

Showing operators how to cut emissions and costs

The Low Carbon Vehicle Partnership has launched a new *Low Emission Van Guide* and associated web tool for operators who want to cut their running costs while also reduce carbon emissions and impacts on local air quality

The van market is the fastest growing sector of UK road transport with vehicle numbers increasing at 3.5 per cent per year. The UK's vans are almost entirely (96 per cent) diesel-powered and almost 50 per cent of the vehicles are owned by companies. This sector accounts for more than 10 per cent of the vehicles and 14 per cent of the UK's CO₂ road transport emissions so clearly any opportunity to de-carbonise vans operations should be grabbed with both hands, but knowledge of what is available is very patchy.

Prepared with support from several key fleets and stakeholders, the guide presents a breakdown of each available technology – electric, plug-in hybrid, LPG, CNG and biodiesel – to help the operator fully understand the incentives in place (including tax breaks and grants) to support vehicle purchase. These include the required infrastructure for operation, maintenance issues, vehicles available on the market (for each technology) and case studies with comments from van

operators experiences with alternative fuels and examples of fleets using an alternative fuel or technology.

Payback time

The guide presents the financial case for each technology and shows how, in many cases alternative fuels can provide a payback within about five years, especially if operators are looking to operate in low-emission zones, such as the one in London.

The guide provides business, environmental and operational information and guidance on switching from conventional fossil fuelled vans (up to 3.5 tonnes in weight) to alternative technologies and/or fuels.

In one example, the guide shows that operators using battery electric vans can enjoy a very short payback time and reduce the

whole life costs of a vehicle operating in the London Congestion Charge zone by £18,340 (or £5,215 outside London). The guide helps operators to choose the most suitable low-emission

van technology or fuel for the type of work they need to do.

With the growing focus on air quality issues in urban areas, more local authorities (including Birmingham, Bristol, Islington and others) will be introducing measures to implement Ultra Low Emission Zones (ULEZ) and limit access to, or even prevent, heavily polluting vehicles from entering certain areas. Van fleet operators need to pay careful attention to changes in local policy that might affect their business plans over the lifetime of a newly purchased van (typically, three-five years).

The *Low Emission Van Guide* is best used in conjunction with the online Van Cost & Carbon Calculator Tool (VC3), developed in collaboration with the LowCVP by CENEX. The Tool allows van operators to compare the costs of operating conventional fossil fuelled vans with the five alternative fuel technologies. Information on other developing technologies, such as hydrogen, can also be found at the LowCVP's on-line Low Emission Van Hub which will continue to build as further information and examples become available. ▶

The Low Emission Van Guide presents a breakdown of each available technology to help operators fully understand incentives



Through operating Battery Electric Vans for three years, Fruit 4 London has noticed the extra business the vehicles are directly responsible for as their customers seek a more sustainable supply chain



Operators have reported annual running cost savings of 40 per cent with LPG



Biodiesel suppliers have seen growing demand for fuel thanks to a lower than forecourt diesel, cost

◀ Battery Electric Vans (BEVs)

Fruit 4 London is a small company, with a big environmental ethos, dedicated to delivering fresh fruit to over 200 London offices every day. Following a successful trial in 2012, Fruit 4 London operates five electric Renault Kangoo ZE delivery vans. The vans typically travel 40 to 70 miles and make up to 60 delivery stops per day. Initially attracted by the environmental benefits of zero-emission vehicles, it soon became clear that the business case was compelling too.

Fruit 4 London director Laszlo Mulato explains: "Operating in the congestion charge zone saves us nearly £15,000 per year over the five vehicles and we're also seeing around 75 per cent fuel savings compared to our two diesel delivery vans."

Having operated BEVs for three years now, Mulato has also noticed the extra business the vehicles are directly responsible for as their customers seek a more sustainable supply chain. Fruit 4 London purchases all its electric vans on a battery leasing model, preferring the financial security and comfort of knowing that the batteries performance and lifetime are guaranteed for as long as they own the vehicles. Other fleets using battery electric vehicles include British Gas, Birmingham City Council, Gwent Cargo, Loughborough University and more.

