Company cars:

how European governments are subsidising pollution and climate change

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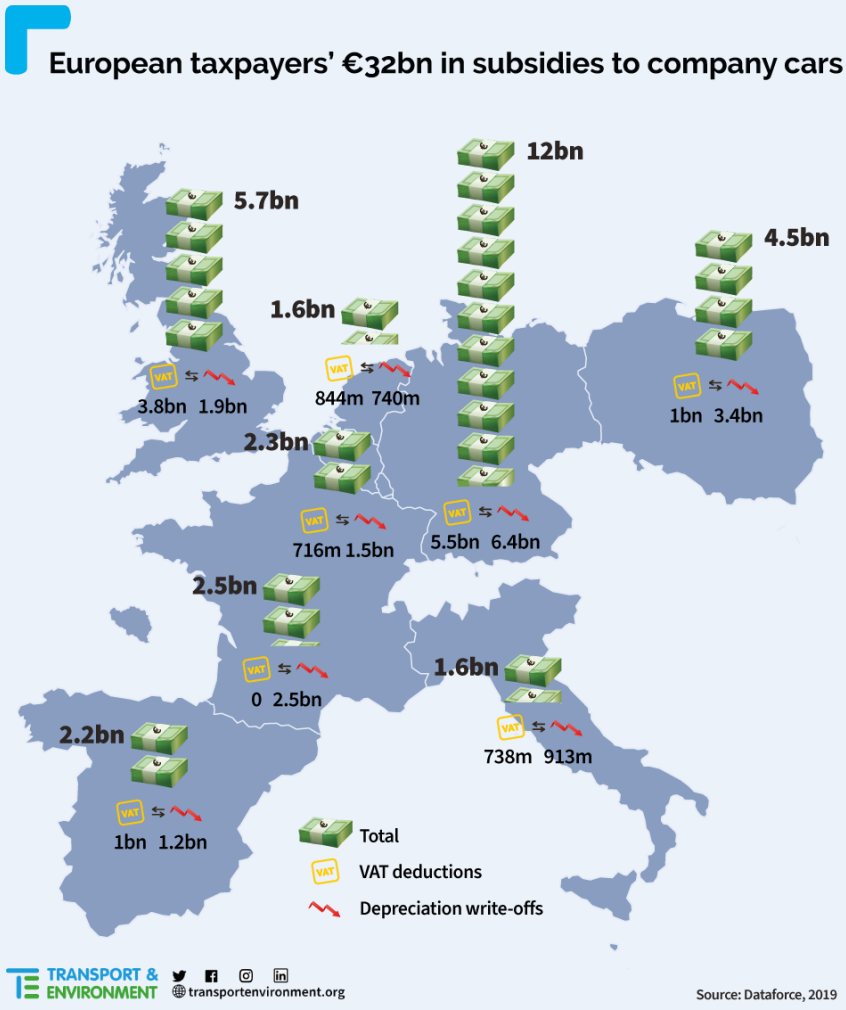
Summary

Company cars are vehicles owned by companies or other organisations - not by individuals - and they represent the main market share for new cars in Europe. T&E has commissioned Dataforce to analyse the corporate market in EU27+UK and this paper looks into the corporate registrations for the car market and its effects on Europe's climate ambitions.



When buying a car, a company can apply for VAT deductions and depreciation write-offs, while an individual cannot. The **deductions and write-offs for company cars in 8 largest markets alone cost European taxpayers €32 billion every year**, an amount that dwarfs the €2 billion investment needed per year to deploy public charging infrastructure for electric vehicles until 2030. This amount excludes other taxation, notably benefit-in-kind schemes.

The massive corporate fleet subsidies explain why almost **6 out of every 10 new cars sold today in Europe are registered through the corporate channel**, with some countries, like Germany or Poland, going beyond and reaching up to 70% of new cars.

When a TCO (Total Cost of Ownership) analysis is performed - and all fleets should make their purchasing decisions on the basis of TCO - electric cars are the optimal investment for corporate fleets. T&E analysis shows that **fully electric company cars are already the cheapest option to use today**, both for large/premium and medium models. **For large company cars the all-electric option is 9% cheaper than the diesel** option: 0.39 €/km vs. 0.43 €/km, and this can bring **over 4,300 € in savings per vehicle** in a four-year period of car ownership.

But despite this, the latest data available on corporate fleet registrations shows that, even though EVs are growing rapidly they have a very limited share, and **96% of new company car registrations are still petrol and diesel vehicles**. Current fleets of very large companies, like Allianz, Dell, IBM, Philip Morris, Roche, or Philips, to name but a few, only have 3% all-electric vehicles in their fleets.

Because company cars drive on average 2.25 times further than private cars, they disproportionately contribute to road transport pollution. While representing 3.7% of the total vehicle fleet, the 10 largest leasing companies alone account for 8% of car CO_2 emissions in Europe. Their fleets**, which total close to 10 million cars, emit 44.3Mt of CO_2 each year.** And European governments are effectively subsidising the pollution of corporate fleets to the tune of €32 billion per year.

With carmakers set to ramp up the supply of electric vehicles to meet EU car CO_2 targets in 2020/21 and beyond, affordable, long range electric cars are finally becoming available. Their beneficial TCO means all **corporate fleets should go 100% electric by 2030, ahead of the private market,** to accelerate the ICE (Internal Combustion Engine) phase-out across Europe.

Crucially for the wider transition to electric cars, corporate vehicles enter the used car market quicker than private ones, so a continuous influx of relatively new and cheap EVs (Electric Vehicles) will be available to private buyers on the second hand market. T&E estimates that at least 1.4 million second hand all-electric cars will be available in 2026 if 30% of fleets are fully electric in 2025. This is when a huge shift is expected in the private market, as the average European buys second hand cars: **accelerating electrification of fleets means much faster and affordable penetration of those cars into the wider European car stock**.

The key driver of vehicle choice in the company car market is vehicle taxation. EU states should **reform benefit-in-kind taxation of company cars, VAT returns and depreciation write-offs,** to guide corporate fleets towards 100% zero-emission vehicles.

Hence, reforming company car policies and taxation could be one of Europe's most powerful policy instruments in the electric vehicle race worldwide. **The low-hanging fruit is corporate fleets, as millions of high-mileage polluting vehicles can be targeted with only a few measures**, and can reap huge climate benefits.

Furthermore, the current **Alternative Fuels Infrastructure Directive (AFID) should be revised and turned into a Zero Emission Infrastructure Regulation (ZEIR)** for a more harmonized and rapid implementation of charging infrastructure, in particular around 3 main pillars: (1) promoting the installation of charging points at company facilities, adding incentives to ensure they are used; (2) developing national plans for fast and ultra-fast charging infrastructure (more than 100 kW) for the highways network, simplifying the administrative process for the installation and commissioning of charging stations; and (3) creating charging hubs in urban areas, targeting mainly zero-emissions fleets for passenger transport services, urban distribution of goods, last mile delivery, and carsharing services.

And last but not least, the EU should **mandate any leasing/long term rental company** with a vehicle fleet size of 200,000 or more to **purchase 30% of its fleet as zero-emission vehicles from 2025**, **and 100% by 2030.**

The company car transition to electric vehicles needs to accelerate drastically to allow the EU to reach its climate objectives. Furthermore, it is already making sense economically and the shift will be profitable for the vast majority of fleets in Europe. **Companies have a role to play in the transition by electrifying corporate fleets** and should use the opportunity to lead the change.

Abbreviations

EV Electric Vehicle (*In this report, this stands for vehicles propelled by an electric motor: battery electric vehicles, fuel cell electric vehicles and plug-in hybrid electric vehicles*)

BEV Battery Electric Vehicle

FCEV Fuel Cell Electric Vehicle

ZEV Zero-Emissions Vehicle: BEV and FCEV

PHEV Plug-in Hybrid Electric Vehicle

HEV Full Hybrids

ICE Internal Combustion Engine

EU European Union (UK not included)

EU27 European Union (UK not included)

EU27+UK EU member states + the UK

TCO Total Cost of Ownership

VAT Value added tax

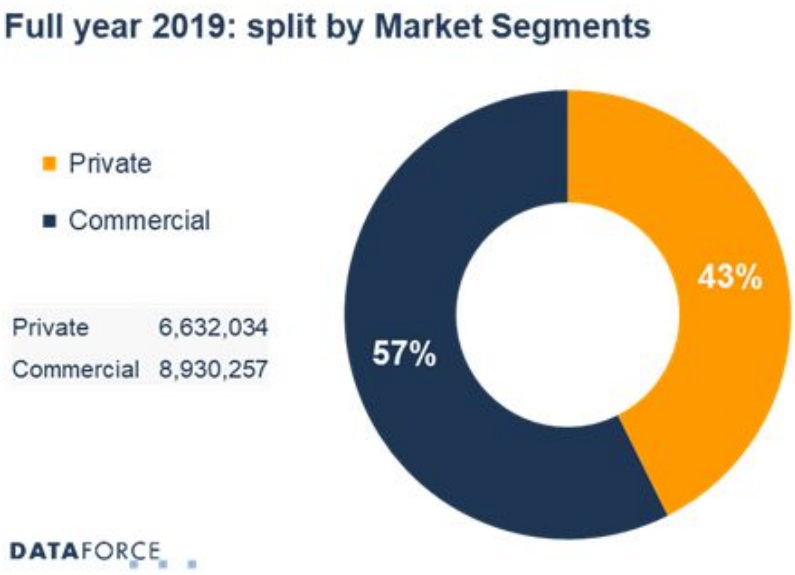
BIK Benefit-in-kind tax

1. Why focus on company cars

When a car is bought, it is registered under the buyer's name: it is labeled as a private registration when an individual buys the vehicle, and as a corporate registration if it's a company that buys it. A company car is hence a car that is owned by a company or other organisation, not an individual.

