



LEX AUTOLEASE

PLUG-IN VEHICLES

This fact sheet highlights the key benefits of “plug-in” vehicles that Lex Autolease supply and the differences in the quotation process compared to traditional vehicles*.

THE DIFFERENT TYPES OF TECHNOLOGY

Micro and Mild Hybrids

These are petrol or diesel vehicles where the performance is improved by utilising regenerative braking and engine stop start technology.

Full Hybrids

These vehicles have a battery and electric motor that can not only assist in providing more power to drive the vehicle when needed, but allow pure electric driving at low speed for a mile or so.

Lex Autolease has provided these technologies for many years now and they are simply quoted and supplied in the same manner as petrol and diesel vehicles as there is no range anxiety or need to plug them in.

Plug-in Hybrids

This is a new variant of hybrid which arrived in the UK market in 2012. They use the same technology as the current full hybrid, but they have a larger battery capacity and on-board charger. This allows them to be plugged into the mains, providing them with a greater ability in the pure electric mode. Typically, plug-in hybrids have a 10 – 15 mile range in pure electric mode and travel at higher speeds in this mode than current full hybrids in electric mode.

The plug-in hybrids have no range anxiety as the petrol or diesel engine can always be used as a default. We will provide these vehicles in the same way as full hybrids and traditionally fuelled vehicles.

The only consideration with regard to plug-in hybrids is how and where you will charge them. Technically they can be plugged into a standard mains socket, but it is recommended that either a dedicated electric vehicle charging point is used, or as a minimum the standard electric socket being used should be checked for suitability by a qualified electrician. This is simply a precaution as the vehicle will typically draw a 10amp charge for between one and two hours.

RANGE-EXTENDED ELECTRIC VEHICLES (E-REV)

Range-Extended Electric Vehicles (E-REV) essentially bridge the gap between plug-in hybrids and pure electric cars. The vehicles run on electricity only, but unlike a pure electric vehicle it is not reliant purely on the battery pack, as it has a generator on board to prevent range anxiety. It can be plugged into a standard 240v outlet for charging the battery which can provide full vehicle speed and acceleration performance for 25 to 50 miles.

For longer trips, the E-REVs on-board range-extending petrol engine acts as a generator to sustain the battery capacity. The range extender can generate additional electricity to power the vehicle for over 300 miles on a single tank of petrol, and will give unlimited range as long as the vehicle is refuelled with petrol. However, the vehicle is never directly powered by the petrol engine like other hybrids and is always driven by the electric motor.

The way to get the most out of the vehicle is to charge it as often as possible with electricity and only use the petrol generator when necessary. This provides the greatest cost and environmental savings.

The BMW i3 Range Extender is an example of this technology and Lex Autolease currently provide these vehicles in the same way as petrol, diesel and hybrid vehicles. They can be quoted, ordered and delivered under our standard process. The only additional consideration is how the vehicle will be charged.

Technically they can be plugged into a standard mains socket, but it is recommended that either a proper electric vehicle charging point is used, or as a minimum the standard electric socket being used should be checked for suitability by a qualified electrician. This is simply a precaution as the vehicle will typically draw a 10amp charge for about 6 hours, although this will be reduced to about 4 hours with a dedicated electric vehicle charging point.

*Information correct at time of publication July 2016

PURE ELECTRIC VEHICLES (EVs)

Pure electric vehicles only have one power source, the electric battery, and this is why they have a number of specific requirements and limitations that require a different approach.

Range

Due to the lack of an additional power source, an electric vehicle will have a limited driving range before it requires recharging, which will often take a number of hours.

A typical pure electric vehicle will have a “real world” range of between 75 and 200 miles on a single charge, and will require 6 to 12 hours to fully recharge depending on the method of charging. It’s possible to charge the vehicles much quicker with a rapid charge point, which can charge a vehicle to 80% charge in about 20-30 minutes. However these rapid chargers are expensive and are usually available at public charging points such as motorway services.

