BVRLA consultation response on ending the sale of new petrol, diesel and hybrid cars and vans

The BVRLA is the UK trade body for companies engaged in vehicle rental, leasing and fleet management. Its members are responsible for around 50% of all new vehicle registrations in the UK and will play a vital role in delivering any phase out of new internal combustion engine (ICE) car and van sales. We welcome the highly consultative approach that OLEV has taken on the issue of phase out and hope that the government's high level of engagement with EV fleets will continue across all aspects of the decarbonisation agenda.

This response follows the widest consultation the BVRLA has ever undertaken with members and other industry stakeholders. The scale of input received demonstrates the vital importance of this plan and the huge impact it will have on all road users.

Many of our respondents highlighted the fact that there is a distinct lack of certainty around the development of automotive technology, its affordability, which mobility models will succeed or fail and how quickly the current supply constraints surrounding electric vehicles will be resolved. This lack of certainty means it will be vital for the Government to regularly review the phase out target and progress towards it.

The phase out date

BVRLA members purchased an estimated 80% of all BEVs sold in the UK in 2019

BVRLA members are already phasing out ICE cars and vans. They have embraced the challenge of transport decarbonisation and many have introduced internal ambitions for zero-emission fleets far in advance of the previous 2040 phase out target. The incentive regime for parts of the industry, specifically company car fleets, has allowed our members to become the trailblazers of decarbonisation.

One date will not fit all, there can be no single date for phase out of all new ICE sales

There is a diverse range of business models and use cases driving demand for new cars and vans. Every part of the fleet sector is committed to decarbonising, but some face a much harder challenge than others. Viewing the market as a single entity is simple but won't work. The BVRLA recommends that the Government segments the market and focusses appropriate support and phase out targets for the relevant use cases.

Without demand support, supply of appropriate models and adequate infrastructure, any phase-out date cannot be met

In some segments the current trajectory is comfortably achievable based on existing support measures or on how vehicle capability matches the needs of the segment. In others, the way that vehicles are used is inherently more challenging to transition or support and incentive mechanisms are not strong enough. For each fleet segment the Government must give specific consideration to the **demand** measures that will drive uptake, the **supply** measures that will ensure sufficient vehicles are available and the **infrastructure** measures that will meet that fleet operating model.

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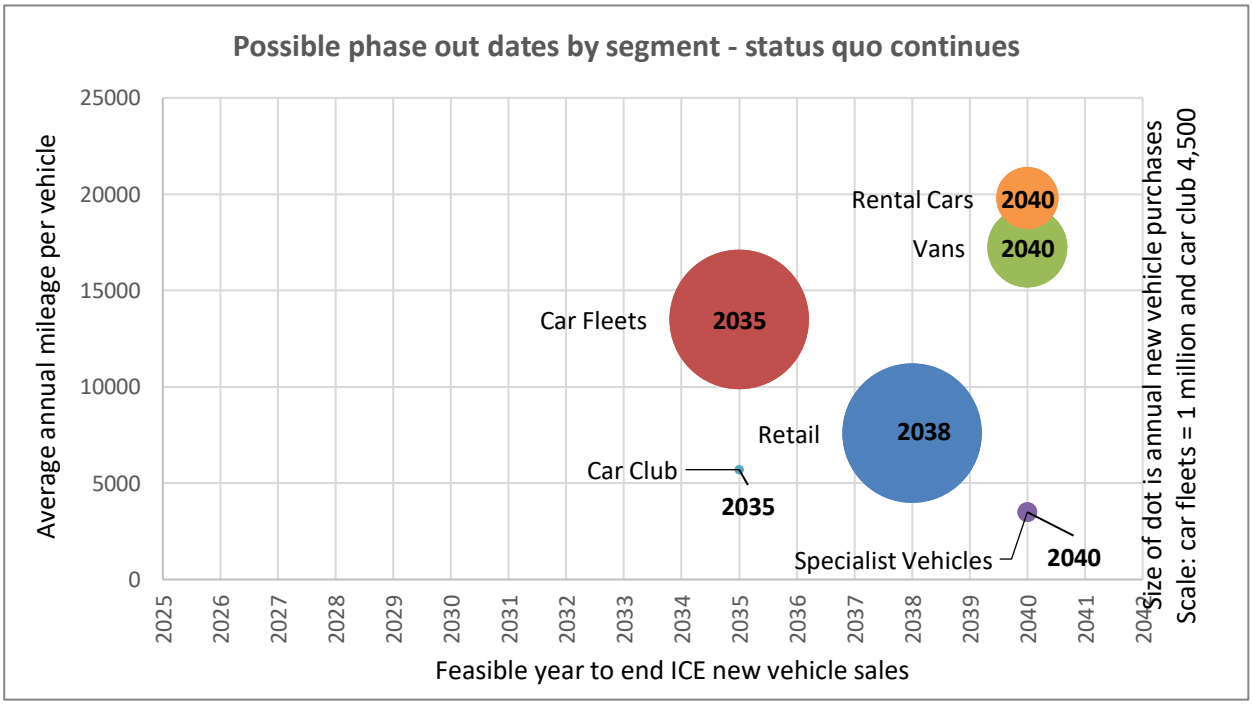
From our membership the BVRLA has segmented the use cases into six groups:

- **Car fleets –** company-provided cars used for business and personal use. For example, salary sacrifice or company cars.
- **Retail –** cars acquired by private individuals, usually via a personal lease or PCP arrangement
- **Car clubs –** also known as car sharing – a self-service form of car rental where members access vehicles remotely using an app
- **Rental cars –** cars which retail and corporate customers rent for short-term use (under 90 days) and are branch based
- **Vans –** goods vehicles up to 3.5 tonnes, can be rented, leased or owned and are depot or home based
- **Specialist vehicles –** vehicles that have been specially modified to fulfil a particular task or that need additional power requirements as part of their daily use. For example, refrigerated vehicles or vans that act as mobile workshops

Graph 1 gives an average mileage and fleet size profile for each segment, and their likely decarbonisation trajectory if the current support regime is continued.[1] In this consultation response we outline the support which would be needed to shift these segments onto more ambitious phase out paths. Graph 2 illustrates the revisited trajectories if these recommendations are acted upon.

Graph 1



[1] Annex 1 details the modelling the BVRLA commissioned from Cambridge Econometrics to inform this

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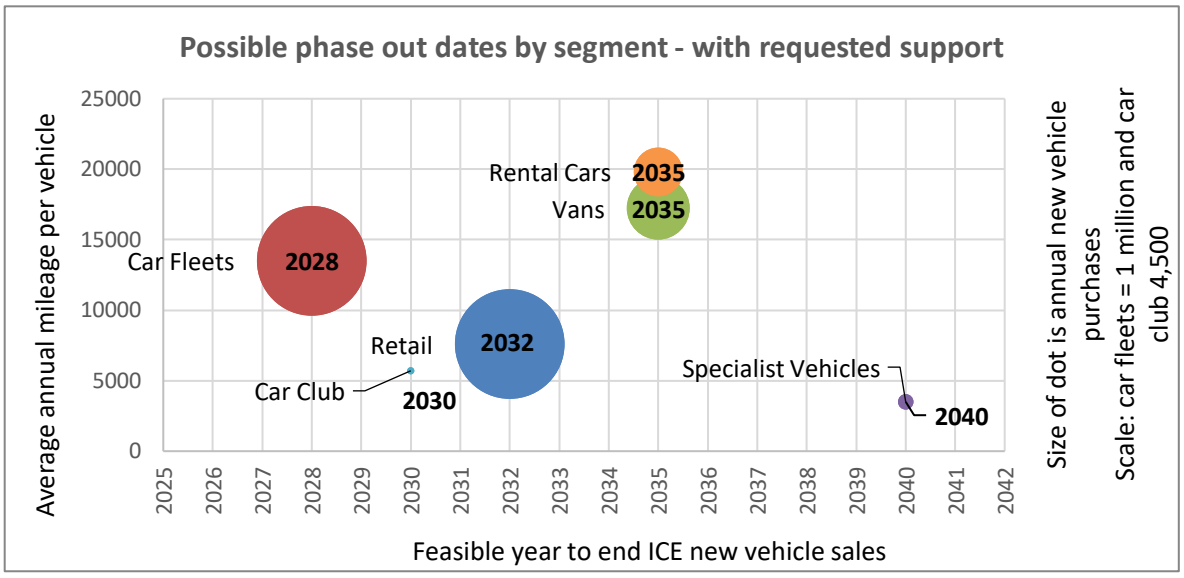
Graph 2



The Government needs to continue to engage with users at a fleet segment level, tailoring support and targets to each specific use case and set of barriers.

