

# A Green Recovery

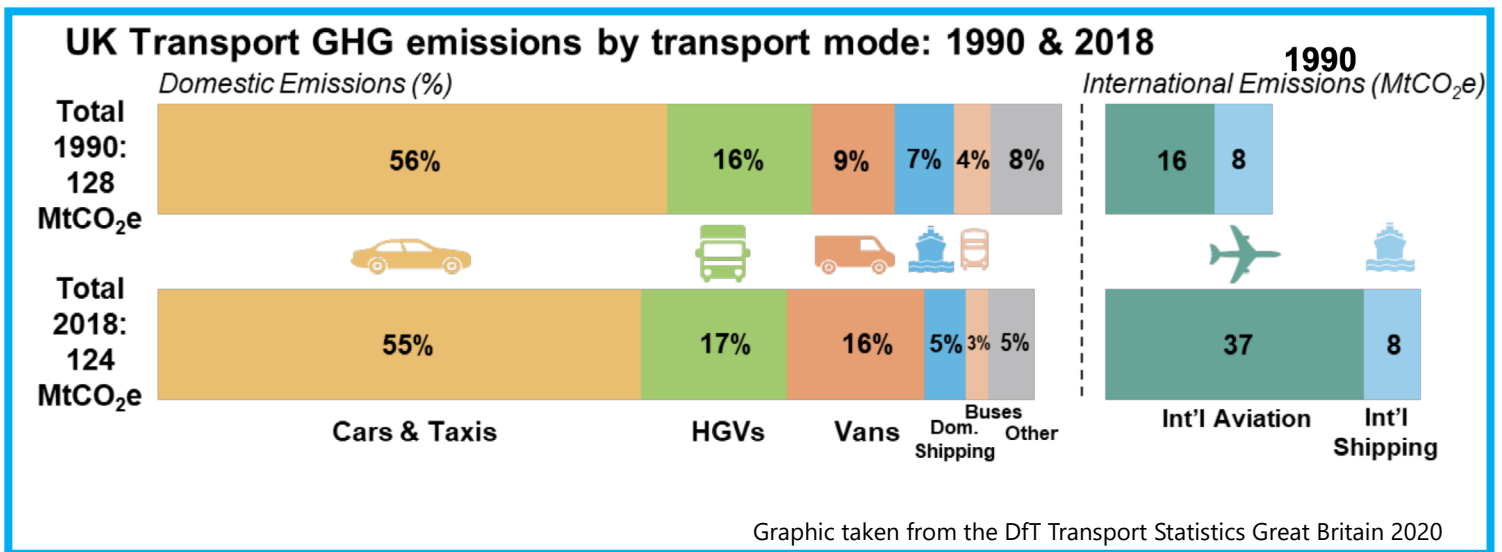
**Delivering a rapid & cost-effective CO<sub>2</sub> reduction for Heavy Goods Vehicles (HGVs).**





## Heavy Goods Vehicles (HGVs)

Heavy Goods Vehicles (HGVs) are the most challenging road vehicles to transition to electric or hydrogen power, a practical and affordable solution is twenty to thirty years away. As the table below shows, since 1990 emissions from HGVs have actually risen. These vehicles also generate the highest emissions per vehicle.



**The only immediately deployable at scale ultra-low carbon alternative fuel for use in HGVs is biomethane.**

This is why major logistics companies across the UK are today switching away from diesel to biomethane, which can be supplied as both gaseous and liquefied fuels. The trucks are being produced by truck manufacturers and the refuelling infrastructure is developed.

The DfT's Transport Decarbonisation Plan should recommend a role for gas HGVs as a key method for decarbonising heavy goods transport. This will unlock investment needed for building the required refuelling infrastructure, in turn creating jobs and building back better.