For these reasons, pure electric vehicles are best suited for lower mileage requirements with a typical daily mileage of about 60 to 150 miles per day. This is dependent on the vehicle’s range and whether there is the opportunity for top up charging throughout the day. Obviously with higher range vehicles and top up charging daily mileages can increase but we would not recommend relying on the public charging network daily for key fleet vehicles. Pool vehicles lend themselves well to electric cars, especially in a limited geographical region or in urban driving conditions.

Seasonal variations

When considering the maximum range of pure electric vehicles, there will be seasonal variations. For example in the winter, the heater, windscreen wipers and headlights will typically be used more often and all draw electricity from the battery. Therefore, it’s wise to consider the likely maximum daily mileage without charging. This should be based on a figure below the daily mileage quoted by the manufacturer. Lex Autolease’s Fleet Consultancy can help you select the right vehicle for your requirements.

Servicing and maintenance

The servicing and maintenance of the vehicle should be considered. Not all vehicle dealers are EV approved, and therefore if you live in a fairly remote area, you may not have a main dealer within driving range of your workplace. Lex Autolease can check approved EV dealer locations prior to placing your order to make sure servicing is not an issue. Often the manufacturer’s dealer network can arrange the transportation of the vehicle until the network is fully established. However the dealer networks are growing quickly and coverage is currently quite good.

Leasing

Due to the range limitations of pure electric vehicles, Lex Autolease will happily provide electric vehicles under contract hire for standard terms of up to, 15,000 miles per annum (10,000 for smaller city vehicles with limited range) for contracts up to 5 years. Contracts will be written on the basis of 5,000, 10,000 and 15,000 miles per annum. For commercial electric vehicles like the Nissan eNV200, contract hire terms up to 20,000 miles per annum will be provided where appropriate. Some higher range vehicles can be requested at higher mileage contracts such as Teslas and the Jaguar i-Pace which have official ranges exceeding 300 miles on a single charge.

Charging the vehicle

Pure electric vehicles only have one power source, therefore they have the largest batteries, take the longest to charge, and draw the highest amounts of electricity. As such, it’s always recommended to have a charging point installed at either the business premises or the employee’s domestic residence, or better still both. These dedicated charging points will provide the fastest and safest way to charge your vehicle.

Benefits of a dedicated charge point

- A tethered charge point means you do not have to keep getting out a charging lead from the boot of your vehicle as a lead is integrated into the charge point
- A dedicated charge point will typically allow the vehicle to be charged at 13 to 16 amps which can reduce the charge time from 10 to 12 hours down to 6 to 8 hours, and also provide peace of mind that the vehicle will always be charged safely and securely

A final consideration with charging is that different vehicle manufacturers provide different charging leads. For example some provide leads with a 3-pin domestic plug to allow charging directly from the mains, however, others provide a Type 2, Mode 3 connector which can only recharge their vehicles from dedicated charging points. Most manufacturers will offer a range of charging leads but they may be a cost option, so check what leads you need and whether they are standard supply items.

The Fleet Consultancy can assist you in identifying the most suitable vehicle, charging solution and leads when you enquire about electric vehicles. We are also able to provide a range of charging systems via our preferred supplier to furnish you with a complete “plug-in vehicle” solution.

THE BENEFITS

- Currently most of the plug-in vehicles we can supply qualify for the Government’s Plug-in car grant of 35% of the vehicle list price. This is to a maximum of £4,500 for cars in category 1, and £2,500 for categories 2 and 3 (see below), which is applied at the vehicle dealership, so you don’t need to fill out any forms or apply for the grant. There are three qualifying categories for the grants:

Category 1: CO₂ emissions of less than 50g/km and a zero emission range of at least 70 miles

Category 2: CO₂ emissions of less than 50g/km and a zero emission range between 10 and 69 miles

Category 3: CO₂ emissions of 50-75g/km and a zero emission range of at least 20 miles

For Light Commercial Vehicles the plug in grant is 20% of the vehicle list price up to a maximum of £8,000.

A final element to the grant is that cars with a list price over £60,000 are not eligible. The Government has confirmed the grants will continue until at least 2020.

