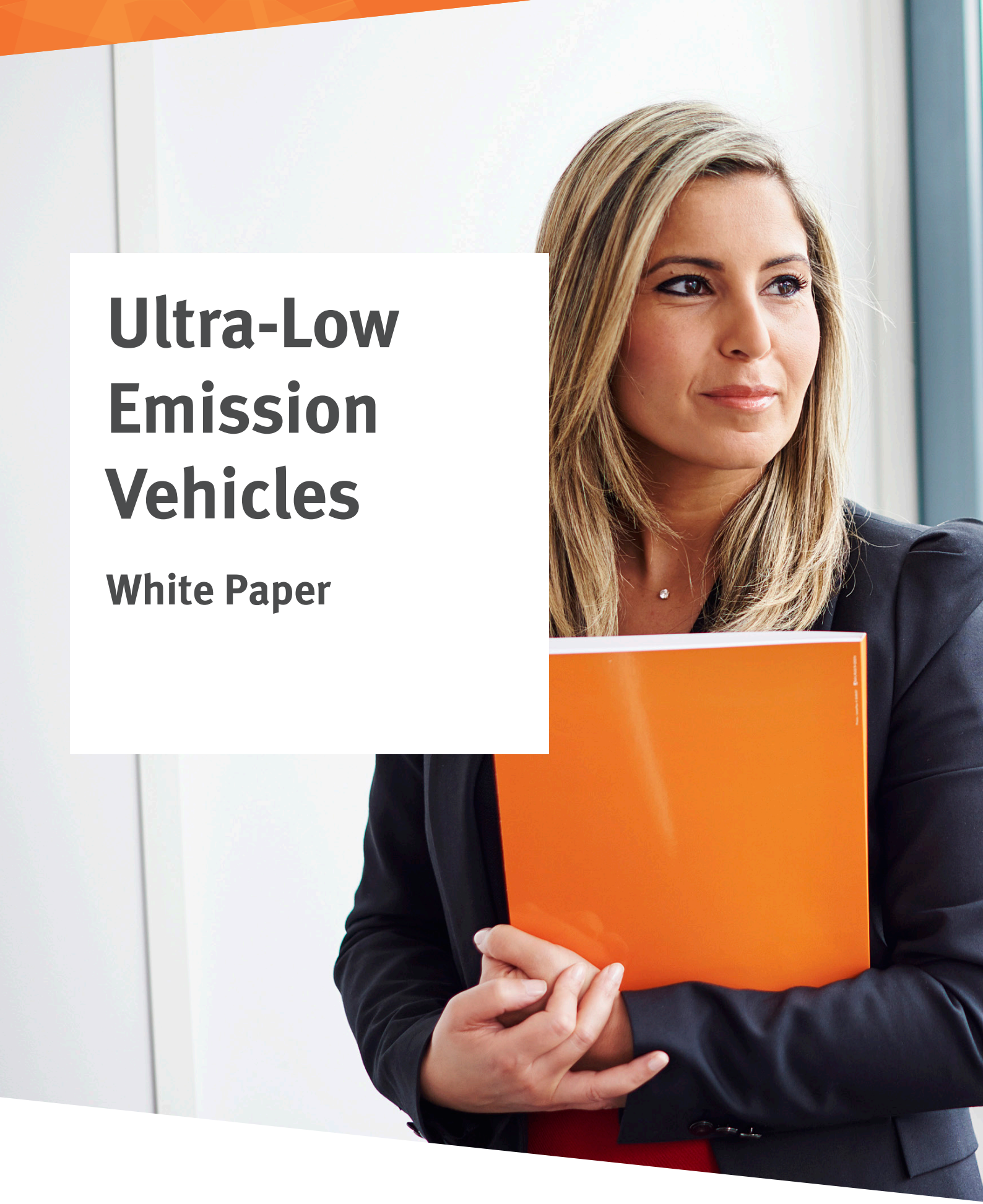
Ultra-Low Emission Vehicles

White Paper



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Contents

Introduction

Ultra-low emission vehicles (ULEVs) cannot be ignored. They are, as Philip Hammond's first Autumn Statement demonstrated, the subject of many government policies and incentives. They are also the focus of manufacturers who are constantly striving to produce better and more efficient models. They are becoming more desirable, more practical and cheaper.

All of these developments will, naturally, make ULEVs attractive to fleets and their drivers. There are other attractions too. Organisations have a duty to be socially responsible in their behaviours – and few behaviours are more visible than fleet policy. Lowering emissions is a fine way of meeting those obligations.

