

Dawsongroup | vans

Review of Electric LCVs



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Executive summary

There are some real key factors to get right when assessing the operating cost of a new electric van.

Is it possible to switch to electric vehicles today and save on costs? Absolutely. The best-case scenario for fuel and driving efficiency shows that there are savings to be made, provided the lease cost of the vehicle is correct.

But it is not as simple as that. You can't operate an electric van and expect your balance sheet to automatically improve.

The capital cost and available discounts will also improve over time making the argument more compelling.

Until then, you need to be very careful when making a decision on electric vans, and very sure you understand the pitfalls that you may encounter.

Electric vans may well be the future, but we need those that drive, and operate them to be educated that they are working on a fine line. Cost of electric, driving style and the miles driven for each KW of energy used are vital measures that need to be controlled, more so than in an equivalent diesel vehicle.

The potential for catastrophic differences to the business cases in this area are huge.

Without an electric charge point, your vans may well have to recharge on the public network. This can cost as much as 35p/kWh and will increase your fuel costs significantly.

The lease cost of the vehicle is currently extremely high as limited discounts are being offered on a high demand product. Volume commitments and key partner relationships will bring this cost down within a 12-month period. Working with key partners within this area are crucial to see a further 20% improvement in current rental rates.

In our belief the target Lease rate needs to be equivalent to Sub £100 a week plus VAT to ensure you have a sensible chance of saving money through the adoption of Electric vehicles.

Once this has been achieved the business case becomes a real game changer and this coupled with the environmental benefits, most business it will struggle not to make the switch to electric.

With all of this taken into account, it must be remembered that is not as clear cut as the electric van manufacturers and suppliers would like you to think.

If you believe the electric vehicle 'hype' around cost saving without due diligence, you may well find yourself with increased operating costs which are too high for your company to sustain.

Leading the ROAD TO ZERO

2030





1. Introduction

We are very much at the point where electric vans will do the job of an equivalent diesel or petrol van.

The biggest challenge for all fleet operators is to openly discuss the cost impact of moving to electric.

There are some key aspects of moving to an electric fleet, we will discuss the key elements of how a fleet can improve its operating cost by moving to an Electric fleet and how, if not managed proactively, how the cost can spiral out of control.

There are many factors that contribute to the running costs of both diesel and electric vans, from the initial vehicle cost to the fuel and running costs. It is important to consider everything when looking to move to an electric fleet.

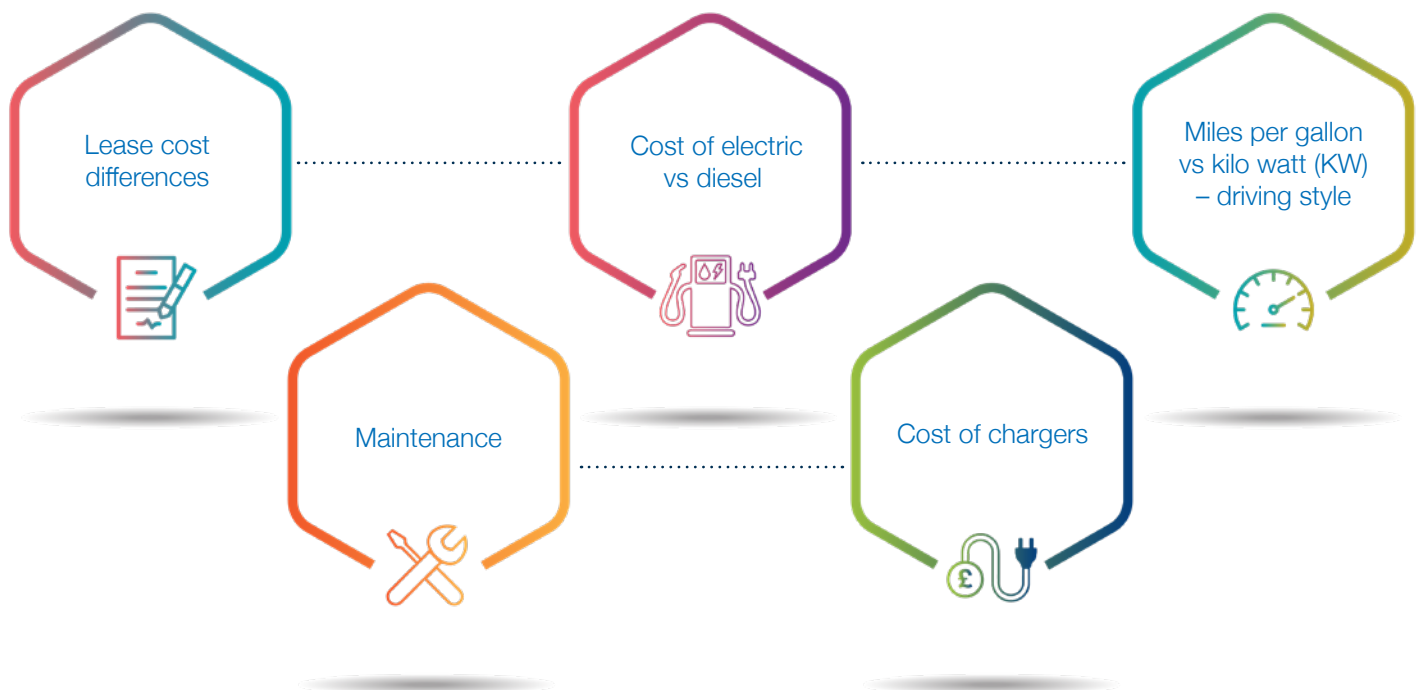
To find out the differences between diesel and electric van running costs, we have researched the facts and figures, and put together a comparison that shows the differences in real terms.

