

Panellists discuss the likely dominance of electric as fuel of choice

The future is electric



Panellists at this year's Freight in the City Expo have agreed that electric is likely to be the dominant fuel of the future for hauliers. However, they also speculated that the sector will ultimately choose a mix of technologies.

At the event, held at London's Alexandra Palace on 6 November, Graham Neagus, head of LCV, Renault Trucks insisted that "going electric is the way forward and should almost leapfrog other alternative fuels which are tinkering around the edges."

He went on to explain that electric is the most easily adaptable fuel, and that gas presents a much more challenging infrastructure.

"But the future will be about a blended solution – a mix of technologies."

Neagus predicted that urban charging points and related facilities would be shared amid a new



mood of sector "co-operation".

"I also think there are a number of areas highly suitable for electric HGV charging that are as yet untapped," he added. "Look at the football and rugby stadiums in London. Why can't they work with our sector?"

Asked if companies were wasting time "pussyfooting around with other fuels", Neagus said two things were currently "holding electric back – one is battery technology and the other is the ability to work with the energy supply companies."

Paul Farr, UK business unit director at CEVA Logistics Transport Centre of Excellence, agreed that there would be "no one-size-fits-all solution" to the fuel challenge.

"You have to back the right horse in terms of technology and get over hurdles, particularly concerning the infrastructure around electric charging ports etc.

"There is definitely a role for electric in urban deliveries but we also need to invest in [a solution for] 44-tonne vehicles."

David Thackray, sales and marketing director at Tevva, argued that the key to the debate was not about electrifying vehicles but electrifying miles.

"You want mileage covered to be down to zero," he said. "The more zero miles you do the better from an environmental and financial point of view."

Diesels revived by power packs

Reducing the environmental impact of refuse collection vehicles is about more than just switching from diesel to electric. Rather than scrapping and replacing end-of-life RCVs, they can be recycled into full electric vehicles.

This concept has been proven by a four-vehicle trial run by a consortium including Veolia, Sheffield City Council, Magtec and Microlise and funded by Innovate.

Four obsolete diesel RCVs were repowered to battery electric and fully refurbished to as-new condition by Dennis Eagle, using complete power packs built by Magtec. Veolia is running two of the vehicles in Sheffield and two in Westminster.

The 300kWh power packs are built on a "raft" by Magtec, so they can be quickly and easily installed by the vehicle builder as a plug-and-play unit. The batteries last for two seven-hour shifts, even when running a fully electric bin lift, and are recharged by 50kW chargers using energy from waste plants. The repowered 26-tonne vehicles weigh 385kg less than before and require far less maintenance.

"We make the motors, gearboxes and controllers at the moment," said Magtec MD Andrew Gilligan at the Freight in the City Expo. "We are looking for partners as we build up volumes to over 3,000 units a year. I also want to partner with OEMs so they can install the kit themselves."



Hauliers left in dark over zero emissions timetable

Speakers at this year's Freight in the City Expo have urged politicians to give hauliers much clearer guidelines on the part the sector should play in a zero emissions future.

The event saw RHA head of policy, environment and regulation Chris Ashley (right) call on the incoming government to reduce the "ambiguity" around its advice and instead offer a "tangible timetable" on how hauliers can play their part.

"We are facing an immense amount of emotion, pressure and noise being created by environmental activists," Ashley said. "We want to channel that emotion to give positive benefits, but the challenge is how we get there."

He went on to claim that "where emotion and reaction meet it can lead to bad policy making".

"In the case of CAZ, a blanket approach to charging – punitive charges – is not the way forward," he said. "For CAZ policy to work it needs to target and address the exact sources of the poor air quality with a much more nuanced and intelligent approach."



"There are warm words about a net zero future but what's missing is a tangible timetable on how hauliers can play their part in it. We need clear milestones.

"We hear about lofty aspirations to bring forward the date of getting rid of diesel cars to 2030, but that's only 10 years away. Does this apply to lorries? Nobody knows. The list of alternative fuels is long and the investment required is involved and expensive. Decisions need to be made on the infrastructure, tax and regulatory framework.

"Will the incoming government allow market forces to determine the way forward in terms of tomorrow's fuel, or will there be state intervention? There are very few answers to the questions."