## Biomethane

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.<sup>1</sup>



**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.**

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





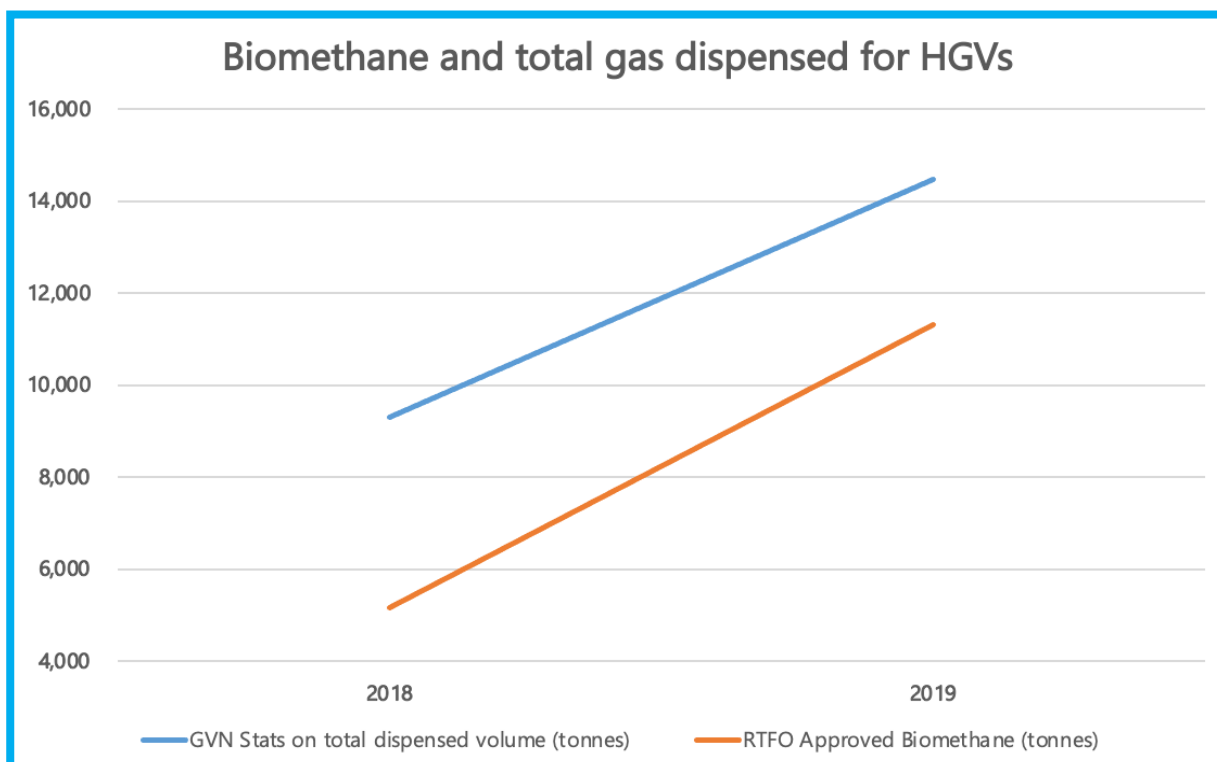
The Gas Vehicle Network, GVN agree with the DfT's own statement in their recent RTFO consultation which stated that: "Carbon budgets are made under the Climate Change Act, and every tonne of GHG emitted between now and 2050 will count<sup>1</sup>. Where emissions rise in one sector, the UK will have to achieve corresponding falls in another. In 2018 biofuels reduced carbon emissions from transport by over 3.5 million tonnes."<sup>2</sup>.



## Biomethane powered HGVs will save greenhouse gas emissions now.

**1** Each biomethane powered HGV typically saves 130-150 tonnes/pa of CO<sub>2</sub> when using 100% biomethane compared to the same vehicle powered by Euro VI diesel, running on a standard diesel blend.

**2** 80% of the total dispensed volume of gas for transport fuel was bio-methane in 2019<sup>3</sup>. This highlights how successful the Renewable Transport Fuel Obligation (RTFO) has been in decarbonising transport.



<sup>2</sup> <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>

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



- 3** Large HGV operators turn over their vehicle fleets in a typical 4 to 6-year cycle. The 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.
- 4** No pragmatic CO<sub>2</sub> reduction strategy for road transportation should ignore the potential benefits of decarbonising the “CO<sub>2</sub> intensive” HGV sector. A 1% annual CO<sub>2</sub> saving can be achieved by switching 540,000 diesel cars to electric OR, 14,000 HGVs from diesel to biomethane.
- 5** Biomethane, when produced from certain feedstocks such as manure, offers more than 100% CO<sub>2</sub> equivalent savings compared to running on a fossil fuel and is therefore a carbon negative transport fuel.
- 6** 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.