However, even with all the benefits of ULEVs, organisations shouldn't change the make-up of their fleet without due consideration. Are these vehicles truly right for the tasks that will be demanded of them? Do they fit into existing budgets? Is the requisite infrastructure available? These are just some of the questions that will need answering.

LeasePlan have published this report to help you reach the answers. It surveys the entire landscape of ultra-low emission motoring – the good and the bad – and explains how your fleet can become a part of it. It is split into five main sections:

What are ULEVs?

This section begins with the basic definition – a ULEV emits less than 75 grams of carbon dioxide per kilometre (gCO_2/km) – and goes on to investigate the different types that are available.

Environmental considerations.

Are ULEVs genuinely cleaner than their traditional counterparts? The best studies don't just consider a car's daily emissions, but all the emissions that are produced throughout its life – from production to fuelling to disposal.

The rise of ULEVs.

The annual number of electric vehicle registrations has risen by 175% over the past three years. We look at the forces, from politics to technological innovation, that are driving this growth.

The Whole Life Costs (WLC).

The basic cost of a ULEV is usually higher than that of an equivalent petrol or diesel vehicle, but it is necessary to look beyond that before making decisions. This section describes the cost factors, including taxes and grants, that make a difference across the entire life of a ULEV.

Bringing ULEVs into your fleet.

This is the practical explanation of how you can rewrite your fleet policy to accommodate ULEVs. It includes a glimpse at our special modelling software, which can be put to use for you.

There is certainly a robust case for ULEVs, but there is also, always, a robust case for doing things properly. We hope that this report will help you do just that. Please get in touch with our consultancy team if you have any questions about its contents, or about anything else to do with your fleet.

What are ULEVs?

A ULEV is currently defined by government as a vehicle that emits less than 75 gCO2/km. These vehicles also tend to be much cleaner when it comes to air pollutants such as Nitrous Oxides (NOx).

They come in a variety of forms, although most of these involve some degree of electric power. These include:

Battery Electric Vehicle (BEV).

These are vehicles powered entirely by a battery, which is charged by being plugged in to the grid. 'Range anxiety' – how far the vehicle can go on a single charge – is seen as a barrier to the take-up of BEVs, but manufacturers are making significant advances in this regard:

- **Tesla Model S 60d.** Tesla has always provided significant range, although their cars are generally priced at the upper end of the market. The Model S 60d has an official range of 253 miles between charges. Upgrade options can take this to just over 300.
- **Nissan Leaf.** The new 30kWh model has an official range of 155 miles. Real-world data suggests that this is probably closer to 130 miles, but this still a significant distance.
- **VW e-Golf.** The official range of the 85kW is 118 miles, and its real-world range between charges is around 94 miles.

Plug-in Hybrid Electric Vehicle (PHEV).

These have both a plug-in electric battery and an internal combustion engine (ICE), which can be either petrol or diesel. The idea behind most of these vehicles is to provide ULEV capabilities in short bursts, such as for short commutes and city driving. Popular models include:

- **Toyota Prius PHEV.** The official electric range is 15 miles before its ICE takes over.
- **Mitsubishi Outlander.** This has an official electric range of 32 miles, and a 2-litre ICE beyond that.
- **VW Golf GTE.** Its battery can take it 31 miles before the 1.4TSi petrol engine is required.

Hybrids.

These combine a traditional ICE with an electric power unit to produce fewer emissions than traditional ICE vehicles. The electric system is charged by kinetic energy captured during deceleration and braking. Journeys are accomplished using both systems, with the car automatically adjusting the mix depending on conditions and driving style. Examples include the Toyota Prius and Honda Civic.

Fuel Cell Electric Vehicle (FCEV).

These zero-emission vehicles are powered by electricity generated in hydrogen cells. Many transport experts believe that these present the best opportunity to replace ICE cars in the future

There are just three models currently in production: the Toyota Mirai, Honda Clarity FCV and Hyundai ix35. But the greater challenge to FCEV uptake may be fuelling locations: whilst FCEVs typically have an impressive range of 300 miles, there are only four public refuelling stations in the UK today. Expansion is underway, though, supported by both the UK Government and the EU. Around 65 stations are expected to be active by 2020.

Environmental considerations

By definition, ULEVs produce fewer emissions than traditional cars – and are therefore considered to be good for the environment. However, concentrating on day-to-day emissions oversimplifies the situation.

Life Cycle Assessment

Anyone concerned about the environment shouldn't neglect to assess ULEVs and traditional cars across their entire life cycles – typically assumed to be around 150,000 km.