It can be a vehicle owned by an employer and provided to an employee as a perk, but also a high-end black sedan that the CEO of a corporation drives (or is driven in). It can be the everyday tool of a salesman, the car of your postman, or the demo vehicle of your local car dealership. It can also be the vehicle that you rent from your favourite rent-a-car during your holidays.

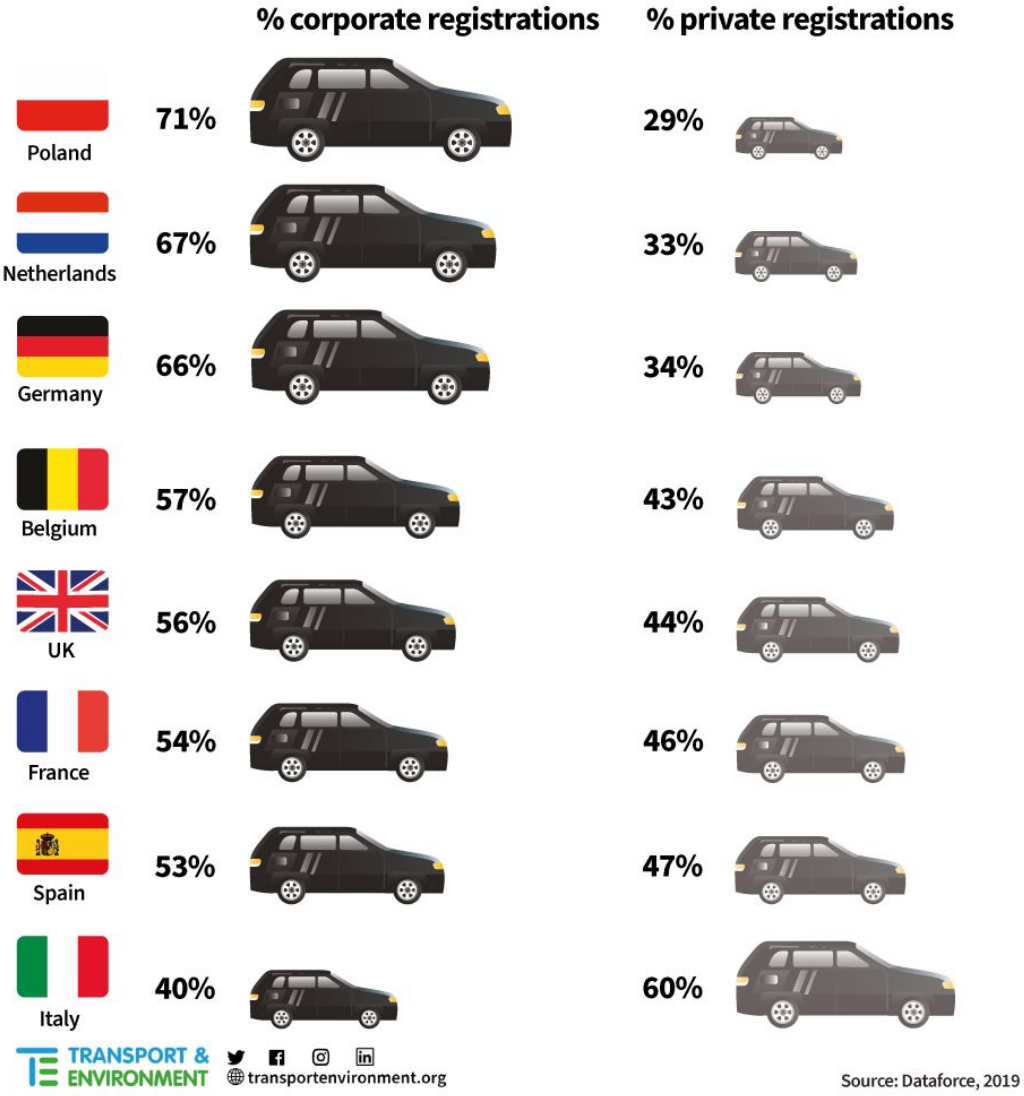
Company cars are everywhere: in Europe, nearly 6 cars out of 10 today are registered through the corporate channel.



T&E has commissioned Dataforce to look into the corporate registrations for the car market across Europe with an emphasis on taxation schemes and EV (Electric Vehicles) adoption, and together with Dataforce's report published alongside this paper, an analysis of the company cars effects for Europe's climate ambitions has been performed in this report.

European corporate new car registrations in 2019

6 new cars out of 10 are registered through the corporate channel



1.1. How public money is subsidising polluting company cars

The Dataforce study shows that 96% of the cars the companies are buying are ICE (Internal Combustion Engine) vehicles running on diesel or petrol, hence contributing towards catastrophic climate change and emitting harmful exhaust gases (such as NOx - Nitrogen Oxides) and toxic particles that go deep into our lungs and can cause heart disease, stroke, lung diseases and lung cancer. Air pollution is a major cause of premature death and disease, and the single largest environmental health risk in Europe.

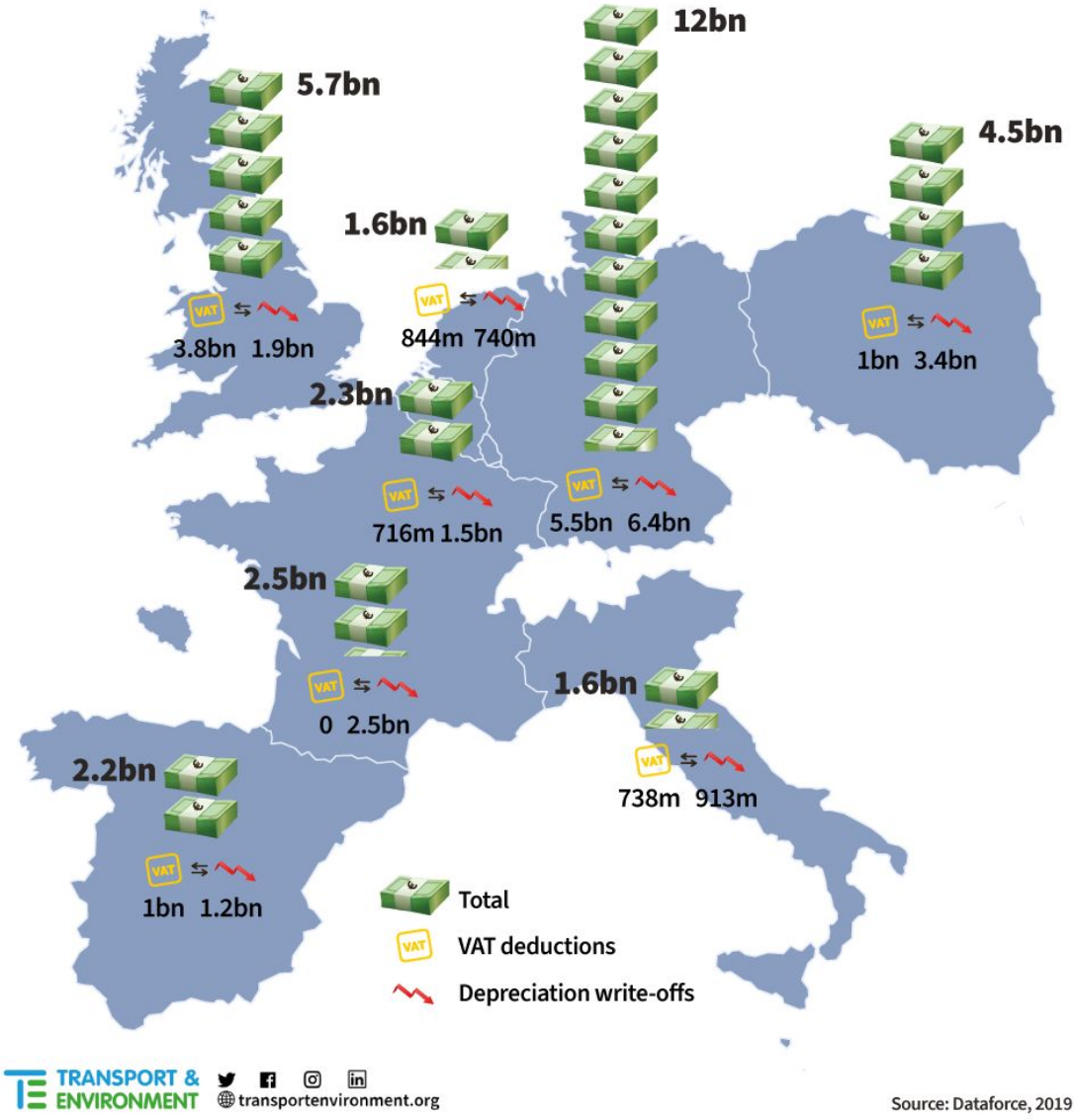
When you buy a car for yourself, you are very likely to pay the full sticker price. But when a company buys a car and registers it under a corporate name, it pays much less than you because a company can apply for VAT (Value Added Tax) returns and depreciation write-offs.

The money that helps companies buy cars applying VAT returns and write-offs actually comes from your pocket: it is taxpayer's money from the State coffers. This means the EU27+UK governments subsidise company cars: we are pouring over €32 billion[1] of public money every year to help companies buy polluting cars, and less than 10% of that amount targets electric vehicles[2]. The €32 billion EU member states + the UK pour yearly into company cars dwarfs the investment the EU needs for public EV charging infrastructure, where only €2 billion per year is needed this decade to serve the growing EV market[3].

Fundamentally, company cars are a subsidy for private car ownership. Subsidised car ownership leads to additional car usage, increasing congestion and pollution. The company car schemes are also unfair as the people most likely to benefit from them are situated in higher income groups; company car schemes should therefore be phased out. However, whilst we make progress towards that goal, it is imperative that governments redirect the €32 billion they are currently spending on company car subsidies through VAT deductions and depreciation write-offs, and restrict the schemes to emissions-free cars, i.e. those that run on a battery and an electric motor.