The definition of what should be phased out

Announcing a target date for banning all new hybrid vehicle sales would lead to a gradual reduction in OEM investment in this technology and a corresponding lack of availability of product well before the phase out date arrived. This would risk leaving the UK market with no 'Plan B' in the situation that the new BEV market was constrained by infrastructure or supply issues.

Hybrids (PHEV, HEV and MHEV) should only be included in any future phase out target alongside petrol and diesel vehicles if:

a) There is a sufficient supply of zero-emission vehicles (BEV or hydrogen) to meet every road transport application
b) ZEVs have reached price parity with petrol, diesel and hybrid vehicles
c) Businesses and consumers are confident that they have sufficient access to public charge points

The Government should undertake a thorough review of the new car and van market as we approach the phase out date to ensure that these criteria are met. If any of them are not met, hybrids that meet certain targets for emissions or zero emission range should be kept on sale. The Government should consult on an initial set of criteria for hybrids and keep these under annual review up to 2035.

Specialist vehicles are a critical segment where operators have little confidence that battery electric powertrains can deliver a practical solution. Most feel that a hydrogen vehicle solution is more likely. A distinct technology roadmap and set of policy measures will be required for this vehicle segment.

Impact of these ambitions on different sectors of industry & society

Assuming the ambitions referred to are bringing forward a phase out date to 2035 or earlier, there will be a significant cost associated with this transition. These costs will be uneven across the use segments.

For car fleets and the retail market, the recent modelling work that the BVRLA has commissioned from Cambridge Econometrics suggests that the retail and car fleet market will require strong, long-term tax and purchasing incentives to meet a 2035 phase out target. We have outlined these in our annexe, but in summary, these additional measures would cost the Government an additional **£95 billion** between now and 2035, peaking at £16.7 billion in 2032. These additional support costs are mainly focused on the retail segment where tax incentives are currently weaker and consumer 'inertia' is harder to overcome. Our modelling also takes into account the fact that the transition rate for both retail and car fleet EV adoption could tail-off if support measures are not maintained beyond 2025.

EV adoption in other fleet segments is not mature enough for us to undertake similar modelling. However, we can estimate the impact of a premature phase out. The clearest impact would be for specialist vehicles, for example vans that need power at the roadside for extended periods. This type of LCV is highly unlikely to have a viable battery-powered zero-emission option by 2035. While the market for these vehicles is very small, their roles and technology needs are hugely varied. Most crucially they perform many core tasks in maintaining the critical infrastructure of the UK. Phasing out ICE vehicles in 2035 would likely mean these vehicles could not be renewed in their usual fleet cycle. This could place employees and UK PLC's essential infrastructure at risk as vehicle cycles are extended or products that are not fit for purpose are deployed.

An accelerated 2035 phase out date would put a huge additional capital expenditure burden on the hard-pressed car rental sector. Based on some preliminary costings, we estimate that basic charging infrastructure at each branch could cost the vehicle rental sector up to **£500 million**[2]. The sector has been hard hit by the Coronavirus and asking it to accelerate this kind of additional investment at the same time as upgrading hundreds of thousands of ICE vehicles for more expensive EVs is unachievable. The price premium between zero-emission vehicles and their ICE equivalents would cost rental companies in the region of **£4 billion**[3] a year. The rental sector would be making these huge additional investments with little or no guarantee that it could pass these increased costs on to its customer base, where there is no indication that people are willing to pay more for zero-emission car rental. The scale of the barriers outlined in the next section demonstrate why the sector is unlikely to develop a functional zero-emission daily rental business case by 2035 without specific focus and support.

Barriers and potential solutions to achieve the earlier phase out date

Keeping the UK an attractive market – matching EU incentives post EU exit

BVRLA members are experiencing difficulties with the supply of zero-emission vehicles, an issue which has been further compounded by the Covid-19 crisis. This problem is particularly acute for vans due to the limited models and volumes of those models available. There are fears that even if the CAFÉ Regulation

[2] Annexe 2 details the calculation and assumptions behind this figure

[3] See Annexe 2 for detail

targets are mirrored in the UK post EU Exit, they will not count towards EU targets where incentives are far greater, which will have a major impact on supply to the UK.