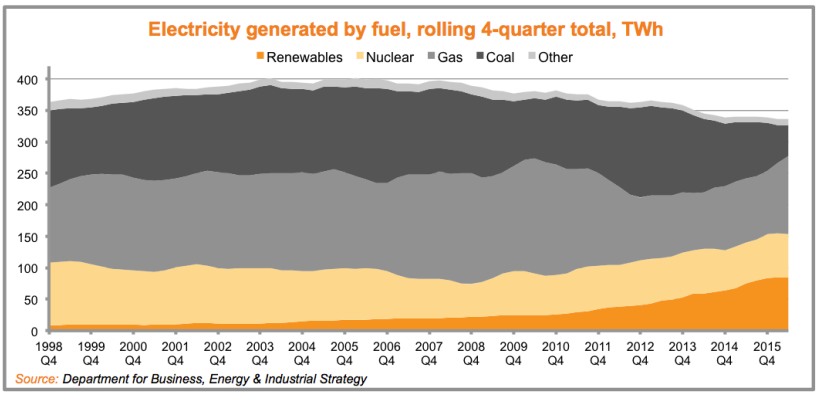
A ULEV's emissions aren't just those it produces whilst being driven. Greenhouse gases will also be produced during its manufacture and disposal. They can even be produced to make the electricity that the cleanest of plug-in vehicles are charged by.

So, how does a typical BEV compare to an ICE vehicle? A recent US report by the Union of Concerned Scientists[1] looked at both across their entire life cycles. It judged in favour of BEVs overall. Although manufacturing them produces more emissions, this is offset within 16 months of driving. Overall, they found, the average BEV produces less than half the global warming emissions of a comparable ICE vehicle.

A separate European study[2], published in the Journal of Industrial Ecology, seems to support this judgment. It found that BEVs emit between 10 to 24% less greenhouses gases than similar ICE models.

Electricity generation

The environmental impact of BEVs and PHEVs depends on the electricity used to power them. Currently, the majority of the national grid's power is generated from fossil fuels, and therefore involves significant emissions at that stage. Our graph shows the current mix of fuels used to generate electricity in the UK.[3]



Of course, the life cycle emissions of plug-in vehicles will be reduced as this mix skews towards cleaner alternatives. Renewables are generating a greater share of the UK's electricity every year: it rose from 22% in the year to June 2015 to 25% in the year to June 2016. The Government has set a target of having 30% of electricity generated by renewables in 2020.[4]

1 Nealer, Reichmuth & Anair, Cleaner Cars from Cradle to Grave, November 2015
2 Hawkins et al, 'Comparative Environmental Life Cycle Assessment of Conventional and Electric Vehicles' in Journal of Industrial Ecology 17(1), October 2012
3 Department for Business, Energy & Industrial Strategy, Energy Trends, September 2016
4 House of Commons Energy and Climate Change Committee, 2020 renewable heat and transport targets, September 2016

Environmental considerations

Other impacts

It should be noted that manufacturing electrical components, such as those used in ULEVs, can have an environmental impact beyond just emissions. The use of metals such as nickel, copper and aluminium can raise toxicity levels on land and in water. The depletion of scarce metals is also a commonly-cited concern.

The study in the Journal of Industrial Ecology considered these effects in some detail. For example, it found that a typical electric vehicle has a metal depletion potential about three times greater than that of an ICE vehicle.

In general, the two reports cited here are useful sources of background information, and both highlight the complexity of life cycle assessments. Everything from manufacturing materials to electricity sources must be considered, along with driving emissions.

On balance, the evidence suggests that electric vehicles are better for the environment overall – but can become more so. The single most important requirement for the future is cleaner electricity through the use of renewables or nuclear power.

The rise of ULEVs

The political landscape

All around the world, legislators are developing policies to reduce the impact of transport on the environment. This is happening on a supranational level: the recent Climate Change Conference in Paris, which set ambitious goals for reducing emissions, is one of the most significant examples. But it is also happening on more local levels: from car-free days in South Korea to Oslo's plan to ban private cars from the city centre, to Paris' CRITair stickers; each country has its own solutions to the problem.

The UK is doing its part too – again, at all levels of politics. The national Government has introduced grants and tax measures to incentivise motorists to switch to ULEVs. While cities such as London, Milton Keynes and Birmingham are introducing measures to discourage the dirtiest vehicles from travelling through their streets. We will return to some of these policies later in this report.

Technology

It's not just politicians who are making ULEVs more attractive. Manufacturers are too. Years of research and development have ensured that motorists no longer have to put up with a limited and costly selection. Even just in terms of plug-in cars, there are now more than 30 different models available in the UK – and they all mark an improvement on those from years past. Most now have ranges well beyond 100 miles, and some cost less than £20,000.