[1] Dataforce Study on Company Cars (June 30, 2020). Sections 6.1.3 to 6.1.10. Retrieved from https://www.transportenvironment.org/sites/te/files/2020_10_Dataforce_company_car_report.pdf
[2] Dataforce Study on Company Cars (June 30, 2020). Section 7.1.13. Retrieved from https://www.transportenvironment.org/sites/te/files/2020_10_Dataforce_company_car_report.pdf
[3] T&E, Transport & Environment (January 2020). Recharge EU: how many charge points will Europe and its Member States need in the 2020s. . Retrieved from https://www.transportenvironment.org/sites/te/files/publications/01%202020%20Draft%20TE%20Infrastructure%20Report%20Final.pdf

European taxpayers' €32bn in subsidies to company cars



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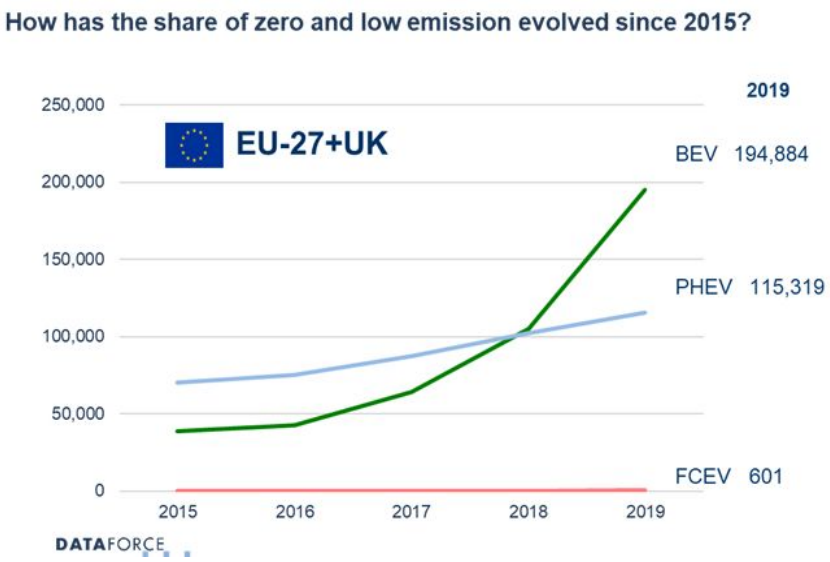
Source: Dataforce, 2019

1.2. Corporate fleets prioritise polluting cars



An electric car is a vehicle powered by an electric motor, which includes BEV (Battery Electric Vehicle), PHEV (Plug-in Hybrid Electric Vehicle) and FCEV (Fuel Cell Electric Vehicle) powertrains.

The share of electric vehicles found amongst registrations by corporate fleets in Europe has evolved with a clear upward trend, in particular with company all-electric cars (BEVs) growing 400%: from 0.52% market share in 2015 to 2.2% in 2019, slightly higher than the 2% BEV share on average for all sales in 2019. Another important observation to be made is that corporate fleets account for ¾ of all plug-in hybrid registrations in Europe, and for ⅔ of all-electric vehicles, while also adding ¾ of diesel registrations and half of petrol cars. The good news come from the all-electric BEVs, but the shares of the other powertrains just mentioned are bad news - because they emit noxious fumes. This applies even when considering PHEVs, as their average weight in 2019 was close to 2 tonnes (1,983 kg), 39% heavier than the average ICE vehicle, and thus very likely to register higher fuel consumption.

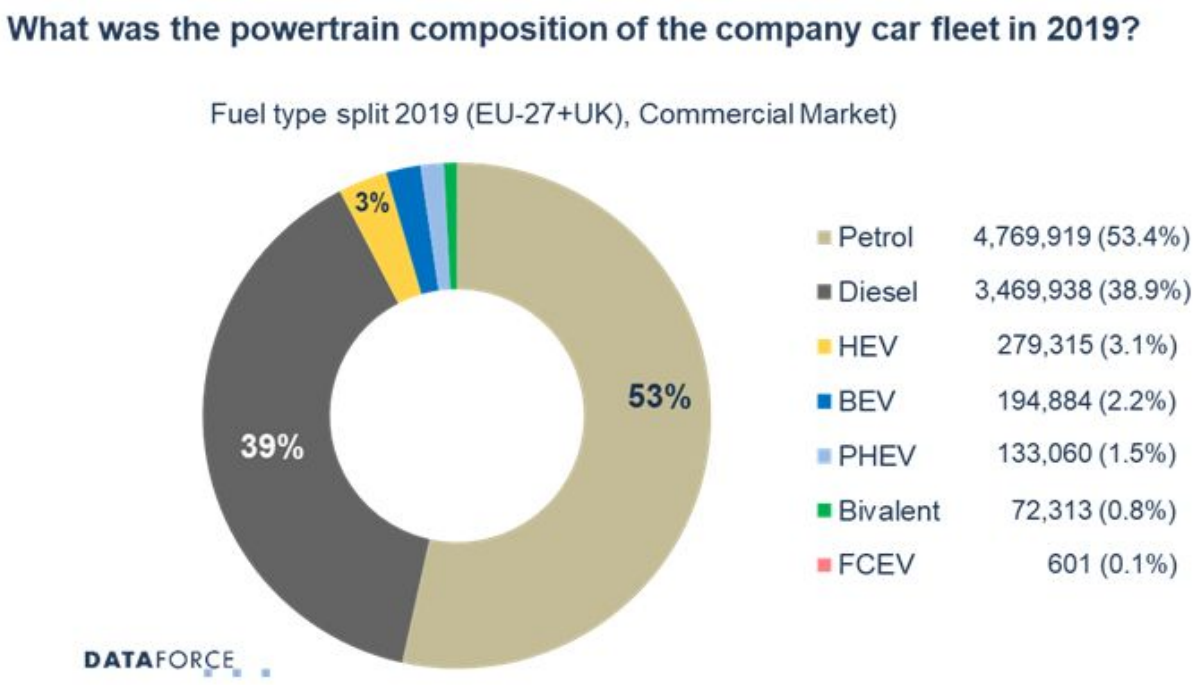
Long-term rentals (leasing)

The long-term rental (or leasing) options are becoming more and more popular in the EU, and that now represents the biggest chunk in terms of new vehicle registration volumes within the corporate channel. According to the Dataforce study, the top leasing companies together own a fleet of about 10 million cars in Europe. But with the exceptions of **ALD**, a leasing company who belongs to Société Générale who has 15% of electrified vehicles in their fleet ("electrified" includes EVs and legacy hybrids), **ARVAL**, belonging to BNP Paribas, with the same percentage, **LeasePlan**, who has 9% of electrified vehicles, and **LEX Autolease**, which belongs to Lloyds Bank, with 8% of electrified vehicles in their fleet, all the top players in the long-term leasing sector hardly buy any electric vehicles for their fleets. And the four exceptions (ALD, ARVAL, LeasePlan, LEX Autolease) don't show impressive

shares of electric vehicles in their fleets either, since their EV numbers include in the electric vehicle category -as stated above- legacy hybrids that cannot be recharged with a plug and have high CO_2 emissions.

Large corporations use full service leasing for 90% of their vehicles, with a duration of 3 to 4 years, and drive those vehicles for an average distance of 25-30,000 km per year, which is up to 250% more than private cars, which are driven 12,000 km per year on average. It is very likely that those leasing contracts are signed with the top leasing companies identified above.

Large corporate fleets



Polluting ICE vehicles (petrol, diesel, legacy hybrid and dual-fuel) still made up the majority of the corporate fleet purchases in Europe in 2019: an overwhelming 96.2% were petrol or diesel, while there was only 3.8% of electric vehicles (BEV, PHEV and FCEV) in the corporate fleet acquisition.

Alphabet, belonging to BMW Group, has a European fleet of close to half a million vehicles, but only a 3% share for all-electric vehicles. Meanwhile, **Athlon** (Daimler group), **Daimler** Financial Services, **Volkswagen** Financial Services, **PSA** Finance, and **RCI** bank & services (Renault) don't even disclose the share of EVs in their fleets, which shows very little support to electrification and raises questions about the - likely very reduced - number of EVs in their fleets.