Will 2020 be the year of the battery?

Battery electric vehicles may come of age in 2020, as what have been until now mostly prototypes start to become mainstream, according to speakers at the 2019 Freight in the City Expo at London's Alexandra Palace last week.

Swedish startup Volta is aiming to put close-to-production spec demonstration versions of its 18-tonne battery electric truck on the road with customers in the UK and France next summer. It plans to start building customer vehicles in 2021, with full series production beginning in 2022.

Operators signing up for a seven year 'Truck-as-a-Service' rental contract will get the vehicle, maintenance, smart charger, electricity and driver training for a fixed monthly fee that should be competitive with diesel.

The box-like Volta truck has a range of around 150km and a recharge time of three to four hours, depending on the battery pack chosen. A refrigerated version will also be available.

Gnewt Cargo operates a 70-strong fleet of fully electric

BEVs carrying out low emissions last-mile distribution. A two-year trial to reduce congestion by using larger capacity BEVs, carried out with the support of the Mayor of London, is nearing completion.

The vehicles included 15 Voltia vans, seven eNV200s and four Fiat eDucatos fitted with smaller batteries supplied by BD Auto. The results of the trial will be published at the end of this year.

The importance of telematics and geofencing to getting the most from EVs was emphasised by Andrew Pearce, director of LEVL Telematics, the UK supplier of the world's largest telematics system, Geotab.

Geotab is used by major fleets that are already rolling out EVs. It extends the range of the vehicle by monitoring the state of the battery, the energy used and driver behaviour.

While full battery electric trucks are gaining ground, the range extender may still have a role to play. Scania showed a production-ready 9-litre L-series 6x2 rigid series hybrid that can run 10kms



on batteries within an ultra low emission zone before switching to diesel for stem mileage. A plug-in version will be available next year.

UK truck convertor Tevva builds range-extended electric trucks using small diesel or petrol internal combustion engines to recharge vehicle batteries on the move. Sales and marketing director David Thackray said its customers were saving £90 a month in real world operations.

Tevva has switched to a lithium iron phosphate battery, which is slightly heavier but uses no cobalt.



This makes it lower cost, longer lasting and more thermally stable.

The company is using geofencing technology to automatically switch the vehicle to full electric mode when it is approaching a low emissions zone.

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MEMMT

Transport sector's fuel challenge will call for a mix of technologies

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LCV for Renault Trucks, insisted that "going electric is the way forward and should almost leapfrog other alternative fuels, which are tinkering around the edges."

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"I also think there are a number of areas highly suitable for electric HGV charging that are as yet untapped," he added. "Look at the football and rugby stadiums in London. Why can't they work with our sector?"

Two things are currently holding electric back, Neagus said. "One is battery

technology and the other is the ability to work with the energy supply companies."

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"You have to back the right horse in terms of technology and get over hurdles, particularly concerning the infrastructure around charging ports," he said. "There is definitely a role for electric in urban deliveries but we also need to invest in [a solution for] 44-tonne vehicles."

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Diesel refuse collection trucks become full electrics

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Battery electric vehicles now poised to become mainstream

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Guidance call on emissions

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What's new at Freight in the City



VOLVO TRUCKS

One of the stars of the show was the Volvo Vera (above), a zero-emission level 4 autonomous tractor unit. Volvo Trucks UK and Ireland MD Robert Grozdanovski said the cabless truck, which has a top speed of 40kph and a range of up to 300km, will not replace drivers. "It's been designed to complement the industry, not replace the current system," he said.

Vera, which means 'faith' in Russian, will shortly enter trials with ferry operator DFDS in Gothenburg. Its journey from a logistics centre to the city's APM Terminals port facility will involve travelling on a public road.

ASTRA CLEARVIEW & SAFETY SYSTEMS

Astra ClearView & Safety Systems offers something it claims manufacturers, such as DAF, IVECO and Scania, do not: passenger door windows that can be fully lowered after the fitment of lower glazed panels.

Technical sales manager Steve Davies said: "None of the mainstream manufacturers have this feature on their trucks. A fully opening window gives drivers better visibility from inside the cab."