Indeed, Nissan recently claimed that new battery technology, due for 2017, will make range a 'non-issue'. But new batteries aren't the end of the story. A consortium expects to reduce the weight of steel components in the current Nissan Leaf by 50% – extending range by up to 25%, without any improvements in battery technology. ULEVs are benefiting from, but also helping bring about, some of the most important innovations in motoring.

The proliferation of chargepoints

Another development in favour of ULEVs is the proliferation of electric chargepoints across the UK. There are now more than 11,000 public chargepoints in the UK, and over 96% of motorway service stations have at least one.[5] These numbers are growing swiftly, and don't even include the many that are being installed privately by businesses and individuals. One provider of these facilities, Chargemaster, claims to be installing nearly 100 new chargepoints each month.

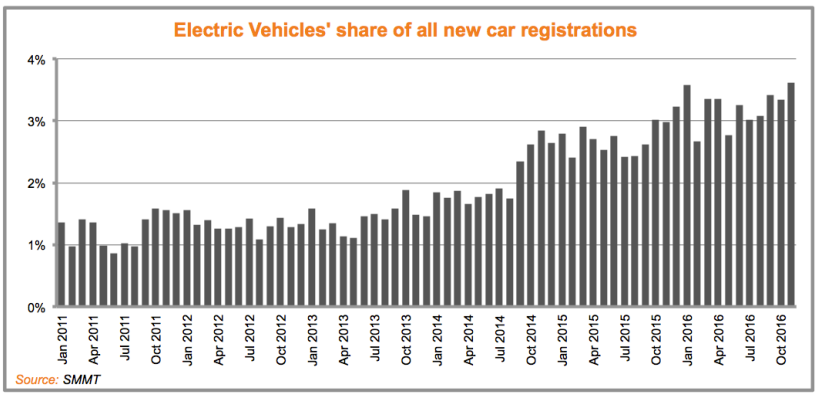
We will look at the practicalities of chargepoints later in this report.

5 Go Ultra Low

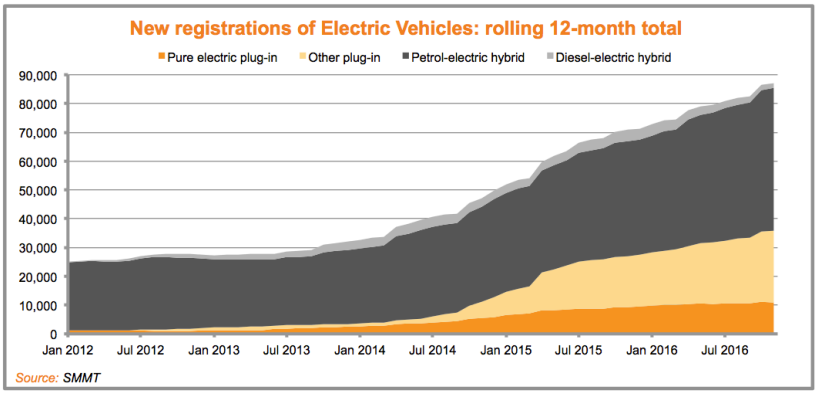
The rise of ULEVs

Uptake of ULEVs

All of these factors have combined to make ULEVs an attractive option for many motorists. 88,450 new electric vehicles were registered in the 12 months to November 2016, up from 32,715 in 2013.[6]



As the graph to the left shows, electric cars now account for around 3.3% of all new car registrations, up from around 1.4% in 2011 to 2013.



Most of the ULEVs on Britain's roads are hybrids, but they don't dominate the ULEV market as they did a few years ago. In 2013 89% were registered as petrol-electric hybrids, that number is now 59% .

6 Society of Motor Manufacturers and Traders (SMMT)

The Whole Life Costs (WLC)

ULEVs may be becoming more popular in general, but this is not enough of a reason for fleet managers to choose them. A proper fleet policy needs to consider the WLC involved. The basic cost of a ULEV is usually higher than that of an equivalent ICE vehicle, but it is necessary to look beyond that before making decisions.