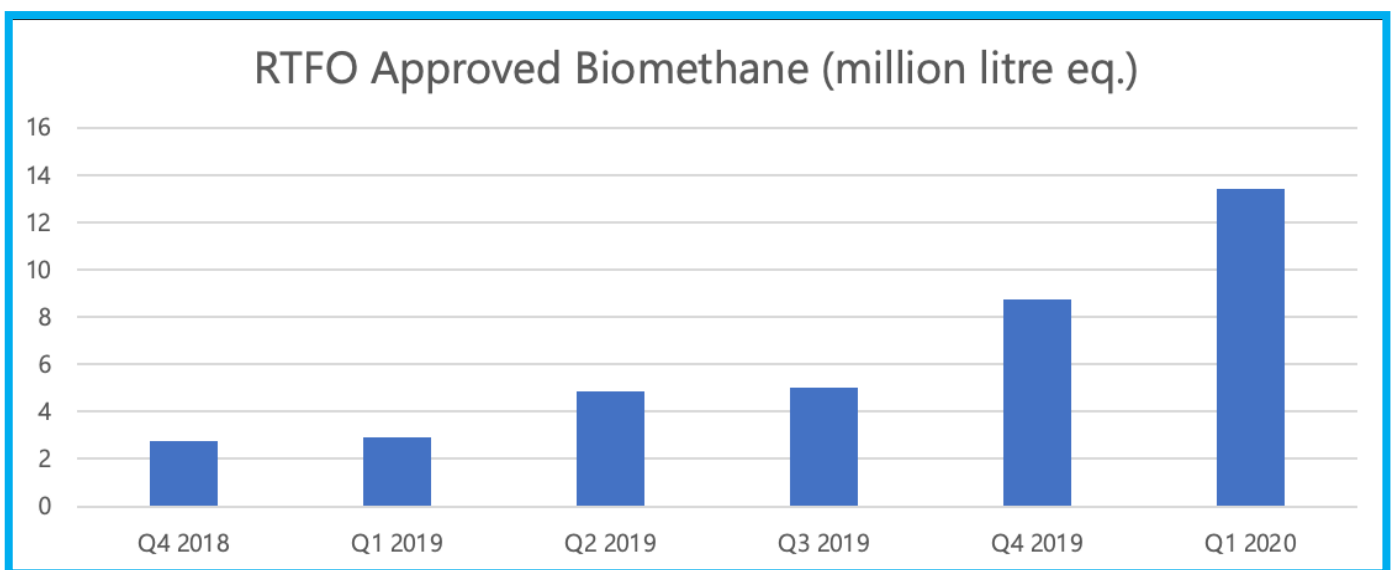


This station is located next to the M62, one of the busiest motorways in the UK, and is in the middle of a large logistics park, where more than 500 HGVs operate from daily.



**7** 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 jobs<sup>4</sup> will be directly created in the biomethane industry when operating at its full potential.

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 CO<sub>2</sub> 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 2017<sup>5</sup>. Current RTFO statistics show that when comparing Q1'19 to Q1'20 the volume of bio-methane is up by 358%<sup>6</sup>.



**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 CO<sub>2</sub>e savings of around 5 million tons is achievable by 2030.**

<sup>4</sup> [http://adbioresources.org/docs/Biomethane - Pathway to 2030 - Full report.pdf](http://adbioresources.org/docs/Biomethane_-_Pathway_to_2030_-_Full_report.pdf)

<sup>5</sup> [http://adbioresources.org/docs/Biomethane - Pathway to 2030 - Full report.pdf](http://adbioresources.org/docs/Biomethane_-_Pathway_to_2030_-_Full_report.pdf)

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



Gas refuelling stations are already in place and are strategically situated where they will be most convenient for logistics companies.







## Conclusion & Suggested Policy Action

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.

## Summary

**There is no other sector of the UK economy where large CO<sub>2</sub> emissions cuts can be so quickly and cost effectively implemented as the HGV and in particular the long-distance truck sector.**



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.



The Gas Vehicle Network, GVN, brings together major UK companies across the gas vehicle industry supply chain who are driving gas as a transport fuel. These include network operators, infrastructure providers, vehicle manufacturers, fuel providers, and logistics companies.

The Network works with Government and other agencies to develop the framework within which the industry will operate.



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