Required measures

1. **EU exit** – remove the 10% WTO tariff on ZEV imports
2. **Incentives –** must match or beat those given to manufacturers across Europe
3. **No ZEV mandate –** BVRLA members are opposed to the idea of a blunt and inflexible target on OEMs which could add an unnecessary regulatory burden and have unintended consequences. Rather than replicate what's happening in China or the US and to avoid any supply disruption, policy measures should be aligned with markets closer to home within the EU, where grants and incentives have been far more successful in achieving a higher EV market share
4. **Investment in the UK –** Increased R&D and and the establishment of UK gigafactories would reduce costs and address supply limitations

Price parity – making the Total Cost of Ownership (TCO) 'stack up'

Electric vehicles are still more expensive than their ICE equivalents. BVRLA members need to make a business case for investment and need to show how the Total Cost of Ownership (TCO) model 'stacks up'. While there is a strong trajectory for car fleets, the other segments of membership (retail cars, vehicle rental and specialist vans) will need strong incentives over the long term to accelerate the transition.

Required measures

1. **Plug-In Car/Van Grant** – BVRLA members believe the grant will be needed until at least 2025 to ensure price parity between BEV and ICE. Separate modelling (see Annexe 1) commissioned by the BVRLA shows the grant would be required beyond 2030 to enable a new ICE phase out by 2035.
2. **Extend 100% first year allowance on purchase of EVs –** not currently available for rental or leasing
3. **Home & Workplace charging grant –** retained until 2025
4. **0% VAT on EVs –** essential to delivering a rapid transition to EV, particularly in the retail car segment
5. **5% VAT rate on public charging –** bringing it in line with the VAT rate on domestic electricity
6. **New EV infrastructure expenditure credit for corporation tax –** 100% of investment costs for EV infrastructure can be offset against corporation tax
7. **Reform the Advisory Electric Rate –** 4 pence per mile is no longer fit for purpose, especially for those reliant on public and rapid charging
8. **Future certainty on incentives/grants available –** supporting the business case for ZEV investment
9. **Policy alignment –** incentives/disincentives should match current technology – e.g. V2G incentives are ahead of vehicle capability, & introduction of ULEZs are ahead of vehicle availability
10. **Clear policy leadership –** government must provide a clear roadmap of what is required and by when, setting out how they are working with industry to meet these goals. A roadmap for hydrogen is also needed for those sectors where BEVs may not be the right solution
11. **Used cars –** strong demand for used BEVs will help keep new vehicle prices low. Buyers need incentives to cover the price gap between second-hand ICE vehicles and equivalent BEVs
12. **Vehicle Excise Duty -** ensure the Government's forthcoming VED review reflects the need for an incremental transition to EVs and hybrid vehicles by continuing to incentivise the cleanest ICE vehicles over the next five years

Infrastructure – biggest barrier holding back adoption of ZEVs

Many members have been quoted enormous sums for additional grid capacity. The current process, whereby the company that pushes the local grid infrastructure over the limit is the one that must pay the total cost to upgrade, is inherently unfair. One member was quoted over £100,000 for three 14kWh chargers at a location in Leeds. This figure would have been even higher if rapid chargers were specified. These costs discourage many members from embarking on this journey and pushes back their decision to make the transition to EVs. Furthermore, those that have made the investment have reported long lead times of over a year and up to 18 months to get the work completed.

Many staff will be required to take vehicles home and will be unable to charge there. Centrica estimates 65% of its engineers will not be able to charge at home. Car clubs and rental also need to ensure they retain high levels of utilisation, which will require easy access to affordable public charging. Reliance on public charging infrastructure and access to rapid charging away from the strategic road network is essential.

This public charging infrastructure must be accessible, affordable and reliable, making it as easy to charge as it is to fill up with petrol or diesel.

Required measures

1. **Grid upgrades –** The Government & Ofgem must re-evaluate the grid upgrade process, ensuring that early EV adopters do not bear the brunt of the costs associated with modernising the network
2. **High-powered charging –** Many fleets will delay investment in high-powered charging until the results of any Ofgem review are known. To avoid these delays, the Government should look at ways of providing financial support to encourage investments now.
3. **Infrastructure roadmap –** DNOs to work with fleets to understand their energy needs and to provide assurances on how these needs will be met
4. **Project Rapid extended –** to include cities, towns, transport hubs and popular rural destinations located away from the strategic road network
5. **Data extraction –** an agreed industry standard/API is needed for those using multiple chargepoint providers
6. **Open access to data –** standard information on location, pricing, speed, availability, state of repair and queue length is needed
7. **Pricing cap –** setting a max price cap for pay-as-you-go rapid charging would avoid undermining consumer confidence on EV affordability
8. **Transparent pricing –** consumers need to plan journeys based on cost. Illuminated tariffs like those outside petrol stations would make pricing clear
9. **Reliability and Roaming –** The Government should use the Automated and Electric Vehicles Act to mandate minimum access and performance levels
10. **Compatibility between chargepoints and vehicles –** to ensure a scalable and cost-effective solution for fleet management, government should set a mandatory requirement for compatibility via ISO15118
11. **Rental & leasehold properties –** The Government to review the rights and obligations of tenants and landlords when it comes to installing and maintaining charging infrastructure