Fleets should assess the WLC of vehicles, incorporating these key components:

- Cost of supply, considering any grants available
- Residual value
- Funding costs, including end of contract charges
- Service, maintenance and repair (SMR) costs
- Fuel costs
- Tax and National Insurance Contributions (NICs)
- Insurance costs
- Employee contributions

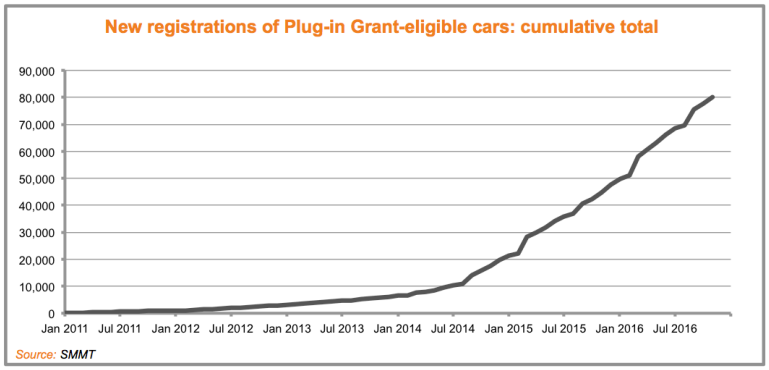
A ULEV's WLC will differ in several important ways from that of a traditional vehicle.

Grants

In 2011, the Government introduced grants towards the purchasing cost of plug-in electric cars and vans. The amount available for cars depends on their CO2 emissions and the number of zero-emission miles they can do. The current rates are set out in the table below.

In February, the Government said it would maintain the grants at these levels until March 2017, or until a certain number had been awarded – whichever comes first.[7]

The graph below shows the number of new cars eligible for the Plug-in Car Grant that have been registered since 2011. By the end of November 2016, the total was 80,239.[8]



Category	CO2 Emissions	Zero Emission range	Grant	Maximum Grant
1	Under 50g/km	At least 70 miles	35% of cost	£4,500
2	Under 50g/km	10 to 69 miles	35% of cost*	£2,500
3	50 to 75g/km	At least 20 miles	35% of cost*	£2,500
Van	Under 75g/km	At least 10 miles	20% of cost	£8,000

- No grant is available in Category 2 or 3 if the recommended retail price is over £ 60,000

7 Office for Low Emission Vehicles, New Plug-in Car Grant Levels from March 2016, February 2016
8 SMMT

The Whole Life Costs (WLC)

Fuel

Charging an electric car at home tends to cost motorists 2 to 3 pence per mile – significantly less than the price of petrol or diesel. Some employers offer chargepoints at work and bear the costs themselves, effectively making recharging free for the employee. Public chargepoints tend to require membership fees and cost more than home charging – although still much less than petrol or diesel.

For fleets, it is important to consider the impact of the company's fuel policy. How far these fuel savings benefit the company will depend on how much it reimburses its employees for fuel. There is also no Benefit-in-Kind (BIK) tax payable on electricity, as HMRC does not consider it a fuel.

Vehicle Excise Duty (VED)

Currently all cars with CO_2 emissions of less than 100g/km – including all ULEVs – pay no VED. This will change in April 2017, when the Government's new VED system will come into effect.[10] The new rates are shown in the table below.

SMR

BEVs are generally thought to incur smaller SMR costs, as they involve fewer moving parts than ICE vehicles. PHEVs have two drive trains, with the greater complexity and higher SMR costs that entails.

However, SMR costs for both BEVs and PHEVs are likely to be inflated by the lack of skilled technicians in the UK motor retail industry. A report published by the Institute of the Motor Industry in April 2016 found that only 1,000 technicians in the UK are qualified to work on plug-in vehicles – and all of these work for manufacturers.[9] 94% of independent garages said their staff would need significant retraining. This means SMR work for ULEVs will generally have to be done through tied dealers, at greater cost.

Vehicle Excise Duty rates from April 2017

Emissions (gCO_2/km)	First year rate	Standard Year rate
0	£0	£0
1 – 50	£10	£140
51 – 75	£25	£140
76 – 90	£100	£140
91 – 100	£120	£140
101 – 110	£140	£140
111 – 130	£160	£140
131 – 150	£200	£140
151 – 170	£500	£140
171 – 190	£800	£140
191 – 225	£1,200	£140
226 – 255	£1,700	£140
255+	£2,000	£140

Cars costing over £40,000 attract a £310 supplement for five years.
Source: HM Revenue & Customs

In the first year after registration, a car is taxed according to its carbon dioxide emissions, on a scale ranging from £0 for zero-emission vehicles to £2,000 for those emitting over 255 gCO_2/km. In every year after, all cars face a single rate of £140, except for zero-emission cars, which never have to pay any VED. There is also an extra £310-a-year charge on cars costing more than £40,000. This applies for the second to sixth years after registration, but disappears in the seventh.

