the confidence to invest in zero-emission technology.”

The new programme will treat battery electric and hydrogen fuel cell electric vehicles as front runner technologies and will undertake a demonstration of the technologies consistently side by side to allow evaluation of: energy consumption and emissions savings potential; business acceptability; vehicle and infrastructure cost, reliability and ease of implementation; efficiency, safety and reliability; refuelling provision and convenience. The programme will thus provide the data to make decisions with confidence on which technology, or technology mix, is likely to be successful in a UK context allowing the Government and industry to accelerate the deployment of these technologies.

This project is the latest example of Ricardo acting as a trusted technology and evidence advisor for Government in the zero emission heavy duty sector. Ricardo is also currently working on the ZEFES (Zero Emissions flexible vehicle platforms serving the long-haul Freight Eco System) programme, co-funded by the European Commission, which addresses the decarbonisation of long-distance freight transport by demonstrating real-world applications with battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) across Europe. Ricardo also led the technical support and analysis provided to the European Commission that fed into their Impact Assessment of proposals to extend and enhance the CO₂ regulations for heavy duty vehicles, published on 14 February 2023.

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About Ricardo

Ricardo plc is a global strategic, environmental, and engineering consulting company, listed on the London Stock Exchange. With over 100 years of engineering excellence and employing close to 3,000 employees in more than 20 countries, we provide exceptional levels of expertise in delivering leading-edge and innovative cross-sector sustainable products and solutions. Every day, we enable our customers to solve the most complex and dynamic challenges to help achieve a safe and sustainable world. Visit www.ricardo.com

Media contacts:

Kathryn Bellamy
Group Head of Corporate Communications
Ricardo plc
Email: kathryn.bellamy@ricardo.com
Telephone: +44(0)7921 941824