When it comes down to it, the comparison that matters is the total weekly outlay for the vehicle. Spending less on fuel only matters if you are not spending more in other areas. For this specific comparison, we are going to compare the Vauxhall Vivaro to its electric counterpart, the Vivaro-e.

We will look at some current day prices for the diesel version and then see if we can achieve price parity (or better) with the electric model.



2. Key areas of cost control





3. Lease cost differences

If we take real examples from CAP data and a well-known leasing website based on 20K we see the real cost difference from your current diesel version, which is highly discounted due to significant purchasing volume / power.

Let's make this comparison unbiased, if we take the holding cost of a vehicle plus the finance charge at 3% from CAP, based on the retail cost and predicted residual we get the following weekly holding cost doing 20,000 miles a year:

Vauxhall Vivaro L1H1 Sportive (Diesel): £122.55 a week
 Vauxhall e-Vivaro L1H1 Dynamic: £120.87 (After Grant)

This looks good in principle, but a note of caution, the diesel model is predicted to have an RV based on 28% of the purchase cost (£7.3K), however the electric version has a predicted RV of 41% of the retail cost (£13K).

Examining the leasing cost we have used a very well-known online leasing website, they quote the following on 20,000 a year with one month upfront:

Vauxhall Vivaro L1H1 Sportive (Diesel): £282.88 a month
 Vauxhall e-Vivaro L1H1 Dynamic: £527.96 a month

Vauxhall Vivaro L1H1 Sportive (Diesel)

Customise Your Lease

Annual Mileage **20000 miles**

6k 8k 10k 12k 15k 20k 25k 30k

Length Of Lease - Months **36 months**

24 36 48 60

Initial Payment - Months **£282.88 Ex VAT**

1 3 6 9 12

Vehicle Options

Solid - Jade white

Curitiba cloth upholstery - Tritone grey with...

Add Maintenance **£41.34 per month Ex VAT**
 Initial Payment **£124.02 Ex VAT**

Vauxhall e-Vivaro L1H1 Dynamic

Customise Your Lease

Annual Mileage **20000 miles**

6k 8k 10k 12k 15k 20k 25k 30k

Length Of Lease - Months **36 months**

24 36 48 60

Initial Payment - Months **£527.96 Ex VAT**

1 3 6 9 12

Vehicle Options

Solid - Jade white

Curitiba cloth upholstery - Tritone grey with...

Add Maintenance **£45.66 per month Ex VAT**
 Initial Payment **£136.98 Ex VAT**

This is equivalent to £56.55 a week increase in cost from the diesel version to the electric.



4. Cost of electric vs diesel

Assuming 20,000 miles per year for both vehicles.

Diesel Cost

The current diesel price is 120p/litre, which is 546p/gallon. A modern Vauxhall Vivaro is rated at 48 miles per gallon.

20,000 miles / 48mpg = 416.6 gallons per year.
416.6 gallons per year at 546p/gallon = £2,476 per year fuel cost.