Plug-in Hybrid Electric Vans

The Environment Agency operates over 1,400 commercial vehicles. The Agency's current CO₂ reduction initiatives include the use of biodiesel in nearly 300 vehicles and the use of retro-fit hybrid assist systems in rear-wheel transits.

Dale Eynon, head of Fleet Services explains: "We already used Mitsubishi Diesel Outlanders within the fleet so, as the PHEV is available at the same cost and even with a low level of charging, we expect to break even. The main focus for us is to ensure we are maximising our CO₂ savings."

The 68 PHEV Outlanders, deployed in March 2015, leave the depots fully charged, and on average will travel around 60 miles a day. The Environment Agency is currently looking to install additional charge points at key work locations and educate staff as to the locations of public infrastructure which could be used during breaks.

The guide includes information on the required infrastructure for operation, vehicles available as well as operator case studies

LPG and CNG

Outdoor advertising firm Clear Channel UK has many reasons to choose autogas Liquefied Petroleum Gas (LPG) to fuel its fleet of service vehicles. It was the environmental angle followed by the financial advantages that were initial prompts. Glenn Ewen, Fleet Manager, Clear Channel UK, said: "As part of our wider strategy to minimise our impact on the environment, Clear Channel UK has set a target of 84 per cent LPG usage against petrol. As part of our commitment to this target, we have installed seven bunkers at Clear Channel depots nationwide where our drivers refuel."

Typically, the company's autogas LPG system provides annual running cost savings of around 40 per cent compared to petrol-fuelled vans. Other fleets using LPG include Humberside Police Force, Grass Hopper Couriers, Camden Council and more. Following a successful implementation of gas refuse collection vehicles, Leeds City Council took advantage of their on-site gas refuelling facilities and incorporated seven Volkswagen Caddy vans into their fleet. The bi-fuel vehicles run on Compressed Natural Gas (CNG) with a small petrol reserve and cover domestic repairs and maintenance at households in the city. The vehicles travel less than 70 miles per day so very much within their 300-mile range, supplying the council with a three pence per mile fuel cost saving. Other fleets using CNG: Tesco, Waitrose, Arla Foods, Balfour Beatty, Camden Council and more.

Biodiesel

ATX is a logistics company operating ten vans. In response to escalating fuel costs, ATX decided to invest in a biodiesel manufacturing plant and secure waste cooking oil supply contracts.

Mitch Sills, ATX Fuels Distribution Manager, explains how their business has changed in recent years: "Since 2004, when we first started out manufacturing our own fuel, we have gradually improved the quality of our biodiesel, which now exceeds the EN14214 standard. Using the correct winterising agents we are also capable of running 100 per cent biodiesel all year round. Being lower cost than forecourt

diesel, the demand for our product is growing at such a rate our business is migrating from a logistics company to a biodiesel supplier."

The filling pump at ATX allows real-time blending of biodiesel and diesel to suit the customer's vehicle and requirements. ATX runs seven Ford Transit vans on blends of up to B100. Although this does void the manufacturer's warranty, they report no reliability problems. They replace vans every 18 months, with each covering around 60,000 MPA. This equates to annual fuel cost savings of over £1,400 and a tailpipe emission saving of 21 tonnes of CO₂ per van. Other fleets using biodiesel include the Environment Agency, McDonalds, Commercial Group, and the London Borough of Hackney.

Useful tool

Gloria Esposito, LowCVP Head of Projects, said: "Vans can be significant contributors to damaging emissions, particularly in cities. This guide fills an information gap, giving operators the tools they need to cut costs and emissions, as well as the chance to polish up their image."

Ian Wainwright, Head of Freight and Fleet at Transport for London (TfL), said: "We are very pleased to have helped create this useful guide, which will help improve the environment and reduce operator costs. By matching different sized fleets to the most appropriate low-emission vehicle, any operator can make an informed purchasing decision and reap the benefits."

Barbara Stoll, Transport Campaigner, Greenpeace UK, said: "This is much more than just a useful tool for businesses who need commercial vans in their fleets and have to watch their fuel costs. It's another powerful demonstration that carbon efficiency and cost efficiency are not just compatible, but frequently go hand-in-hand. The beneficiaries will range from window cleaners to multinational logistics companies, and from our choking cities to our melting poles." ■

FURTHER INFORMATION

www.lowcvp.org.uk/lev