Support measures specific for vehicle rental – normal TCO benefits do not apply

Customers are unwilling to pay more for an expensive EV and damage/accidents are also more expensive and must be factored into business models. As rental companies do not fuel their vehicles, they do not benefit from the same fuel cost savings that other fleets rely on to establish a positive EV 'Total Cost of Ownership' (TCO). Until there is greater price parity the following support is needed.

- **0% VAT on ZEV rental**
- **Direct grants and funding given to businesses to support EV infrastructure development should not count as state aid now or under a future UK regime post Brexit**
- **EV infrastructure grant scheme for rental branch locations running from 2021-2025**
- **Project Rapid extended beyond the strategic road network**
- **Supporting PHEVs as a transition technology, for example by raising the main pool rate (applicable to cars under 50 g/km CO2) for writing down allowances from 18% to 25%**

Support measures specific for commercial vehicles – overcoming supply constraints

There are some very unique challenges facing the commercial vehicle sector. Supply of vehicles is a particular issue with very few zero-emission van models available and even where stock is available, there are challenges with volume. This is further compounded due to limited battery supply vans where cars take precedent and commercial vehicles are neglected. Cost and price parity is also an issue with members reporting differentials of up to 50% more for vans and minibuses. There are questions about how specialist power needs will be met with many believing hydrogen is the solution.

- **Plug-In Van Grant retained until 2025**
- **0% van benefit charge until 2030**
- **Project Rapid roll out to cater for those unable to charge at home but where efficiency is critical**
- **Charging bay provision for larger vans where spaces are often too small**
- **Review of building regulations to allow for secure parking whilst charging**
- **Clarity on the future for fuel duty to support business cases and investment in BEVs**
- **A roadmap for hydrogen and investment in R&D to resolve powertrain needs issue and to help with vehicle supply**

Support measures needed for car fleets – maintaining the surge in demand

Changes to Benefit-in-Kind (BiK) rates have seen a significant upturn in demand from car fleets. It is important that incentives continue to keep this momentum.

- **0% BiK extended for a further year**
- **ZEV BiK frozen post 2025**
- **Continued foresight of any removal or changes to grants and incentives**
- **No change to Optional Remuneration Arrangement (OpRA) rules to support salary sacrifice**
- **No change to the classification that electricity is not a fuel for BiK purposes**

Annexe 1: Cambridge Econometrics modelling

The BVRLA commissioned Cambridge Econometrics to model the framework of policy support needed to produce the 2035 phase out outcome for the new car market. The modelling examined three questions:

1) How rapid a transition to zero-emission cars will current policy deliver?
2) What role will the fleet market play in driving this transition?
3) What policies could be used to encourage a more rapid take-up of EVs, and what are the costs and benefits associated with these?

The modelling looked at four scenarios to establish whether the policy package would enable a 2035 phase out to be met. The results were split between the car fleet and retail markets. The economics have tipped sharply in favour of EVs in the company car market (as of 1 April 2020), which drives much more rapid take-up in the fleet market. Conversely, in the retail market costs have been changing more slowly and there is stronger consumer inertia.

Key findings from modelling:

1) **Current government policies (our baseline scenario) are not sufficient to deliver the Government's proposed 2035 target**
   - They will only deliver a 50% market share for pure electric cars by 2030, rising to 84% in 2035 and 97% in 2040
2) **Taking a more ambitious approach with fiscal support measures (our ambitious policy scenario), would deliver a 95% market share for pure electric car shares by 2035, making an ICE ban deliverable**
   - These measures would cost an estimated £95bn over the course of the transition, peaking at £16.7bn 2032 (equivalent to just less than 2% of total government expenditure in 2019).
3) **The fleet sector will lead the way in EV take-up**
   - Under current government policy EVs will reach 68% of new car sales by 2030 and 94% by 2035
   - More ambitious fiscal support would see 90% of fleet sales being EVs by 2030 and 99% in 2035

Policy	Most ambitious scenario
Company car tax	• No further increases for BEVs from 2025 onwards: a constant rate of 2%
Plug-in Car Grant	• Continues at £3,000 until 2032, then reduces by £1000 each year until 2035 where it drops to £0
Enhanced Capital Allowances	• 100% first year allowance across whole fleet market from 2021
VAT	• VAT exemption for all EV purchases and leasing payments from 2021

The BVRLA will be releasing the full Cambridge Econometric report shortly.