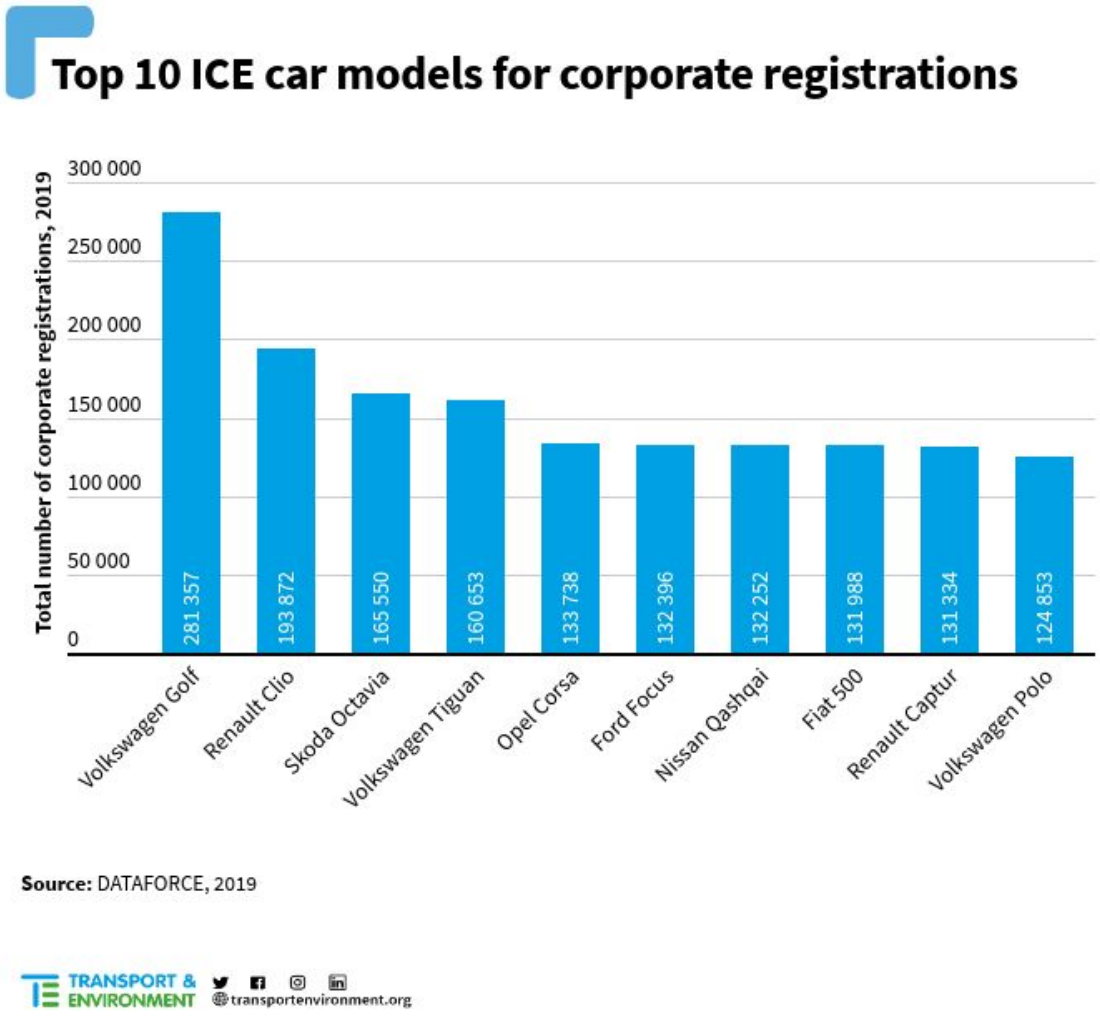
However, all have plans to improve the share of electric vehicles in their fleets over the next years. In particular: **LeasePlan** (who is also signatory to the EV100 initiative), aiming at having 100% EVs for new car orders by 2030 and will have all of its employees driving electric by 2021.

The analysis stemming from the Dataforce study also shows the powertrain composition of 10 very large company fleets in Europe: **Allianz**, a German multinational financial services company; **Dell** and **IBM**, both American multinational computer technology companies; **Philip Morris**, an American multinational cigarette and tobacco manufacturing company; **Roche**, a Swiss multinational healthcare company with pharmaceuticals and diagnostics divisions; and **Philips**, a Dutch multinational conglomerate corporation, to name only but a few, own fleets that are made up almost entirely of diesel cars, while **alternative powertrains only hover between 3 and 10%**. And alternative powertrains include legacy hybrids that cannot be plugged in and run on petrol, so the actual share of EVs (all-electric cars and plug-in hybrids) is even lower.

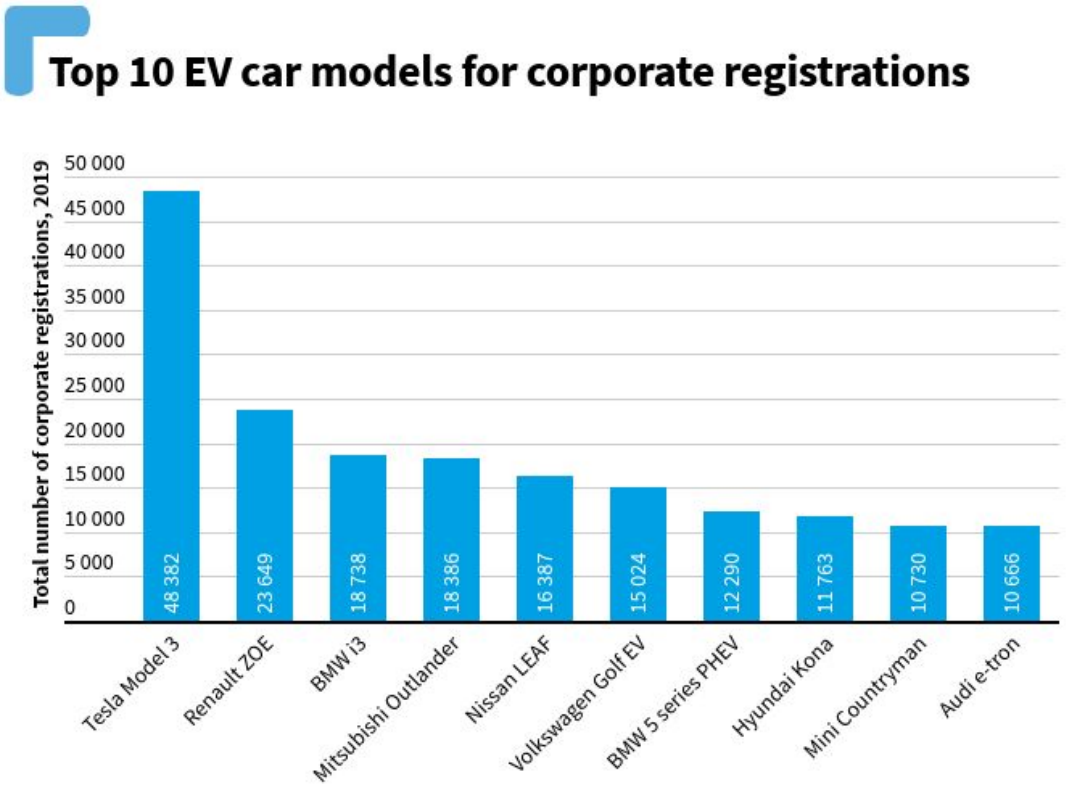
Top 10 car models for corporate fleets - 2019

The Dataforce study provides a list of the top 10 car models[4] bought by companies in 2019, and it splits the list between cars powered by an internal combustion engine, and electric vehicles. The results can be found on the following two figures below.

[4] Dataforce Study on Company Cars (June 30, 2020). Section 11.3.1. Retrieved from https://www.transportenvironment.org/sites/te/files/2020_10_Dataforce_company_car_report.pdf



The car models are ranked according to their registration numbers for 2019, and the companies' preference for ICE cars is outstanding: the top ICE car model (a Volkswagen Golf) among corporate registrations - see figure above - was bought almost 6 times more than the top EV (a Tesla Model 3), as can be seen on the figure below.



From a quick analysis of both lists, what is most striking is that almost all the car models powered by internal combustion engines that companies bought in 2019 could have been electric, since they either directly had the very same model available with an electric powertrain - the Volkswagen Golf also exists as an all-electric -, had a very similar model from the same brand - the Renault Clio has its electric equivalent: the Renault ZOE - or had an alternative fully electric model from another brand in the same segment - a Skoda Octavia is comparable in size and shape with a Tesla Model 3 -.

With a vast number of new electric models from several brands reaching the market in 2020/21, the alternatives to the polluting ICE company car models keep growing. Company cars can therefore be electrified starting now.

2. Corporate fleets must go electric

2.1. Faster uptake of affordable second hand EVs

With carmakers set to ramp up the supply of electric vehicles to meet EU car CO_2 targets in 2020/21 and beyond, longer range electric cars are finally becoming available. Driven by TCO and less sensitive to sticker price, the corporate fleets represent the most promising market segment that can go electric now. Greening company car fleets is an effective way to drive market transition to emissions-free cars, since over 65% of new cars sold in some European countries (i.e. Germany and Poland) are company cars.

Crucially for the wider transition to electric cars, once corporate fleets start to go electric, a continuous influx of EVs from company fleets to private hands is to be expected, as in only three to four years (on average a leasing contract duration is 45 months) after a new car is added to the corporate fleet, it will be sold off as a relatively new car on the second hand market.

So once companies go for electric cars in their fleets, the defleeting process after a four year ownership period - a conservative scenario[5] - will be churning out millions of vehicles yearly into the second hand market: 1.4 million EVs are to be expected in 2025 and 3.4 million in 2030, according to T&E calculations, thus providing affordable EVs in almost-new condition for used car buyers. Most of those EVs from the wider corporate fleets would come from leasing companies alone: 800,000 EVs per year (out of 1.4 million) will go into the used car market in 2025, and 2.7 million EVs (out of 3.4 million) in 2030. This is when a huge shift is expected in the private market, as the average "Jane and Joe" in Europe buys second hand cars (of any powertrain), not new ones[6]. So accelerating electrification of fleets means much faster and affordable penetration of those cars into the wider European car stock.

[5] T&E calculations of how many EVs will reach the second hand market after having been registered and driven as part of a corporate fleet use a 4 year ownership period. However, many company cars have a much lower average ownership period: for example, car rental companies defleet after 4 to 22 months, with an average period of ownership of only 13 months.

[6] Vanherle, K. and Vergeer, R. (May 2, 2016). Data gathering and analysis to improve the understanding of 2nd hand car and LDV markets (...). DG Climate Action, European Commission. Retrieved from https://ec.europa.eu/clima/sites/clima/files/transport/vehicles/docs/2nd_hand_cars_en.pdf

2.2. Favourable economics

On top of having more vehicles than the private segment and thus being a key driver for market demand, the share of EVs in the company car segment is already today higher (about 4% in 2019) than in the private segment (2.7% in 2019) because they already make economic sense. Furthermore, during the COVID-19 crisis, and according to JATO Dynamics[7] EVs were the only segment which grew year on year: in the first quarter of 2020 the growth of EVs was driven by fleet and business registrations. Company cars accounted for 59% of all EV sales in Q1 2020, with volumes increasing by 73% over Q1 2019.

The higher uptake of EVs amongst companies can be explained by the fact that company purchase decisions are driven by Total Cost of Ownership (TCO), not purchase price alone. And electric cars are cheap to own but currently costly to buy, which is one of the main barriers to private EV adoption. The purchasing costs of EVs are still higher than those of cars with internal combustion engine powertrains, but the most recent data[8] suggests that falling battery pack prices will take electric cars to price parity in the mid-2020s.