9 Professor Jim Saker, On the Road to Sustainable Growth: Boosting Electric Vehicles in the UK, April 2016
10 HM Revenue & Customs (HMRC), Vehicle Excise Duty, July 2015

The Whole Life Costs (WLC)

Company Car Tax (CCT)

CCT rates are also based on a car's CO2 emissions. ULEVs emitting less than 50g/km currently face a 7% rate, but that is set to rise to 16% in April 2019. ULEVs emitting 50–75g CO2/km face an 11% rate this year, rising to 19% in 2019. The rates for other cars are all higher than these, up to a maximum of 37%.

However, in its Autumn Statement the Government announced a reform of CCT to differentiate between different types of ULEV.[11] The new rates, which come into effect in April 2020, are shown in the table below.

Company Car Tax rates in 2020-21

Emissions	Zero-emission miles	Appropriate percentage
0 gCO_2/km		2%
1 – 50	130+	2%
	70 – 129	5%
	40 – 69	8%
	30 – 39	12%
	0 – 30	14%
51 – 54		15%
55 – 59		16%
60 – 64		17%
65 – 69		18%
70 – 74		19%
75 – 79		20%
80 – 84		21%
85 – 89		22%
90 – 94		23%
95 – 99		24%
100 – 104		25%
105 – 109		26%
110 – 114		27%
114 – 119		28%
120 – 124		29%
125 – 129		30%
130 – 134		31%
135 – 139		32%
140 – 144		33%
145 – 149		34%
150 – 154		35%
155 – 159		36%
160+		37%

Diesel vehicles attract a 3-percentage point surcharge.
Source: HM Revenue & Customs

The appropriate percentage for zero-emission cars will be 2%. For ULEVs with CO2 emissions of between 1g/km and 50g/km, the rate will be between 2 and 14%, depending on the number of zero emission miles the vehicle can do. Those with emissions between 51g/km and 75g/km will face rates of between 15 and 19%.

11 HMRC, Finance Bill 2017: Overview of legislation in draft, December 2016

The Whole Life Costs (WLC)

Company Car

The Chancellor also announced that, as of April 2017, any new Salary Sacrifice car will be subject to Income Tax (for the employee) and NICs (for the employer).[12] ULEVs will be exempt from this change, however, creating another tax incentive to switch to them.

Low emission zones

Almost all of Greater London was made into a Low Emission Zone in 2008. Vans and lorries that do not meet the required emission standards must pay £100 and £200 respectively for each day they drive within it. A new Ultra-Low Emission Zone (ULEZ), with tighter emission standards, was planned for 2020, with the goal of halving NOx emissions in Central London. However, new London Mayor Sadiq Khan intends to introduce it a year earlier, in 2019.[13]

Under current plans, the ULEZ will cover just the centre of London – the same area as the Congestion Charge Zone, and much smaller than the existing Low Emission Zone. Mayor Khan proposes extending this to cover Inner London (between the North and South Circular roads) for cars, vans and motorcycles, and to the whole of Greater London for coaches and lorries.

Once the ULEZ comes into effect, older cars and vans – that are sub Euro4 standard and do not meet its emission standards will have to pay £12.50 a day to drive through it, while larger vehicles will face a £100-a-day charge. Before then, Khan is proposing an Emissions Surcharge – or 'T-charge' – of £10 per day for the most polluting cars entering the Congestion Charge Zone. This is due to run from October 2017 until the ULEZ begins in 2019.

The Government also plans to introduce Clean Air Zones in five other cities: Birmingham, Derby, Leeds, Nottingham and Southampton.[14] By 2020, the most polluting diesel buses, coaches, taxis and lorries will be have to pay a charge to enter these cities, although private vehicles will be exempt. However, the High Court has ordered the Government to draw up a new Air Quality Plan, so the details of these Clean Air Zones are subject to change.

13 Transport for London, New proposals to improve air quality, October 2016
14 Department for Environment, Food & Rural Affairs, Improving air quality in the UK, December 2015

The Whole Life Costs (WLC)

Chargepoints

Plug-in vehicles require infrastructure – and therefore create costs – that ICE vehicles do not. What sort of infrastructure should that be? What can it be? Who will pay for it? Different organisations will reach different answers based on various factors.

The standard for charging systems across Europe is for a Type 2 socket and a Mode 3 communication module between vehicle and chargepoint. The speed of charging comes down to choice and availability:

- **Slow charge (16A/3.6kW).** Typically used for overnight or home charging, where most vehicle downtime occurs. For a pure BEV, this generally takes around 7-8 hours.
- **Fast charge (32A/7kW).** This reduces the charging time to around 3-4 hours. Although this can be installed in homes, it is more usually associated with workplaces and public networks. Most BEVs can now use fast charging.
- **Rapid charge (direct current/alternating current at 50kW/43kW).** Can now be used by the majority of BEVs. An 80% recharge can typically be completed within 30 minutes.

