

LOW CARBON SOLUTIONS FOR THE UK TRUCK MARKET

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The Low Carbon Vehicle Partnership (LowCVP), established in 2003 to help accelerate the shift to low carbon vehicles and fuels, has been grappling with the combined need to reduce polluting emissions as well as those implicated in climate change. Meeting these twin challenges and delivering solutions for both the existing fleet and for new vehicle purchases, are nowhere more complex than in the freight and commercial vehicle sector.

The sector is responsible for around a quarter of all CO₂ emissions from road transport in the EU with vans and HGVs estimated to contribute more than 30 per cent of greenhouse gas and 40 per cent of roadside NO_x from UK road transport. Improving the efficiency of road freight, as highlighted by a recent International Energy Agency report, is critical to reducing carbon emissions and air pollution over the coming decades.

It's partly because of the variety of vehicles and complexity of the market that the freight sector has been relatively neglected. The LowCVP recently re-established a Commercial Vehicle Working Group and is working on a range of initiatives and advice to government to hasten the low-carbon, low-pollution shift in and for the sector.

The Partnership's 2012 *Low Carbon HGV Barriers and Opportunities* report identified that independent verification of the 'real world' performance of HGV-related technologies and their applicability to different operational environments were key building blocks in the development of a supportive

policy framework. This has led to the development and launch of an accreditation scheme for retrofit carbon reduction (fuel saving) technology for HGVs and testing of various gas-powered vehicles in 2016.

Working with the Energy Saving Trust, the LowCVP is extending this to a Clean Vehicle Retrofit Accreditation Scheme (CVRAS) to enable equipment manufacturers or vehicle operators to conduct robust, repeatable and reliable tests to validate the impact on fuel consumption and pollutant emissions in different operating conditions.

The CVRAS is a development of earlier Government programmes – the Clean Vehicle Bus Fund/Clean Vehicle Technology Fund – and followed an evaluation of the earlier initiatives to ensure that the technologies work for both policy and operators.

Based on this work, the Government recently announced that a new £30 million Clean Bus Technology Fund is open to local authorities in England and Wales who are looking to implement accredited, rapid, cost-effective and reliable emissions-reduction retrofit programmes in bus fleets. The aim is to extend this approach to introduce a similar scheme targeted at the commercial vehicle sector and the first step – to provide the testing framework – is just completing.

The key findings of the LowCVP's analysis of testing and accreditation initiatives for retrofit equipment to date were that:

- The highest NO_x emission reductions (80-100 per cent) were seen for retrofit Selective Catalytic Reduction after-treatment and >>



Manufacturers are currently working on future low emission trucks using alternative fuels including electricity, hydrogen, natural gas (including biogas) and biodiesel options



diesel bus engine conversion to use an electric powertrain

- Moderate NOx emission reductions (25-29 per cent) were achieved by retrofit thermal management and flywheel hybrid technologies
 - Low NOx emission reductions (3-6 per cent) were achieved by mild hybrid, hybrid assist and dual fuel compressed natural gas (CNG) conversions
- SCR retrofit, as well as showing the highest emissions reduction, also

demonstrated excellent conformity with testing undertaken six months and two years after the initial fitting. The technology achieved high levels of NO2 emissions reduction (>80 per cent). The majority of retrofit SCR systems were fitted with particle filters and enabled large reductions in particulate (PM) emissions as well.

Retrofit technology offers a relatively low-cost and 'quick-fix' solution, particularly to the challenge of urban pollution. Tying the CVRAS

to the requirements for Clean Air Zones provides the confidence for all stakeholders that robust solutions exist to help clean the current fleet at the pace required (which of course far exceeds natural fleet replacement cycles).

But the importance of innovation in the new vehicle market cannot be underestimated. Diesel remains the lowest carbon choice for the majority of operators and, with Euro VI emissions standards in effect, now meets the air quality needs for the current market. However, the long-term strategy for zero emissions, while currently focussed on light vehicles and city centres, will inevitably impact the heavy market as time goes on.

Innovative manufacturers are working on future low emission trucks, using alternative fuels including electricity, hydrogen, natural gas (including biogas) and biodiesel options. Governments and energy providers are considering novel infrastructure solutions to enable these vehicles to operate effectively.

Tesla will soon launch plans for an all-electric semi-truck, or a typical >>

DKV increases potential savings for European transporters

Transport companies making journeys throughout Europe face a complex purchasing situation with diesel net prices, VAT and fuel excise duty rates and the level of refundable international tax payments all varying widely. However, if you make sure your purchasing concept takes these issues into consideration, you can definitely save money. For transporters who wish to increase their potential savings, DKV offers the possibility of combining refuelling abroad with VAT and fuel excise duty refunds.