People underestimate the total cost of owning a car by about 50%[9], illustrating car owners' very low awareness of their vehicle lifetime costs. Companies are TCO oriented, and before making any investments the fleet managers analyse the total cost of ownership: running costs, repairs, taxes, maintenance, depreciation and resale values. When that TCO analysis is made, electric cars become the optimal investment[10]. Fully electric company cars are already the cheapest option today, both for large/premium and medium models, as can be seen in the figures below displaying the T&E model calculations and results.

For the large/premium cars comparison we have used a Tesla Model 3 (BEV), a Mercedes C200e (HEV) and a Mercedes C180d (ICE, diesel), all driven 27,000 km per year, with a 4-year ownership period, charging infrastructure that is amortised over 15 years, electricity or fuel costs paid by the company,

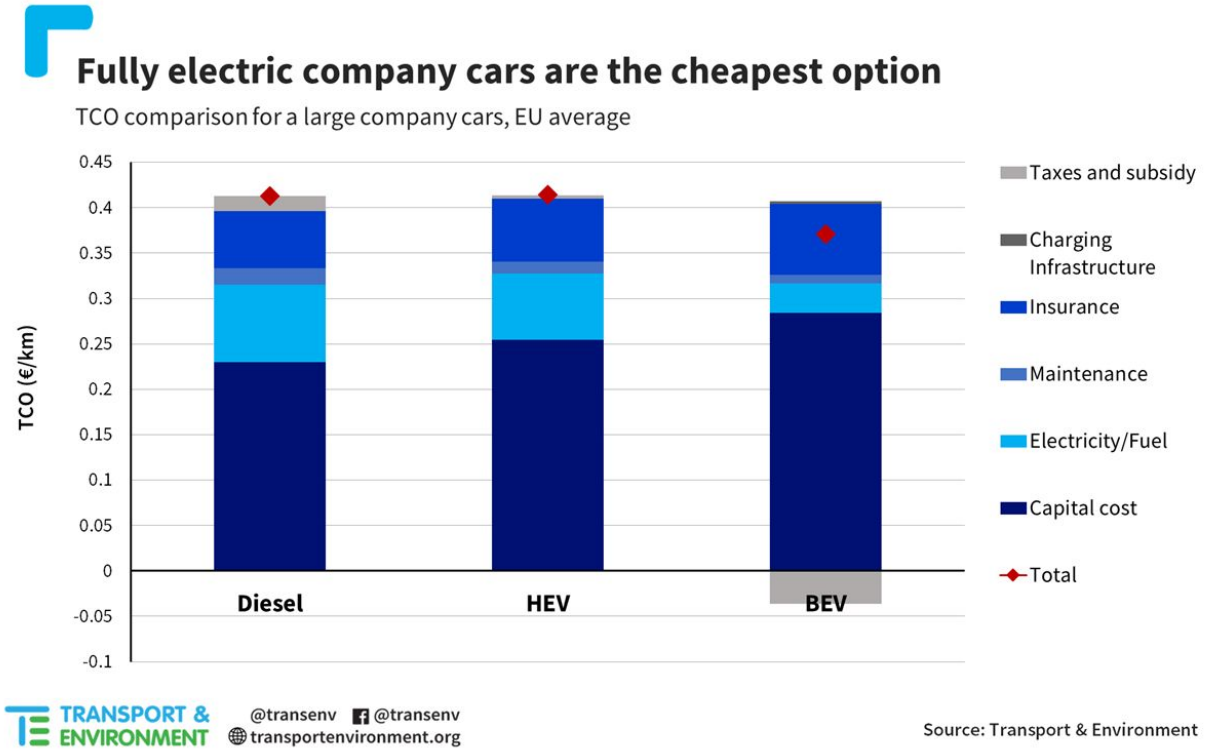
[7] Munoz, F. (2020, June 16). Europe is the new fortress for the world's BEVs. JATO Dynamics. Retrieved from https://www.jato.com/europe-is-the-new-fortress-for-the-worlds-bevs/

[8] Bullard, N. (2019, April 12). Electric Car Price Tag Shrinks Along With Battery Cost. Bloomberg. Retrieved from https://www.bloomberg.com/opinion/articles/2019-04-12/electric-vehicle-battery-shrinks-and-so-does-the-total-cost

[9] Andor, M.; Gerster, A.; Gillingham, K; Horvath, M. (April 2020). Running a car costs much more than people think - stalling the uptake of green travel. Nature. Retrieved from https://www.nature.com/articles/d41586-020-01118-w

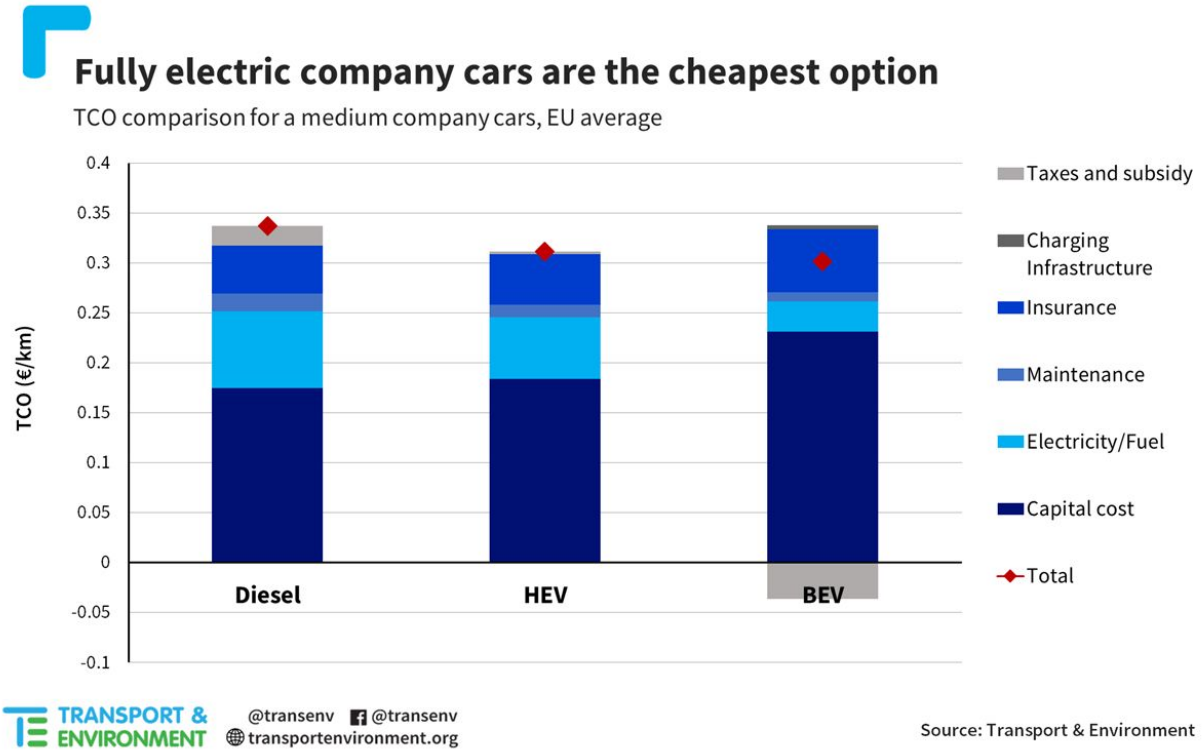
[10] Van der Goot, M. (2019, OCt 1). The Total Cost of Ownership of EVs vs Traditional Vehicles. Retrieved from https://www.leaseplan.com/en-ix/global-fleet-insights/tco-ev/

average oil prices from 2019, and a leasing contract with 8% finance rate. Residual values after 4 years were set at 35% (for all vehicles), and electricity and fuel consumption were extracted from Spritmonitor and EV-database, averaged in 5 key EU cities: Paris, Berlin, Madrid, Lisbon, and Brussels.



The calculations for large company cars show that the BEV is 9% cheaper than the ICE car: 0.37 €/km vs. 0.41 €/km. This means that a company using an all-electric car instead of a diesel would save 4,320 € on average over a 4-year period.

The same assumptions were used to perform the calculations for the medium sized company cars comparison: the all-electric vehicle (BEV) selected is a Nissan Leaf 62 kWh, the hybrid (HEV) is a Toyota Prius, and the diesel (ICE) is a Skoda Octavia. And the results are strikingly similar: the all-electric Nissan Leaf (BEV) is 12% cheaper than the diesel Skoda Octavia, and 3% cheaper than the Toyota Prius (HEV). The costs per km for each vehicle were: 0.30 €/km for the all-electric, 0.34 €/km for the diesel, and 0.31 €/km for the hybrid.



The TCO calculation of course also takes into account the existing tax benefits for EVs, as seen in purple on the bar charts above, which shows that part of the TCO benefit comes from taxation policies favourable to EVs.

This all shows there is no business case anymore for companies to operate diesel or petrol vehicles in their fleets. Combining the TCO focus of companies with the fact that most countries provide generous fiscal regimes for companies who purchase EVs, it makes sense for the corporate/leasing channel in Europe to go full electric starting now.

2.3. The consequence of not going electric

The 10 largest leasing companies in Europe together own an estimated fleet of almost 10 million vehicles. As seen above, an overwhelming majority of their cars are powered by diesel or petrol engines. But another calculation is still to be made: how much CO_2 do those fleets emit per year?