As for where this charging takes places, there are, again, different options:

- **Home charging.** Most plug-in vehicle owners would seek to have a chargepoint installed at the home, if secure, off-highway access is available. So long as the installation is done by an accredited supplier, grant funding is available to cover up to £500 of the cost. Typically, this would mean an overall cost – including the grant and VAT – of £395 for a slow charge system. The cost would increase by about £95 for a fast charge system.
- **Workplace charging.** A basic slow charge system can be bought for as little as £500, rising to £2,500 for a double-socket rapid charge system with contactless access and web-based management software. Whilst these chargepoints may be appropriate for your staff, they can also be part of a public network and billing programme – although, if that approach is chosen, public access and parking facilities also need to be considered. The recent Autumn Statement introduced a new 100% First-Year Allowance to give tax relief on business expenditure on chargepoints, which will remain in effect until April 2019.
- **Public network charging.** There are currently over 11,000 public chargepoints across the country, with around 1,000 of these offering rapid charging. This is already the largest rapid charge network in Europe – and it's growing. The Government offers grants to Local Authorities who want to install more. One concern, however, is the reliability of the system, with complaints that there are frequent chargepoint failures. Motorists can also pay to use the facilities offered by various independent network providers. All offer membership schemes, which typically provide concessions, but non-members have access too.

The availability of chargepoints, whether at home our outside of it, means that plug-in vehicles are now a realistic option for many drivers – particularly for localised business use and daily commutes. Longer journeys will still require some forethought and planning, but nothing that makes them unfeasible.

Bringing ULEVs into your fleet:

Modelling

Many organisations adopt a WLC policy in determining which vehicles to offer to employees. We highlighted the core elements of WLC earlier in this report, and will now consider the principles more closely and how they might help with introducing ULEVs into a fleet.

Modelling the options

It's important to understand both the employer and employee WLCs, and to determine if mutual advantage can be secured through policy adjustment.

Constructing your own scenarios

LeasePlan's modelling tools can provide a complete picture of WLC and rental costs, and of employer and employee costs, helping you to test different scenarios for grade boundaries and employee contributions. This way, you can properly see whether ULEVs are right for your fleet, and, if so, design a revised allowance structure to encourage their adoption.

It is our view that WLC provides a genuine pathway for the introduction of ULEVs into a fleet, without impacting the cost of benefit provision to the employer.

Employees

The right ULEVs for your employees

In addition to ensuring that ULEVs are available and attractive for your employees in general, it is important that the right vehicles are found for the right drivers.

There is little point, for example, in offering a Mitsubishi Outlander PHEV with a pure electric range of 30 miles if the vehicle is engaged in regular long journeys using the ICE power train, or if the electric capabilities are rarely used by the employee. In this case, there would be negligible emissions reductions and fuel costs would be unchanged.

Employee motivations and profiles

The way to discover whether ULEVs, and especially BEVs and PHEVs, are viable for your employees is to analyse their business journeys through either telematics' data or your organisation's expenses system. Or at least this is a start – where frequent long-distance travel occurs, even deeper analysis may be required.

A driver's personal lifestyle requirements will also often influence their choice of vehicle – and they are in the best position to know what these requirements are. But an organisation's policy should still make it clear that business expectations are the deciding factor when it comes to approving ULEVs.

Domestic arrangements

Plug-in vehicles are particularly cost-effective and convenient when they have access to a home chargepoint. The costs and grants associated with these were detailed earlier in this report. An employee would also need make other calculations, such as whether they have suitable – preferably, off-road – parking for their vehicle, and whether their domestic electricity circuit can handle any extra demands made of it.

Bringing ULEVs into your fleet:

Policy

First of all, fleet policies must clearly explain the criteria by which the initial selection of a ULEV can be made. This means, in part, obligations on the driver, specific to the type of ULEV selected. Many of these would be a matter of common sense – for example, making sure that journeys are completed by charging the vehicle sufficiently – but they should still be spelt out. Most drivers will understand these limitations and demands implicitly, and carry out their business duties effectively.

Fuelling arrangements

For companies who provide Fuel Cards to the majority of their employees, different rules will need to be introduced for those driving BEVs or PHEVS.