Astra charges between £1,300 and £2,200 for a full door conversion, depending on make and model, and its products will prepare hauliers for TfL's Direct Vision Standard, which is due to come into force next year. The most recent additions to its portfolio are the Mercedes-Benz Actros and Arocs.

ULEMCO

Ulemco showed a Euro-5 Volvo FH16 4x2 (below) converted to run on hydrogen. The diesel engine's injectors have been swapped for hydrogen injectors, and 12 tanks



containing 60kg of the gas have been mounted on the chassis.

Liverpool-based Ulemco can convert any Euro-4, Euro-5, or Euro-6 vehicle to run on hydrogen, which, if manufactured using a sustainable process, is free of carbon emissions. Operations director Dr Gordon Nelson said that 4x2 chassis layouts are best suited to the conversion as there is plenty of space for the tanks. Its hydrogen trucks can travel 500 to 600 miles between fills, achieving 10 miles per kg of hydrogen – the equivalent of 10mpg.

RENAULT TRUCKS

Renault Trucks is setting its sights on the municipal sector, and believes its ZE technology will help boost its appeal. The first vehicle in its zero-emission range is the Master ZE, which features a 57kW battery, giving it a 124-mile range. Although initially only available as a 3.1-tonne GVW panel van, it will be joined next year by a chassis-cab and higher GVWs. Also arriving in 2020 are RHD Range D and Range D Wide 16- and 26-tonners. Order books are open, with deliveries expected in week 11.

Renault Trucks head of LCV Grahame Neagus said: "We've always been popular in refuse collection with our D Wide, but we are looking to expand into other pockets, like construction."

SCANIA

Scania debuted a hybrid L-series (below) – an L320 6x2 rear-steer chassis-cab – which, according to head of pre-sales Phil Rootham, will improve fuel economy figures by between 10% and 15%. The truck's DC09 diesel engine is supplemented by a 74kW lithium-ion rechargeable battery. This powers an electric motor between the diesel engine and Opticruise gearbox, allowing the truck to run on electricity



alone for 10km. Like the other L-series on show, it had a factory-fitted passenger window, giving it a five-star Tfl Direct Vision Standard rating.

DAF TRUCKS

DAF promoted the benefits of hydrogenated vegetable oil (HVO), showing a Euro-6 LF 230 FA 4x2 skip-loader which, like all DAF models, can run on the fuel without any modifications. One of the advantages of HVO, DAF claims, is that hauliers can use both it and diesel on tramping operations where EVs are less practical.

Marketing manager Phil Moon said: "EVs can be unpredictable in terms of range as the infrastructure isn't there. HVO offers a 45% reduction in CO₂, and you can use it on the way to a drop, but use diesel on the way back if you so wished."

Moon admitted that HVO is between 5% and 10% more expensive than diesel, which puts some operators off. "If there was a government incentive like there is with EVs, more operators would take up the idea," he said.



TRANSCOVER AND MARSHALLS

Transcover demonstrated how its new Tippercover and Undercover sheeting systems (above), shown on a pair of Scania P410 XTs, can improve inner-city safety.

Commenting on the Tippercover, which was fitted to the upper portion of a Marshalls Muck Shifter steel body, Transcover UK and European sales manager Colin Bartram said: "It stops cyclists from holding onto the outside of vehicles, and potentially getting injured."

Transcover's Undercover automatic sheeting system, shown on a Marshalls hook-loader, has framework that extends widthways by 165mm per side from beneath the skip. The rollerbar is

manoeuvred into place and the sheet is attached from the rear. The frame then returns to its original position. "The Undercover's design is less of a hazard to cyclists and pedestrians when operating on narrow streets," Bartram said.

TEVVA

Essex-based Tevva displayed a pair of 12-tonne range-extended electric vehicles.

David Thackray, Tevva sales and marketing director, said the new truck is available with or without a range extender. "With the range extender it has an 80kWh battery, and without, the truck has a 154kWh battery"

Thackray told *CM* that the vehicles are available with a full repair and operating lease, which costs 25% more per month but saves 30p per operating mile. He said Tevva vehicles covering over 1,400 miles per month will have a total cost of ownership advantage over equivalent diesel-powered trucks.

The first RHD examples will be delivered in December, while 50 more will begin work next May.