Call for Evidence Response

Thursday 28th October 2021

Negative Emissions Technologies

Call for evidence

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. Given that air pollution, and related preventable deaths, are at unacceptably high levels, the work of our members is vital in developing the next generation of cleaner transport fuels and vehicles.

The GV Network is one of the seven divisions of the 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.

What contribution could NETs (through DACCS, BECCS, and/or other NETs) make to achieving net zero by 2050?

GVN believes that negative emission fuels and technologies will play a vital role in our journey to net zero. Certain sectors are notoriously far more difficult to decarbonise than others and transport, particularly heavier vehicles, is certainly one of them. Our members operate in the gas-powered heavy goods vehicle (HGV) sector which is growing rapidly and already delivering significant CO_2 emissions savings over diesel, typically in the order of 84%. We know that HGVs account for a disproportionate share of emissions: 17% of transport-related CO_2 emissions despite only making up 2% of vehicles on our roads and travelling just 6% of vehicle miles. Figures compiled from our member companies dispensing gas fuels show that the amount in kilograms of biomethane dispensed in 2020 was up 80% on 2019. Of all gas fuels dispensed in 2020, 93% was waste-derived biomethane which shows a clear demand for this low carbon alternative to diesel. Much of this growth is being driven by large companies switching part or all of their fleet to biomethane.

Substantial and cumulative emissions reductions are key to decarbonising many transport-related sectors given that they now account for the largest share of the UK's overall emissions. Transport emissions have remained largely stagnant since 1990 due to a conspicuous absence of alternative fuels and technologies to the dominant petrol and diesel. With the advent of biomethane, this situation is rapidly changing though. Gas HGVs offer a familiar driving and refuelling experience for fleet operators and drivers whilst their higher upfront purchase cost is typically paid back within three years thanks to the far lower Fuel Duty applied to gas fuels. This means that biomethane HGVs are in a strong position to displace diesel models and make a significant contribution to reaching net zero in the transport sector.

In recent years, fuel providers have begun to explore different waste feedstock to tap into even greater emissions reductions than the already impressive 84% that has been typical for several years. Manure in particular is a very promising feedstock as it avoids the escaping methane emissions that result from its typical treatment and instead puts it to use as a vehicle fuel.

Manure-derived biomethane can already be certified as carbon neutral in the UK and in other advanced economies, such as California, it is actually classified as carbon negative. This is a world away from the relatively marginal emissions reductions that the Government is seeking to achieve through, for example, the introduction of E10 petrol. We therefore believe that the Government should give strong backing to carbon neutral biomethane for use in HGVs given that it can decarbonise fleets today.

In the future, the advent of carbon capture and storage technology could further enhance the production of biomethane fuel by removing CO_2 produced in its manufacture so that it definitely goes from being a net zero fuel to a carbon *negative* fuel. This would deliver real reductions in overall emissions associated with the fuel and its feedstock, something which the expensive, underdeveloped alternative technologies currently being propagated by the Government, such as battery electric and hydrogen HGVs, cannot offer.

Which 'hard to decarbonise' sectors could benefit most from NETs, and which should be prioritised?

Unsurprisingly, we believe that HGVs, and other heavier vehicle classes, ought to be a key target for NETs given that they are considered 'difficult to decarbonise'. Transport is an area where electrified or alternative fuel technologies, other than biomethane, are not as mature or commercially viable as many other sectors. We feel that NETs should, at least initially, be targeted at sectors and applications which have seen the most sluggish reductions in emissions since 1990.

At what technological stage are current NETs, and what is the likely timeframe that will allow NETs to be operational at scale in the UK?

As we have described already, biomethane production is already commercially viable and widespread, as is refuelling infrastructure. The technological advancement we need in order to make biomethane vehicle fuel an unquestionably carbon negative fuel is carbon capture and storage. For this reason, GVN has long called for urgent Government investment in the technology and a supportive policy framework to enable the UK to become a world leader in it. We fear that the opportunity to do so is rapidly slipping away due to the Government's years of prevarication over CCS but we are confident that when it does reach the stage of commercial viability, it will enable even greater emissions reductions from biomethane vehicle fuel.

What are, and have been, the barriers to further development of NETs? How can such barriers be overcome?

As mentioned previously, the lack of investment in, and a coherent policy framework around, CCS is hampering the development of many negative emission renewable fuels, including biomethane. This should be a key plank in the Government's strategy to reach net zero as it would greatly assist efforts to decarbonise many sectors where this is a significant challenge.

How should the UK Government support the further development of NETs?

The Government's subsidy schemes for renewable fuels should offer even greater incentives to fuels which can be classed as carbon negative or carbon neutral. Currently, a great deal of taxpayers' money is spent on subsidising fuels such as E10 which do not offer anything like the emissions reduction per vehicle of fuels such as biomethane.

The Government has indicated it will publish a Biomass Strategy in 2022, including the role of BECCS. What should be included in this strategy?

The Government needs to use this new strategy to make it very clear to our industry what role it sees for fuels such as biomethane in the journey to net zero transport emissions. Until now, the Department for Transport's focus has largely, and rightfully, been on cutting CO_2 emissions. However, we are now seeing an orthodoxy around zero *tailpipe* emissions emerging. This could exclude many fuels, such as biomethane, which can already deliver net zero emissions and are on course to become carbon negative fuels. The alternatives, including battery electric and hydrogen HGVs, are not yet proven in financial, practical or emissions terms. The Biomass Strategy therefore presents an opportunity to properly evaluate and define the benefits of biomethane and chart a course to the development of carbon negative transport fuels wherever possible.