Annexe 2: UK rental industry data on electrification of vehicles and infrastructure

BVRLA has used its best endeavours to provide a realistic and accurate assessment of the requirements for electrification of the UK rental fleet. This is based on current data, including market prices.

1. Electric infrastructure: costs of charge points

a) Costs per charge point

There are three broad categories of electric vehicle chargers:

i. 7kW AC fast chargers;
ii. 22kW AC fast chargers, and,
iii. 50-125kW DC rapid chargers.

- Costs for the physical fast charger units, maintenance and software are typically in the range of **£4,500-5,500**, based on a three-year maintenance deal.
- Rapid charge units are considerably more complex in terms of power management requirements and are incrementally more expensive, with:
  - **50-60kW DC rapid chargers** costing in the region of **£45,000**; and,
  - **125/150kW DC** units closer to **£65,000 each**.
- It should be noted that these costs do not include installation, groundwork and any power re-enforcement to the local grid by the distribution network operators (utilities).
- Installation might be similar to the cost of the hardware for a fast charger (**£5,500)** or twice that for a rapid (**£11,000)**, before any grid upgrades.
- Every site is unique, but if a location requires additional supply capacity and new cabling, these works can easily average **£100,000 per location**.
- Approximately **90% of the UK's 2000** rental sites would face grid constraints if they were to install the required rapid chargers.

b) How many needed per vehicle

- A **fast charge unit** is optimised for charging overnight or in downtime between shifts, and 7kW AC units in particular are designed around domestic or light industrial use.
  - The size of the vehicle battery and the level of charge all influence how many vehicles a charge point can charge per day.
  - Typically, such a **unit can fully charge an EV with a 40-50kW battery overnight**, and if managed efficiently, **perhaps two other vehicles during the day**.
- In terms of a **rapid charge unit at 50kW DC**, a similar vehicle could be charged from **20-80% state of charge in under an hour**, whilst a **125kW DC rapid unit** could achieve a similar charge **in just over 30 minute**s, assuming the vehicle is configured to accept that level of charge.
- In a rental operational environment, and noting that customers do not return vehicles sequentially, we expect **efficiency of the charge points to be about 50%**, so based on a branch opening 12 hours a day, we would expect:
  - A **50kW DC to service 6-8 vehicles per day**
  - (Perhaps) **14-15 vehicles charged by a 125kW DC rapid charger**.
- Our expectation is that a **mix of fast and rapid chargers will be required**, with some vehicles being charged overnight from 7-11kW chargers, with a level of smart charging and load balancing to minimise impacts on the power supply.
- However, given customers return vehicles throughout the day, **access to rapid charging will be imperative to service requirements and achieve fast turnaround**.

- If we were to hypothesize the eventual electrification of the entire UK car and van rental fleet – 456,918 vehicles at current size – a **ratio of between 25-33% fast chargers** to **66-75% rapid chargers**, would require something in the range of 5,000-6,700 fast and 4,100-4,650-rapid unit chargers.

c) Specific EV requirements for the vehicle rental industry

- The utilisation level of vehicles is the key differentiator between fleet and rental operations, with short turnaround times between hires.
- This means that the opportunity for overnight charging is limited, and vehicles require rapid charging as quickly as possible.
- Customers also do not generally have access to home charging, so access to public rapid charging infrastructure is critical given the inability to charge vehicles overnight.

2. Cost of vehicles: price premium

The current costs of zero-emission vehicles are significantly more than their ICE equivalents.

- Rental firms renew their car fleet annually and purchase approximately **275,000** new cars a year
- Rental firms renew their vans fleet on average every 2.5 years and purchase approximately **72,000** new vans a year
- The average cost premium for a rental operator of a BEV car over an ICE equivalent is **£8,500**
- The average cost premium for a rental operator of a BEV van over an ICE equivalent is **£25,000**