- No Vehicle Excise Duty
- Low emitting vehicles benefit from the lowest BIK tax, and in 2020/21 cars emitting 50g/km or less will be taxed on their electric range capability resulting in pure electric company cars only attracting 2% BIK

CO ₂ emissions (g/km)	Electric range (miles)	Taxable percentage of list price*			
		2017/2018	2018/2019	2019/2020	2020/2021
0	n/a	9	13	16	2
1 – 50	>130	9	13	16	2
1 – 50	70 – 129	9	13	16	5
1 – 50	40 – 69	9	13	16	8
1 – 50	30 – 39	9	13	16	12
1 – 50	<30	9	13	16	14
51 – 54		13	16	19	15
55 – 59		13	16	19	16
60 – 64		13	16	19	17
65 – 69		13	16	19	18
70 – 75		13	16	19	19
76 – 79		17	19	22	20
80 – 84		17	19	22	21
85 – 89		17	19	22	22
90 – 94		17	19	22	23
95 – 99		18	20	23	24
100 – 104		19	21	24	25
105 – 109		20	22	25	26
110 – 114		21	23	26	27
115 – 119		22	24	27	28
120 – 124		23	25	28	29
125 – 129		24	26	29	30
130 – 134		25	27	30	31
135 – 139		26	28	31	32
140 – 144		27	29	32	33
145 – 149		28	30	33	34
150 – 154		29	31	34	35
155 – 159		30	32	35	36
160 – 164		31	33	36	37
165 – 169		32	34	37	37
170 – 174		33	35	37	37
175 – 179		34	36	37	37
180 – 184		35	37	37	37
185 – 189		36	37	37	37
190 or over		37	37	37	37

Diesel supplements: * add 3% and from 6 April 2018, 4% for call cars not meeting Real Driving Emissions 2 Standard (RDE2) subject to a maximum charge of 37%.

New European Driving Cycle (NEDC) test procedure CO₂ values to be used until April 2020.

- Company National Insurance Contributions (Class 1A NIC) will also benefit due to the lower BIK tax rates
- 100% discount from the London Congestion Charge, and no proposed charges for Clean Air Zones and Ultra Low Emission Zones
- Quiet and relaxing motoring – no gears and smooth acceleration
- Cheap fuel – typically 2 to 4 pence per mile when running on electricity, dependent on electricity tariff and off peak charging benefits

- Zero or reduced tail pipe emissions, especially in urban environments (plug-in hybrids can have EV mode selected manually when in urban driving conditions)
- Reduced reliance on fossil fuels and potentially greater security of supply

BATTERY WARRANTY

The battery warranties for plug-in vehicles are typically for 5 to 8 years and 80,000 to 100,000 miles. So for most intended fleet applications, the warranty will easily exceed the anticipated fleet life of the vehicle. Most manufacturers expect the anticipated life of the battery to be around 10 years and 150,000 miles. As with petrol and diesel engines, there are conditions attached to the warranties to cover areas such as misuse or abuse of the battery. We can supply further details if required.

THE KEY CONSIDERATIONS FOR PURE ELECTRIC VEHICLES

- Be aware of the range capabilities of electric vehicles and the effect cold weather and the use of heaters/ headlights and windscreen wipers etc can have on the vehicles overall range performance
- Think about how and where you will charge the vehicle. Pure electric vehicles should have a charging point installed at the place where regular charging will take place
- Make sure that an EV approved dealer is close to your location for servicing and maintenance work
- Make sure you have selected the correct technology and the most appropriate vehicle for the job

WE'RE HERE TO HELP

The Fleet Consultancy experts can provide guidance with all of the key considerations when choosing a suitable vehicle and provide additional sustainability information to help you set a fleet policy that works for you.

All quotations for pure electric vehicles are currently channelled through one of our specialist teams to make sure that you receive all the help and guidance needed to make your first steps towards electric vehicles as trouble free as possible.

We hope this guidance is useful and clarifies a number of questions commonly asked of hybrid, plug-in and pure electric vehicles.

To find out more, contact our dedicated Fleet Consultancy team or

Call: 0344 824 0270

Email: fleetconsultancy@lexautolease.co.uk

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