Based on the inputs on those leasing companies provided by Dataforce, which contains insights on the powertrain composition of the fleets, and knowing that the average fleet mileage is 27,000 km per year, we can calculate the CO_2 emissions. Data from the European Environment Agency[11] shows that new diesel cars emitted 120.9 gCO_2/km on average from 2016 to 2019, while new petrol cars emitted 123.6 gCO_2/km. These figures, however, are unrealistic as they use the outdated NEDC cycle. A more realistic approach would be to use the real-world performance of vehicles, which shows a divergence of 42% for company cars[12]. For the electric vehicles in their fleets, when the powertrain composition is undisclosed by the leasing company, we assume the same sales split of HEVs, PHEVs, and BEVs as in the total EU market[13].

Based on these figures, calculating the CO_2 emissions of those 10 leasing companies' fleets shows a daunting result: **they are emitting 44.3M tonnes of CO_2 per year**. The fleets of the top leasing companies emit more CO_2 than the largest coal-fired power plant in Europe, more than the most polluting shipping company, more than the most polluting airline, and almost as much as a whole EU country: Slovakia. The CO_2 emissions of those 10 leasing companies' fleets alone are equivalent to the climate-wrecking emissions of 24.6 million privately owned cars[14]. And we are subsidising corporate fleets with European taxpayers' money.

These figures might seem hard to believe, but they are easily explained by the sheer number of vehicles the leasing companies own in Europe, and the very low percentage of electric vehicles in their fleets. For example, one of the largest leasing companies, **ARVAL** (with 1.25 million vehicles in Europe) has a 55% share of diesel cars in its fleet, that is: 685,000 cars. The CO_2 emissions of Arval's diesels alone can hence be calculated at 3.2 million tonnes per year. And an averaged sized coal-fired power plant in the EU emits 2.9 million tonnes of CO_2 per year[15]. So we can clearly see that the yearly emissions of diesel cars from a large fleet alone already surpass the emissions of an average coal-fired

[11] Average CO_2 emissions from newly registered motor vehicles, European Environment Agency. Retrieved from annual reports from 2016 to 2019. See for example: https://www.eea.europa.eu/data-and-maps/indicators/average-co2-emissions-from-motor-vehicles/assessment-2

[12] From Laboratory to Road White Paper (January 2019). ICCT. Retrieved from https://theicct.org/sites/default/files/publications/Lab_to_Road_2018_fv_20190110.pdf

[13] As reported by ACEA. Retrieved from https://www.acea.be/statistics/tag/category/registrations-and-press-release-calendar

[14] CO2 emissions from cars, the facts, Transport & Environment. The average car in the EU consumes 1.8t CO2 per year. Page 15. Retrieved from: https://www.transportenvironment.org/sites/te/files/publications/2018_04_CO2_emissions_cars_The_facts_report_final_0_0.pdf

[15] Coal Power in Europe (May 2017). Climate Action Network Europe. Retrieved from http://www.caneurope.org/docman/coal-phase-out/3117-factsheet-coal-power-in-europe/file

power plant. The sum of CO_2 emissions of the 10 largest leasing companies in Europe are the consequence of not going electric: **44.3M tonnes of CO_2** emitted every year, contributing towards catastrophic climate change.

Furthermore, the 10 million vehicles belonging to the 10 largest leasing companies in Europe represent just 3.7% of the total car park[16], but they emit 8% of the total CO_2 of passenger cars. Regulating a small number of companies can hence bring substantial benefits in terms of CO_2 reductions for the transport sector.

3. Taxation systems for company cars

Corporate registrations can be divided into different categories. (1) OEM/manufacturers registrations: a car manufacturer that registers a vehicle under its corporate name, for example to be driven by employees or for testing purposes; (2) dealership registrations: a car dealership that registers a car under the dealership name, for example to be used as a demo car for potential customers; (3) short-term rentals/rent-a-car registrations: a car rental company that registers vehicles under their name, to be rented to customers; and (4) true fleet.

The true fleet category includes all registrations that are not identified by any of the other categories: for example, fleets of emergency services, public administration fleets, carsharing fleets, fleets of leasing and long-term rental companies, etc.

In Europe, 8 countries hold approximately 87% of the European true fleet market: Germany, France, the UK, the Netherlands, Belgium, Spain, Italy and Poland. An overview of taxation systems for the true fleet category of those 8 countries therefore represents very well the overall European company cars taxation in Europe.

[16] The EU vehicle fleet size is 271 million passenger cars, according to ACEA: https://www.acea.be/statistics/tag/category/size-distribution-of-vehicle-fleet#:~:text=The%20European%20Union's%20motor%20vehicle,than%2041%20million%20commercial%20vehicles.

3.1. Company cars are subsidised

Consolidated Tax income on Passenger cars of true fleets – 8 largest fleet markets

DATAFORCE

Country	Total regular tax income 2019 from fleet *in millions euro €*	Total benefits true fleets *in millions euro €*	Benefits Fleet vs. Private / vehicle *4yr period, PC Medium, €*
GER	6,470	7,991	845
UK	5,137	2,824	- 4,024
FRA	4,814	1,789	1,569
ITA	2,381	965	2,233
SPA	1,839	1,649	3,498
POL	1,821	4,373	5,157
NL	3,147	647	- 10,346
BEL	1,801	1,578	6,542
Σ	27,410	21,817	

Tax includes: Purchase tax, annual taxation, road tax, VAT, benefit in kind taxation fleet drivers, vehicle depreciation

The first column of the figure above shows the total tax income from company cars (which includes purchase tax, annual taxation, VAT, Benefit-in-kind taxation of corporate fleet drivers and vehicle depreciation) for 2019 in the selected countries. The second column shows the total benefits of the fleet vehicles (with VAT returns and depreciation write-offs driving the benefits). The third column on the right shows the taxation benefit / disadvantage of fleet vehicles vs. privately-owned cars, calculated per vehicle. For this calculation, a medium sized vehicle with an internal combustion engine has been taken as reference.

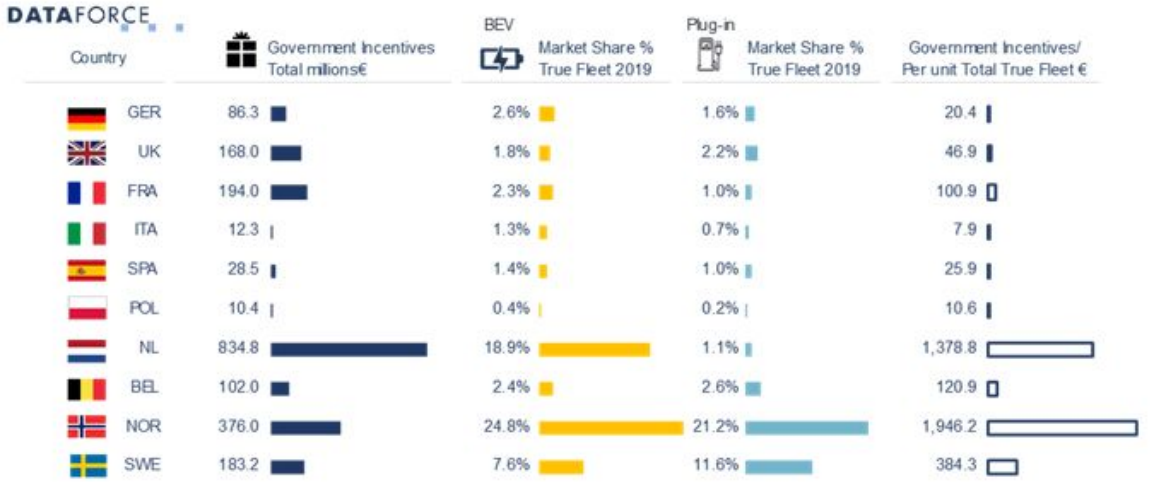
It is striking that there are only 2 countries on the list where company cars generate more tax than a private vehicle: the Netherlands and the UK., i.e. where they are not fully subsidised.

The other 6 countries that form the group holding approximately 87% of the European true fleet market are all subsidising company cars: Belgium pours €6,542 per vehicle (and that translates into €196 per capita: each Belgian taxpayer gives 196€ yearly to subsidise company cars); Poland €5,157; Spain €3,498; Italy €2,233€; and France 1,569; while Germany is the only country below the €1,000 bar (with €845€ per vehicle) but has the highest total true fleet subsidy with almost €8 billion.

3.2. Incentives and tax advantages for electric vehicles in corporate fleets

The 8 European countries that hold approximately 87% of the true fleet market analysed in the section above (Germany, France, the UK, the Netherlands, Belgium, Spain, Italy and Poland) can also be used for an overview of the incentives and tax advantages that exist for electric vehicles in corporate fleets. The figure below also adds Norway and Sweden to have further reference.

Consolidated Government incentives for Electrical Vehicles and Plug-ins – Largest EU markets



Tax incentives on: Purchase tax, annual taxation, road tax, VAT, benefit in kind taxation fleet drivers, vehicle depreciation

What is most striking from an analysis of the figure above is the comparison between the total government incentives (first column to the left), which shows how many million euros were spent by each government to subsidise EVs, and the total amount of overall subsidies for company cars as shown in section 1.1 of this report: the total overall subsidies by European governments add up €32 billion, while EV incentives only get €1.4 billion.

As a reminder, Germany subsidises (through VAT deductions and depreciation write-offs) corporate fleets with €12 billion every year, but only €86.3 million go to EV incentives: that is a meager 0.7% of the total. The UK's €168 million government incentives for EVs that can be found on the figure above represents only 3% of the overall €5.7 billion subsidies for company cars. The Netherlands is the only country that spends most (52%) of its subsidies to corporate fleets in EV incentives (€834.8 million out of the overall €1.6 billion).

It is hence not surprising that the Netherlands had a 20% EV share of the true fleet category within company cars in 2019, while the other countries amongst the 8 selected all stayed below the 5% EV share level for true fleets.

3.3. EV incentives and tax advantages: Germany vs the Netherlands

In the section 3.2 above we have identified a worst case scenario for EV incentives (Germany, with only 0.7% of company car subsidies dedicated to EV incentives), and a best case scenario (the Netherlands, with 52% of company car subsidies dedicated to EV incentives). In this section, an analysis of the incentives per car - for both all-electric vehicles and plug-in hybrids - in each of the two countries will be performed, together with a taxation comparison for diesel, fully electric, and plug-in hybrids vehicles.

