

GVN response to the Comprehensive Spending Review

About us

The Gas Vehicle Network (GVN) is an established trade body which represents a diverse range of businesses involved in the production of gas-derived fuels and gas-powered vehicles, particularly heavy goods vehicles. Our members work is vital in developing the next generation of cleaner transport fuels and vehicles.

The Gas Vehicle Network is one of the seven divisions of the Energy and Utilities Alliance (EUA). Energy and Utilities Alliance (EUA). A company limited by guarantee and registered in England. Company number: 10461234, VAT number: 254 3805 07, registered address: Camden House, 201 Warwick Road, Kenilworth, Warwickshire, CV8 1TH.

Response

Support for Green Gas to decarbonise transport

If the UK is to meet its climate change targets then the current biggest contributor to greenhouse gas emissions, transport, needs immediate attention. Compared to 1990 (the baseline for the 80 per cent reduction) the UK has reduced its overall emissions by 41 per cent; transport emissions in that time have fallen by just 2 per cent. Transport is now the largest emitting sector of the UK's greenhouse gas emissions, comprising some 26 per cent of the total, compared to energy supply (electricity) 25 per cent.

Within the transport sector, road transport is the largest emitter of greenhouse gases and HGVs have disproportionately high emissions. They account for 17% of road transport CO₂ emissions despite making up just 5% of vehicle miles.

The importance of tackling HGV emissions was recognised in DfT's "The Road to Zero" which stated that a voluntary target for industry is now in place to reduce HGV emissions by 15% by 2025.

The powertrain required for these vehicles means that alternatives to diesel, such as batteries, are simply not capable of pulling the loads. Gas-powered engines are an alternative to diesel and are suitable for use in the UK. In 2013, the Chancellor recognised this and lowered the fuel duty on gas compared to diesel. At the time, this decision was a nudge to encourage a switch to gas-diesel hybrid HGVs. The industry however, recognised that these vehicles are not as effective as dedicated gas-powered HGVs.

The duty differential has encouraged the industry to deliver gas filling stations; fleet managers (such as Waitrose) to start switching from diesel and the potential for lower carbon HGVs to become a reality. We would encourage Treasury to ensure that this duty differential remains in place.

Biomethane is today's ultra-low carbon fuel of choice for fuelling HGVs and in particular for trucks travelling long distances. When sourced from certain feed stocks, biomethane is not only an ultra-low Greenhouse Gas (GHG) emissions fuel but is a negative GHG fuel. Wastes that would otherwise lead to significant methane emissions are used to produce a renewable and sustainable road fuel. It is also an abundant fuel with ADBA estimating that by 2030 there will be sufficient feedstock to power long haul HGVs on the road today.¹

¹ <https://adbioresources.org/news/adba-launches-biomethane-the-pathway-to-2030-report>

No other green technology is currently available to fuel heavy, long distance, logistics operations. It is likely to take decades before zero carbon alternatives are widely available or economic with infrastructure deployed to make them a practical alternative. Biomethane for HGVs is compatible with all future technology developments and will not hinder their development. In fact for some it may be an important first step in the transition to clean fuel.

The public and the UK logistics and haulage industry want action today to reduce emissions from trucks. Biomethane fuelled HGVs represent a no regrets “solution available today” and are therefore a vital component in transitioning and delivering “The Road to Zero” as well as the UK’s ambition to become a world leader in low carbon technologies.

The Gas Vehicle Network, GVN agree with the DfT’s own statement in their recent RTFO consultation which stated that: “Carbon budgets are made under the Climate Change Act, and every tonne of GHG emitted between now and 2050 will count¹. Where emissions rise in one sector, the UK will have to achieve corresponding falls in another. In 2018 biofuels reduced carbon emissions from transport by over 3.5 million tonnes². Biomethane powered HGVs will save greenhouse gas emissions now.

Each biomethane powered HGV typically saves 130-150 tonnes/pa of CO₂ when using 100% biomethane compared to the same vehicle powered by Euro VI diesel, running on a standard diesel blend.

80% of the total dispensed volume of gas for transport fuel was bio-methane in 2019³. This highlights how successful the Renewable Transport Fuel Obligation (RTFO) has been in decarbonising transport.

Large HGV operators turn over their vehicle fleets in a typical 4 to 6-year cycle. The

² <https://www.gov.uk/government/consultations/increasing-the-renewable-transport-fuel-obligation-buy-out-price-for-biofuels-suppliers/>

increasing-the-renewable-transport-fuel-obligation-buy-out-price-to-ensure-continued-greenhouse-gas-savings

³ <https://www.ngvnetwork.co.uk/news/renewable-gas-accelerates-hgv-industry-to-carbon-free-destination>

speed of adoption for biomethane is also more rapid than for cars because the primary life of a truck in a major haulage fleet is far shorter.

No pragmatic CO₂ reduction strategy for road transportation should ignore the potential benefits of decarbonising the "CO₂ intensive" HGV sector. A 1% annual CO₂ saving can be achieved by switching 540,000 diesel cars to electric OR, 14,000 HGVs from diesel to biomethane.

Biomethane, when produced from certain feedstocks such as manure, offers more than 100% CO₂ equivalent savings compared to running on a fossil fuel and is therefore a carbon negative transport fuel.

Under almost all future scenarios, development of refuelling infrastructure will be key to enabling the deployment of new low carbon technologies. Diesel refuelling is cheap and widespread but refuelling for future technologies will be much more expensive and require scale to be economic.

Biomethane refuelling infrastructure provides a first step in this direction as stations can be deployed at large logistics parks, ports or logistic company sites where very large concentrations of trucks operate and refuel. In the fullness of time, as other zero carbon technologies emerge such as hydrogen and potentially replace biomethane, these same locations will be ideal for HGV refuelling and can be repurposed to the new technologies and fuels.

The UK is a world leader in gas HGV engine technology. Jobs are being created in the manufacturing of fuel systems that are used globally in high pressure gas injection trucks. It is also estimated that 30,000 jobs⁴ will be directly created in the biomethane industry when operating at its full potential.

⁴ http://adbioresources.org/docs/Biomethane_-_Pathway_to_2030_-_Full_report.pdf

As a national network of biomethane refuelling stations is put in place it would be reasonable to project that 50% of all long range, heavy payload new truck purchases will be powered by biomethane by 2030. That would equate to about 60,000 HGVs and be equal to incremental annual CO₂ savings of about 2.5 million cars. ADBA model that the UK could produce up to 76.3 TWh of biomethane per year by 2030. This energy equates to 97% of the HGV energy consumption in 2017⁵. Current RTFO statistics show that when comparing Q1'19 to Q1'20 the volume of bio-methane is up by 358%⁶.

With the fixed fuel differential (biomethane versus diesel) already in place until 2032 and a national network of 45-50 open access biogas refuelling stations operational by the end of 2025, annual CO₂e savings of around 5 million tons is achievable by 2030.

The DfT's upcoming Transport Decarbonisation Plan should recommend a role for gas HGVs as a key method for decarbonising heavy goods transport. It is the only way to decarbonise HGVs today without having to wait for a technological breakthrough in 20 years. Unlike many other decarbonisation initiatives, expensive subsidies are not required. Positive support from the Government will create certainty to unlock investment. In turn this will make a significant contribution to the UK's "green recovery" and create jobs in the rapid construction of refuelling infrastructure. This is the essential prerequisite for reducing emissions and pollution from HGVs operating on our roads.

⁵ http://adbioresources.org/docs/Biomethane_-_Pathway_to_2030_-_Full_report.pdf

⁶ <https://www.gov.uk/government/statistics/renewable-fuel-statistics-2020-first-provisional-report>