When compared to electric costs

Using the 75KW battery, the maximum range of the Vivaro is 205 miles. That equates to 2.7 miles per KW.

20,000 miles at 2.7 miles per KW = 7,407 kWh per year.
7,407 KW at a cost of 9p a KW* = £666 a year

*Note – This is based on best available home charging tariff and requires home charger to be fitted.

On paper it does seem that you can achieve a fuel cost saving on this vehicle of £1,809 a year or £34.80 a week. This recovers a large proportion of the increased rental cost and leaves an overage of £13.51 a week (plus VAT).

The next section covers how the cost of electric may well be higher and how this coupled with a poor driving style can and will eat into this cost saving quickly.



5. Miles per gallon vs kilo watt (KW) – driving style

205 Miles Range

This is where the cost saving in fuel starts to become less clear. In real terms we are very positive that this range can be achieved

In trials it appears an uneducated driver is achieving 2.1 miles per KW with a limited load (equivalent to a range of 157.5 miles). In real terms a four-week demo of the vehicle will show its true miles per KW as the vehicle will monitor this throughout the four weeks.

On this basis, the fuel saving based on the same calculation would reduce as shown below:

Electric cost at 2.1 miles per KW

20,000 miles at 2.1 miles per kW = 9,523 kW per year.
9,523 KW at a cost of 9p a KW* = £857 a year

*Note – This is based on best available home charging tariff and requires home charger to be fitted.

Again, on paper, it does even seem that you can still achieve a fuel cost saving on this vehicle of £1,619 a year or £31.13 a week. This again still recovers a large proportion of the increased rental cost and leaves an average of £17.18 a week (plus VAT).

Using Public Chargers and Fuel Card Providers

The potential for catastrophic differences to the business cases in this area are huge.

The cost for diesel will currently vary according to the AA Fuel Watch by a range of costs from the highest – The South East

has recorded a diesel price of 119.8 p/litre – to the lowest – Northern Ireland has the cheapest diesel at 114.3 p/litre. Which is about an increase in cost of 5%

This excludes supermarkets and Motorway service stations. If we do the same analysis on the cost per KW, we have a range difference of 4.8ppkW (British Gas Overnight Cost) to 35ppkW at our local high-speed charger. This is a percentage uplift of 730% or the equivalent of paying £8.68 per litre of diesel.

Without electric charge points at home or at the work environment, in our experience vans will start to rely on the public network. This can cost as much as 35p/kWh and will increase your fuel costs significantly.

The impact on fuel costs have been shown on the following example where 25% of the charge required is obtained from the public network on high-speed chargers at a cost of 25p per KW. This equates to an average price per kw of £0.13.

Electric cost at 2.1 miles per KW

20,000 miles at 2.1 miles per kW = 9,523 kW per year.
9,523 KW at a cost of 13p a KW = £1,238 a year

On this basis the fuel cost would only save £23.80 a week compared to the increased lease cost of £48.31 a week. This is slightly misleading as if we take the worst-case example of fuel economy and diesel cost in the same situation we would estimate that the saving in fuel would then increase back to £34.73 a week again only leaving a short fall of £13.58 to break even. This is a real tight line and a crucial one to consider.



6. Maintenance

A bit early for me to comment on this but in honesty £2.88 is the saving in my educated guess.

All of this has already been factored into our rental rates.

7. Cost of chargers

The per-vehicle cost of the charger will drop if you have a large fleet of electric vehicles.

Charge point cost can be summarised below:

Home Charger – Pod Point advertising £549 for a 7KW charger installed (Including the government grant of £350)

Work Charger for dual 22KW Charging points – Estimated at £3,500 installed after grant.

Work Charger for single 50KW Fast charger – Estimated at £28,000 installed after grant.



Simon Ridley
Managing Director

With over 20 years of experience in the industry, Simon Ridley holds an impressive performance record in the commercial vehicle rental industry.

Simon's approach is insightful, adaptable and always alert to the bottom line with particular focus to long-term behavioural and process change, rather than superficial or tactical remedies. Having coached and developed a significant number of direct reports into senior players in the commercial rental sector, Simon's next objective is help operators efficiently implement tomorrow's fleet. The addition of electric vans and charger network to Dawsongroup's fleet illustrates just that, empowering operators to trial the latest the latest technology with minimal risk before committing to significant capital investments.