DKV has two variants for obtaining refunds: the first involves the standard refund for 28 European countries. With this variant, the waiting time for refunds depends on the authorities. To reduce the time for the refund to take place, DKV offers an immediate refund procedure (Net Invoicing Programme) for most European countries. Here the customer receives the international VAT with the same DKV invoice as the provided VAT service.

DKV Euro Service takes the full handling of your VAT refund applications out of your hands - including VAT on invoices not originating from DKV - by way of:



- Automated processes and complete handling of the bureaucratic process by experts versed in the language concerned
- Instant acceptance of DKV invoices by all European tax authorities (excluding some new EU member nations)
- Permanent access to all records, including automatic data filing and extraction via DKV eREPORTING
- Intelligent full-service, full costs transparency and no hidden cost factors, including a unique cost 'airbag'.

For further information, visit:
www.dkv-euroservice.com/gb/services/refund/vat-refund/

articulated lorry. It's reported that the truck will have a range of 200-300 miles on a single charge, making it suitable for some regional trips but certainly not the longer hauls. Closer to the UK market is Banbury-based Arrival's range of electric trucks, now being trialled by the Royal Mail in London.

Toyota has announced plans to build a fleet of heavy-duty, zero-emission, hydrogen fuel cell trucks. The company is betting that commercial vehicles, from trucks to forklifts, operating out of a centralised depot may be most suited to the technology because of the cost and challenges of developing the necessary refuelling infrastructure. A Salt Lake City-based start-up, Nikola Motor Company, recently unveiled a large class 8 truck powered by hydrogen fuel cells. The truck is claimed to have an operational range of as much as 1,200 miles and is expected to be released in 2020.

But for the UK operator right now, these future concepts are just that – conceptual – and, arguably, irrelevant to the current need to run

efficient trucking operations on the UK network.

The LowCVP's 'Low Emission Truck Stop' at the Low Carbon Vehicle Event (Cenex-LCV17) held at Millbrook in 2017, aimed to demonstrate how the freight sector is already rising to the emissions challenge with the introduction of new cleaner technologies and fuels, available now.

The Truck Stop showcased a Scania vehicle running on CNG with a 500-mile range, capable of operating on renewable biomethane for the lowest carbon impact. Waitrose has recently introduced ten of these which will be used to make deliveries to the company's stores in the Midlands and the North. A hybrid Scania was also showcased, demonstrating the huge potential for conventional diesel truck improvements in specific applications.

Amongst other vehicles at the Truck Stop was a DAF vehicle, retrofitted with an electric drive-train by Magtec and a hydrogen fuel-cell range-extended van from Arcola.

The rich portfolio of technology we now see, provides a solution for every truck and operation, from the smallest operator with a Euro IV truck needing to continue working in cities with Clean Air Zones, all the way through to the biggest corporates, considering their 20-year fleet policy.

The LowCVP's Commercial Vehicle Working Group (CVWG) will be continuing to support the Department for Transport's growing freight carbon reduction agenda, as well as contributing to other programmes such as Transport for London's LoCITY initiative and the work of the Defra/DfT Joint Air Quality Unit (JAQU).

The CVWG will be the main mechanism for LowCVP members interested in freight decarbonisation and emissions reduction to engage in and plan our next work programme, influence policy-making and collaborate with like-minded organisations and individuals.

For more information about getting involved in the Low Carbon Vehicle Partnership, visit: www.lowcvp.org.uk

Brexit – don't just 'wait and see'



Grosvenor International Systems Ltd has been at the heart of customs duty management and declarations for more than 30 years, and is one of the five software houses that will be undertaking early testing of the CHIEF replacement – CDS. The company's position with HMRC provides it with a particular insight into what international traders should be doing in the run up to our exit from the EU.

Many commentators in the field of international trade are constantly repeating the multiple mantras of: 'Customs can't cope', 'The systems will grind to a halt', 'CDS will fail', 'Ports will be at a standstill' etc. – all you have to do is look at your LinkedIn timeline!

Although Grosvenor accepts that there may be pain, and that HMRC needs to start relying on its 'partners' in the customs software industry to help them deliver the changes needed, its advice to any company involved in international supply chains (UK/EU/Worldwide), is to review currently available reliefs and procedures and, if you think one or more

may be beneficial, start implementing now. Don't wait, don't hesitate, because if you do, you may be trampled in the rush and the bottleneck that will occur the closer we get to March 2019.

The company believes that the following reliefs and procedures should be at the top of the list to consider:

- CFSP (Customs Freight Simplified Procedures) – the in-land, after-the-event electronic import declaration process which has the impact of relieving strain at the border but may also be a route into other (future) simplifications such as Self-Assessment.
- NES (National Export System) – effectively CFSP for exports.
- Customs Warehousing/Inward Processing - one or a combination of these special procedures will help mitigate the potential 'double duty hit' Brexit may bring.

If you want to talk through your options, you can contact Grosvenor on 01689 818000 or email: info@customs.net