3.3.1. EV incentives and taxation for company cars in Germany

The figure below shows that from the total €86 million the German government uses to incentivise EVs in corporate fleets, €58 million go to purchase tax incentives, €7 million go to road tax incentives, and €22 million for company car tax incentives.

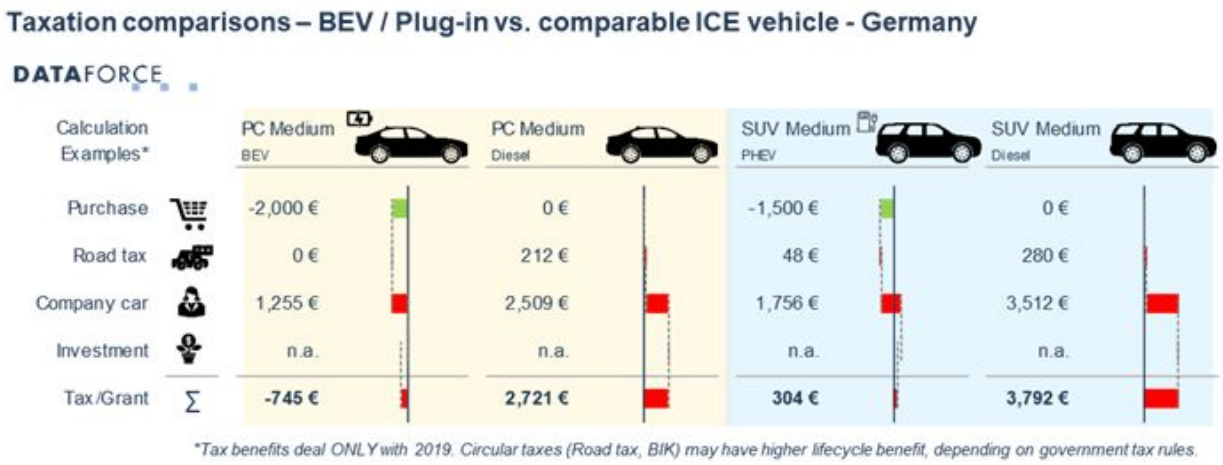
Government incentives for Electrical Vehicles and Plug-ins – Germany

DATAFORCE

		Government Incentives	Average incentive / car	
Fleet Market Share	%		2.6%	1.6%
Purchase		58 Mn €	2,000 €	1,500 €
Road tax		7 Mn €	137 €	0 €
Company car		22 Mn €	1,503 €	820 €
Investment		-	-	-
	Σ	86 Mn €	3,640 € BEV	2,320 € PHEV

On a per-car basis, each fully electric car in a German corporate fleet (representing only 2.6% of the total company car fleet) gets an average of €3,640 - while a plug-in hybrid (only 1.6% of the corporate fleet) gets €2,320 on average.

A taxation comparison between a diesel sedan vs a fully electric sedan; and plug-in hybrid SUV vs a diesel SUV shows how much each type of vehicle pays (or gets subsidised) in Germany with the 2019 taxation system for company cars, as seen on the figure below.



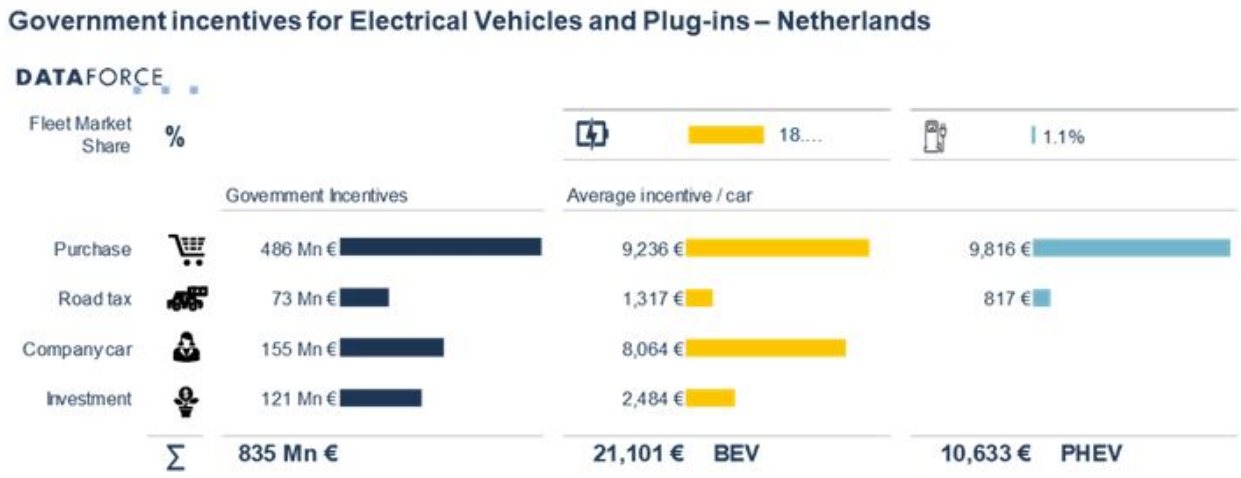
The German government provided a purchase grant in 2019 which both private individuals and companies were eligible for. This government incentive of €2,000 for BEVs and €1,500 for PHEVs was provided if the dealership or manufacturer granted an equal discount and the car list price was below €60,000. In the case of leasing, it was up to the leasing company to which extent they passed any of the grant onto their customers.

BEVs are exempt from road tax, but for Germany this is not a big extra incentive, as it results only in an advantage of €137 per year. BEVs and PHEVs with less than 50 gCO_2 receive a 50% discount on the BIK amount (which has been raised to 75% in 2020). This has led to all German manufacturers offering plug-in hybrids as much as they can in order to benefit. For fleets, this benefit led to a more notable effect than the purchase grant.

The taxation comparisons show that EVs are the cheapest option from a tax and incentives perspective in Germany, since running an all-electric sedan as company car will bring a €745 discount per year vs a €2,721 cost for a diesel sedan, while a medium SUV powered by a diesel engine will cost €3,792 per year vs €304 for a PHEV SUV.

3.3.2. EV incentives and taxation for company cars in the Netherlands

The figure below shows that from the total €835 million the government of the Netherlands uses to incentivise EVs in corporate fleets, €486 million go to purchase tax incentives, €73 million go to road tax incentives, €155 million go to company car tax incentives, and €121 million for investment incentives.

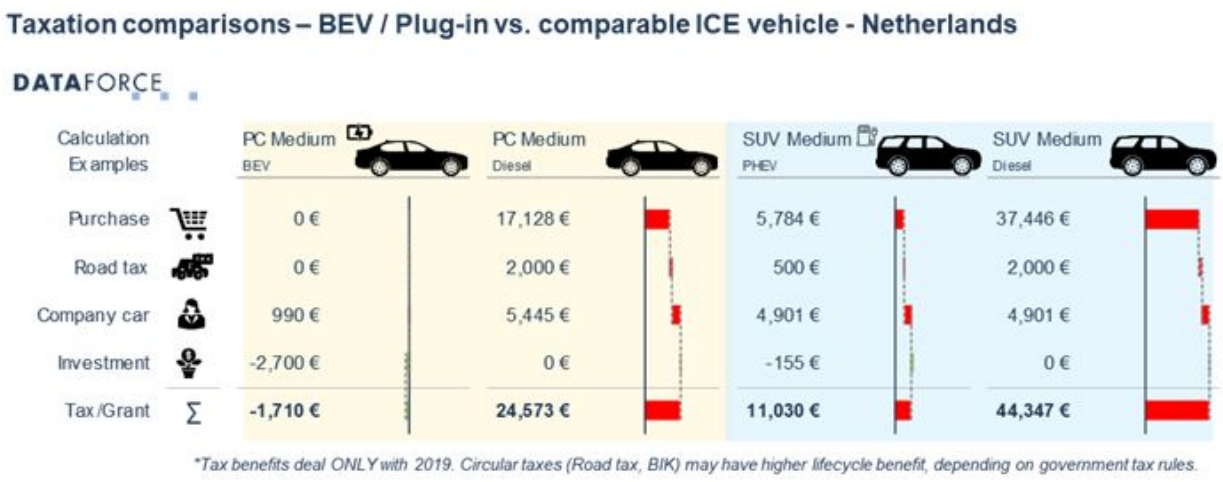


On a per-car basis, each fully electric car in corporate fleets in the Netherlands (representing 18.9% of the total company car fleet) gets an average of €21,101 - while a plug-in hybrid (only 1.1% of the corporate fleet) gets €10,633 on average.

The Dutch purchase benefits are substantial due to the very high tax on CO_2, on top of which BEVs receive a favourable tax rate, which leads to very serious benefits for the fleet driver. All cars except BEVs pay a registration tax for each gram of CO_2 they emit plus a base tax of €360. Tax per gram increases with higher CO_2 values, i.e. 2 €/g between 1 and 71 g/km, 429 €/g for emissions exceeding 157 g/km. For PHEVs different rates have applied since 2017 which has resulted in a reduction to their tax advantage.

Road tax for the Netherlands depends on vehicle weight, fuel type, CO_2 and province. BEVs are exempt from the tax while PHEVs get a 50% discount of the tax levied. The Benefit-in-kind in the Netherlands for BEVs is 4% of MSRP, up to €50,000 MSRP, then 22% for everything above. All other vehicles pay 22% as their taxable amount.

A taxation comparison between a diesel sedan vs a fully electric sedan; and plug-in hybrid SUV vs a diesel SUV hence shows how much each type of vehicle pays (or gets subsidised) in the Netherlands with the 2019 taxation system for company cars, as seen on the figure below.



