

Choices, choices, CHOICES

Speakers from Cenex, Gasrec and the Low Carbon Vehicle Partnership outlined the technical options for fleets to reduce carbon emissions and improve air quality, reports Steve Banner

As van and truck operators become increasingly conscious of the responsibility they have to cut harmful pollutants, interest in environmentally-friendly alternative fuels is accelerating fast. The technologies available to them to achieve that goal are also accelerating, said Steve Carroll, head of transport at Cenex (pictured, inset).

"In 2012, Innovate UK announced that it was going to put £12 million into a trial of low-emission commercial vehicles," he recalled. "Thirty-five companies took part with 270 vehicles, and although the trial was open to all technologies, 95% of them were gas powered and had been retrofitted with dual-fuel systems."

They were the most viable systems available at the time.

"We got a lot of useful information from the trial, and one of the most useful outcomes was the development of a natural gas refuelling network up and down the UK," he said. "Another thing was a long list of barriers to the adoption of alternative fuels by fleets for the government to ponder. That included the lack of real-world data, limited technology choices, high vehicle costs, lack of a renewable fuel, low OEM support... the list went on and on.

"Thanks to the rich data that came out of that trial, the government more recently announced the launch of the Low Emission Freight and Logistics Trial, with a £20m budget and involving 316 vehicles," Carroll said. "This time around

we've got lots of OEM-supported vehicles as well as models from low-volume manufacturers and vehicles that have been retrofitted.

"What we're also seeing is a much larger range of technologies installed in everything from small vans to heavy trucks," he continued. "We're looking at everything from battery power and biofuels to plug-in hybrids and hydrogen."

What is clear is that the OEMs are now stepping up to the plate, Carroll said. "They're offering electric vans, gas power as you progress from large vans upwards, some limited support for different blends of biodiesel, and renewable diesel coming in, too, with growing warranty and servicing support," he adds.

"OEMs are now offering CNG (compressed natural gas) vehicles with a 500-mile range and LNG (liquefied natural gas) trucks that can go from John O' Groats to Land's End on a single fill.

"The lack of information about alternative fuels has been addressed as well. The LoCity programme run by Transport for London (TfL) is all about reducing emissions from commercial vehicles in the capital, but the information and the roadshows are relevant UK-wide," he observed.

"We've been doing some work for them on what the current financial proposition is so far as the range of alternative-fuel technologies across different vehicle classes is concerned," said Carroll. "It will be published as a web-enabled tool during the first quarter of next year."



LOW-HANGING FRUIT

While speculating on the alternative-fuel technologies that may debut in the future may be laudable, operators should not ignore what is available today, said James Westcott, chief commercial officer at gas supplier Gasrec (pictured). "I'm thinking about technologies that may not be so exciting or interesting to talk about at conferences like this, but already deliver in terms of air quality and carbon savings," he said. "Gas is safely in that space.

"The main issue we've had over the past few years is a lack of suitable vehicles, but that's a picture that is changing week by week," Westcott continued. "By this time next year there will be a range of vehicles available from a variety of OEMs.

"In that sort of scenario, the problem isn't so much how to obtain the vehicles and how to use

FACT

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the fuel, but the supply chains that are in place to enable fleets to operate them," he said. "And so far as the infrastructure is concerned, there are pitfalls that we could encounter very quickly that would mean that nobody would want to use gas. I'm thinking about a failure to supply fuel because we can't get the fuel to the filling station, or because we can't get the fuel into the vehicle, or because people can't access the filling station," he continued. "If you've got dedicated gas vehicles then those are the sorts of thing that can have a huge detrimental impact on your operation.

"So what we've been looking at is clustering large open-access refuelling facilities that have resilience built into them, with multiple dispensers and storage tanks," said Westcott. "That may not be the right answer on its own, however, if access is blocked by a road traffic accident or a

bomb scare closes the nearby motorway."

Other options can include having gas delivered direct to an operator's premises by pipeline. "You don't have to order and pay for it in advance or keep it in stock," he pointed out.

If you need to use gas at a site where you have a small number of vehicles based temporarily then there is nothing to stop you having skid-mounted tanks deployed, he said.

Returning to the vehicles themselves, the current demand for second-hand gas-powered right-hand-drive vehicles outside the UK is, to say the least, limited, and that has implications for residual values. This means that fleets will have to think carefully about how long they should keep such vehicles in service; and may decide to hang on to them for longer than their diesel equivalents.

THE DIESEL FAN

It is increasingly rare to hear anybody put in a good word for diesel trucks these days, but Brian Robinson, programme manager for commercial vehicles at LowCVP, the Low Carbon Vehicle Partnership, was happy to do so. "Euro VI works, and works extremely well, so far as heavy-duty applications are concerned," he states. In his view it is making a significant contribution to reducing air pollution.

"There is an ever-expanding body of evidence from trucks and buses showing that Euro VI is leading to real-world reductions in NOx of up to 98% compared with Euro V," Robinson said. "OK, they still emit pollutants – but a 98% step in the right direction is a big step, and the introduction of clean air zones in cities across the UK will encourage the uptake of Euro VI vehicles.

"There are, however, issues concerning the disposal of older vehicles that may not be all that old," he continued. "When there are lots of clean air zones it becomes a lot more difficult to shift older vehicles to somewhere else in the country."

But the picture is not universally perfect. Of emissions from Euro 6 vans, he contended: "To be honest they're not all that good. They're cleaner than Euro 5 vans but we're certainly not seeing a 98% NOx reduction. However, the picture is evolving, and the regulations are catching up with heavy-duty Euro VI," Robinson said.

"So by 2021 a Euro 6 van should be pretty much as clean as a Euro VI truck. The key developments will be changes to the test cycle and the introduction of in-service testing," he added. "Remember, too, that although we focus on tail-pipe emissions there are plenty of other sources of emissions, including brakes, tyres and refrigeration units, some of which are very far from clean."

And CO₂ emissions? "The story there is not so encouraging so far as freight is concerned, and they are at best flat-lining, especially when you take into account the way in which grey fleet cars are being used on home-delivery work," he said.

He remains optimistic, however, and points to the bus market, in which 40% of new buses sold are either zero or low emission. "These technologies will be mainstream so far as buses are concerned in a couple of years' time," he predicted. "So far as trucks are concerned, ultra-low-emission models using alternative fuels should be mainstream by 2025." ■