BEVs. The vehicle will generally be charged from multiple sources, whether at home, at the workplace, or on a public network. Given the variability of the costs associated with these locations – and the question of who actually pays these costs – devising a new arrangement can be problematic. No official EV mileage rates are published, as electricity isn't classed as a fuel for the purposes of any BiK calculations. However, all types of chargepoints capture information about both the electricity used and the costs per charge. We anticipate that costs per mile can be defined from this information, and split (if so desired) between private and business use.

PHEVs. As with BEVs, it will be necessary to account for the differences between fuelling sources. Yet the single most important control will be to ensure that the vehicle's EV capacity is optimised. Arguably, the most effective way to do this is to remove any Fuel Card and adopt a stepped approach to fuel reimbursement. This could involve making an assumption that the first part of each business journey is accomplished by electric power – based on the vehicle's specific range capabilities – and reimbursing this at a low rate (say, 4-5 pence per mile). Any subsequent miles would be reimbursed at HMRC-approved rates.

Workplace charging

Once you have identified the costs associated with installing a chargepoint at your workplace, you need to take into account that there are other considerations too.

For organisations that have multiple regional offices, it is worth identifying the places that have greater concentrations of ULEV-eligible employees. A logical starting point would be major urban locations, although a full audit should be conducted to determine which locations truly are more suitable. Of central importance is the ability to provide dedicated chargepoints with parking access.

Where locations are tenanted or shared, there may already be chargepoints on site – or it might be possible to have them installed. Otherwise, Local Authority car parking is increasingly wired up for ULEVs, although access to it cannot be guaranteed.

If organisations do install their own chargepoints, then they would need to decide whether it is reserved for their employees only. Options exist for billing outside users of your chargepoints, so long as they are deemed accessible. Carefully selected locations could be good for CSR.

Bringing ULEVs into your fleet:

Policy (continued)

In-life events

The policy will need to provide guidance for a range of different events, either employer- or employee-created, including:

- House move. A change in circumstances could affect the sustainability of the ULEV option. In the case of a BEV, for instance, a longer commute may challenge the vehicle's range. You might decide to organise a new home chargepoint – although, this time, without grant support, as only one grant is allowed per vehicle.
- Change of role. This could also make a ULEV, and particularly a BEV, impractical. Although consideration will need to be given to whether the change is a permanent one, perhaps requiring more long-distance travel, or a temporary, project-based one.
- Leavers. Reallocation of a ULEV – and, again, particularly a BEV – is more challenging than it is for a traditional ICE vehicle, as the pool of suitable drivers is smaller. There could also be issues around the installation of a home chargepoint, if the grant has already been claimed for the particular vehicle.

Tax risks

We have already detailed the CCT regime for ULEVs in this report. The short version is that, although the rates for ULEVs are rising until 2019-20, they will remain lower than those for cars with higher emissions. In 2020-21, a new CCT system will be introduced that is even more favourable for ULEVs.

However, it is worth remembering that costs are affected by more than just CCT. For example, the government will reduce the threshold for capital allowances for business cars to 110 gCO_2/km in 2018-19, and the FYA threshold to 50 gCO_2/km. Choice lists and allowances will need to be updated accordingly.

Internal budgeting and control

When implementing a WLC approach to vehicle entitlement, consideration would need to be given to how the revised structure is presented to divisions and cost centres.

- The 'rental' element is balanced by considerations of Class 1a NICs, fuel costs and employee deductions/contributions as part of the WLC.
- Cost centres will need visibility of these additional elements in order to understand that overall costs have not changed – but that components of cost, previously held and (likely to be) managed centrally, are now accounted for at the employee level within a revised allowance mechanism.
- Costs such as Class 1a NICs escalate each year in line with the CCT regime. For the purposes of WLC entitlement, these costs are 'blended' over the contract term to produce a level allowance (and any related employee contribution). The budgeted NICs and the actual NICs will balance over the contract period – but not at any given moment.

Cost centre managers would need to understand the dynamics of the WLC arrangement, rather than focussing solely on the individual, temporary variations that would arise in comparison to the pre-existing methodology. Any implementation activity would address such matters in detail.

Conclusion

Ultra Low Emission Vehicles were one of the great success stories of 2016 – and as we have seen in this report, a number of policy developments are pushing this growth along. Aside from exempting them from the Salary Sacrifice changes, the new system of Company Car Tax for 2020-21 will surely encourage the take-up of ULEVs even more than the current system does.

The expectation is that the rise of ULEVs will continue in 2017 and beyond. Not only are the vehicles themselves becoming cheaper, more practical and more desirable, but the Government is backing them too.

In our opinion Businesses and Public Sector bodies alike should give ULEVs due consideration – as developing a fleet policy which supports some element of ULEV adoption is, quite simply, unavoidable.

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