If a company opts for a diesel sedan in its corporate fleet, the vehicle will cost €24,573 in taxes, while an equivalent fully electric sedan will bring €1,710 incentives as income: a massive difference of more than €25,000 per year, per car. For SUVs the difference is even bigger, as a diesel medium SUV will cost €44,347 per year in taxes to a company, while an equivalent plug-in hybrid SUV will cost €11,030: an impressive €33,000 less.

4. How to accelerate the EV transition of corporate fleets

Company cars are a huge driver of the new car market in Europe and will shape the European fleet via the second-hand market for decades. Instead of giving a subsidy to the car industry to pollute - up to €32 billion per year - governments should use taxes such as benefit-in-kind, VAT returns and depreciation write-offs to ensure all corporate registrations are electric by 2030. Accelerating the transition will require actions at three different levels: corporate, national and EU level.

4.1 Reform national taxation

At Member State level, a lot can be done to steer car leasing companies' offer towards electric vehicles by reforming national taxation systems, beginning with company car benefits: VAT deductions and depreciation write-offs should only be applicable to zero-emission vehicles. Furthermore, depreciation write-offs for EVs should be either instant or accelerated, to encourage corporate fleets to invest in EVs.

Crucially, the BIK (Benefit in kind) tax should be used as incentive for EV uptake, and should thus have zero or very low rates for fully electric vehicles, and high rates for ICE vehicles. An example of this system can be found in the UK, where from 6th April 2020, all-electric cars will be eligible for a 0% BIK rate for the 2020/21 tax year. The BIK rate will then rise to 1% in 2021/22 and to 2% in 2022/23, being held at 2% for 2024/24 and 2024/25.

As this report includes both all-electric zero-emission vehicles and plug-in hybrids into the EV definition, another crucial action at national level would be to differentiate the two and limit the PHEVs in corporate fleets to companies where access to workplace charging is available, and when the plug-in vehicle has a minimum range in all-electric mode of at least 80 km. Furthermore, no fuel card can be provided, to encourage charging the battery at all times, and to optimise PHEV usage.

4.2. Install workplace charging infrastructure

Since the TCO focus for companies clearly indicates there is hardly a business case to operate vehicles other than EVs, why is it that EV adoption is not higher today in corporate fleets?

As Dataforce indicates in the study, there is a clear lack of charging infrastructure, specifically in buildings - both for office charging and for residential overnight charging -, and that is proving to be a bottleneck for faster EV adoption, in particular for company car fleets, which could benefit greatly from office buildings being equipped with EV chargers.

T&E underlined in its earlier report[17] about charging infrastructure in the EU that, to keep up with the upcoming electric surge - estimated to be between 33 and 44 million electric cars in 2030 - EU's infrastructure framework needs to prioritise electric charging and be in line with the increasing demand for public and private charge points. Installing charging stations in offices and commercial

[17] RechargeEU: how many charge points will Europe and its Member States need in the 2020s (January 2020), Transport & Environment. Retrieved from https://www.transportenvironment.org/sites/te/files/publications/01%202020%20Draft%20TE%20Infrastructure%20Report%20Final.pdf

properties in particular - and simplifying the approval procedures across EU countries - is what companies need to be able to electrify their fleets.

Companies are able to amortise the installation of the charging infrastructure for a long period of time, e.g. 15 years, much longer than the duration of the vehicle leasing. As shown in our TCO calculations in section 2.2 above, this contributes to make EVs more cost competitive. And the needed office and home charging infrastructure does not even require high power chargers, which are more expensive. Since the average commute in Europe is below 30 km per day, 5 hours of charging at low power from a standard outlet tops up the battery: there is hence no need for expensive office/home wall chargers to be installed, which will drive EV costs down further.

Installing workplace charging infrastructure hence requires actions at the three levels:
(1) at EU level, the Alternative Fuels Infrastructure Directive (AFID) should be revised and turned into a Zero Emission Infrastructure Regulation (ZEIR) for a more harmonized and rapid implementation of charging points, with mandatory targets for Member States;
(2) at the national level, governments should quickly target current market gaps and leverage investment in the cabling of buildings and the strengthening of the electricity grid, especially in urban areas, particularly focusing on the “right to plug” to ensure that EV drivers in the EU wait no longer than three months to get charging, whether at home or work; and
(3) at company level, investing in charging infrastructure in company premises, offering free charging at work instead of distributing fuel cards to employees, and for car leasing companies: offering the installation of a charge point with every EV leasing contract.

Workplace charging is not the only infrastructure required, and Member States should also enact laws to boost the deployment of a much-needed infrastructure for fast and ultra-fast charging (more than 100 kW) for the highways network, simplifying the administrative process for the installation and commissioning of charging stations; and to create charging hubs in urban areas, targeting mainly zero-emissions fleets for passenger transport services, urban distribution of goods, last mile delivery, and carsharing services.

4.3. Companies should not overestimate ICE vehicles residual values

The number of BEV models available on the market has stayed consistently low in the past since carmakers saw them as mere compliance tools, delaying the investments into producing mass-market all-electric cars as they didn’t need them before 2020. But since the 2020/2021 CO_2 emissions standards entered into force, Europe will now see a surge in the number of new EV models

coming to market this and next year[18]. Provided the CO_2 standards are raised upwards post 2025 - something the European regulators are currently contemplating - the EV supply is expected to grow and reach at least 35-50% sales by 2030. So the model choice is no longer a constraint.

The process to dispose of end-of lease vehicles to the second-hand market is a critical aspect for leasing companies. The residual value risk is the main risk they are confronted with, as the resale value of each car at the end of the lease is a factor that influences the financing operation greatly. If residual values are too low, then there is more to finance and leasing costs go up. If the residual values are high, the leasing costs drop significantly. It should be noted that the latest data on value retention shows EVs are becoming much better than ICE vehicles at residual values[19]. But with battery technology improving fast and a limited second hand market, there remains much concern around EVs resale price. To assure lease companies, governments should in the interim guarantee the risk of EV residual values by offering top-ups if their price drops below 40% in the second hand market.

One of the reasons why ICE vehicles' residual values are very likely to worsen is the ICE vehicle bans and restrictions coming across Europe. Actually all cities should put in place zero-emissions zones, and ban ICE vehicles from city centres by 2030. The ICE vehicles residual value in particular is hence becoming an issue that lease companies should start worrying about, given that drivers won't be able to enter city centres in the coming years with polluting vehicles. This will very likely affect negatively the residual value of those vehicles as second hand buyers will show less interest in buying them. In turn, as ICE vehicles residual values continue to get worse, EVs residual values will keep improving.

4.4. Steer & mandate company cars towards EVs

A desk research of the main car leasing companies online offer will show that they only display the rental price, which typically offers a 36 to 48 months leasing contract that includes a fixed amount of yearly kilometres, maintenance and insurance. This pricing method will very likely deter fleet managers from choosing electric cars, as it does not include a full TCO analysis that also takes taxes and electricity/fuel costs into account, and that would show EVs are cheaper, as explained in section 2.2 of this report.

[18] Electric Surge: Carmakers' electric car plans across Europe 2019-2025 (July 2019). T&E. Retrieved from https://www.transportenvironment.org/sites/te/files/publications/2019_07_TE_electric_cars_report_final.pdf

[19] Tesla Model 3 value drops 5.5% in 1 year, BMW 3 series value drops 38% in 1 year (May 8th, 2020). Shahan, Z. (Cleantechnica). Retrieved from https://cleantechnica.com/2020/05/08/tesla-model-3-value-drops-5-5-in-1-year-bmw-3-series-value-drops-38-in-1-year/

Car leasing companies should hence be required to display monthly prices based on a full TCO analysis. Furthermore, they should also be required to publish all the assumptions underlying their residual value calculations. These recommendations affect companies only.

Moreover, at the EU level the Clean Vehicles Directive should be reviewed to require private fleets to go zero emissions. For company cars, a mandate for any leasing/long term rental company with a vehicle fleet size in the EU of 200,000 or more to purchase 30% of its fleet as zero-emission vehicles from 2025, and 100% by 2030, should be put in place. Because of the consumer focus of car rental services, the timeline can be more flexible, and thus any rent-a-car/short term rental company with a vehicle fleet size in the EU of 100,000 or more shall purchase 30% of its fleet as zero-emission vehicles by 2026, 70% by 2030 and 100% by 2035.

Any public administration fleet in the EU Member States shall purchase 50% of its fleet as zero-emission vehicles from 2025, and 100% by 2030. Crucially, the EU institutions and Member States governments should lead by example, electrifying their fleets faster: 50% of its fleets should be zero-emission vehicles from 2023, and 100% by 2027.

These recommended measures relate to new sales/purchases and do not affect the existing fleets of the above companies. Car lease contracts have an average duration of 45 months, and rental companies replace their vehicles even faster, often every 4 to 22 months. This means that agreeing on such rules in the next year or two will not have a serious impact on the current balance sheets of the companies. Instead it would influence their future purchase decisions and be in line with the natural replacement cycle of vehicles.

5. Conclusion

The EU has binding climate targets for 2030 - and also for 2050 by having signed the Paris Agreement - which apply to transport, the only sector whose emissions have kept growing since 1990. Cars have been identified as one of the biggest contributors to transport greenhouse gas emissions, so bringing them down requires reversing the ever-rising trend and phasing out the sale of internal combustion engines. The low-hanging fruit is corporate fleets, as accelerating the transition to zero-emission vehicles already makes economic sense, and can reap huge climate benefits by targeting millions of high-mileage vehicles with only a few measures.

The measures outlined in section 4 above, at company car level, Member State level, and city level, together with an ambitious EU mandate on fleets to go electric, a revision of the car CO_2 standards and an upgrade of the Alternative Fuels Infrastructure Directive to transform it into an EU Regulation that deploys a 21st century EV charging network in Europe with 3 million charging points by 2030, would propel the EU automotive industry forward. It would represent a triple win: a win for the economy, a win for the environment, and a win for air quality.