



Is Uber delivering on its promises?

November 2021

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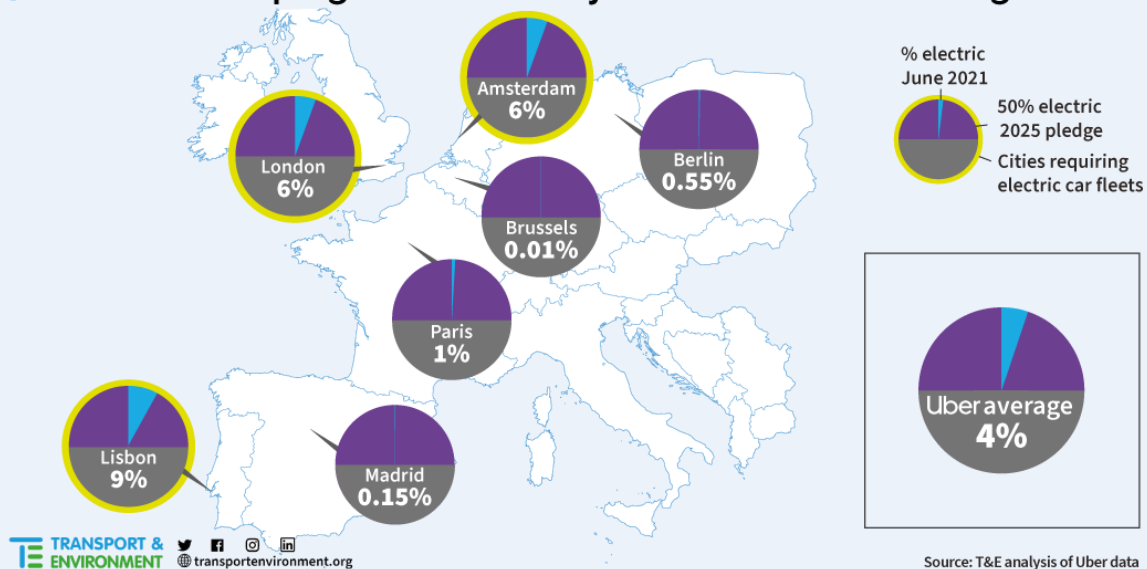
Executive Summary

In September 2020, after a coalition of green NGOs pressured Transportation Network Companies (TNCs) to clean up their fleets given their disproportionate impact on city pollution, Uber announced half of its rides across seven European capitals (Amsterdam, Berlin, Brussels, Lisbon, London, Madrid and Paris) would be emissions-free by 2025. Uber also added it would aim for 100% within five years of having the economic and regulatory conditions to make driving all-electric cars as profitable as running combustion engine cars.

Ahead of COP, a number of major companies came out with similar voluntary commitments, many around electric cars, so it is important to ask how serious these are. More than a year since Uber's promise, how well has the company done? The data provided by Uber to T&E shows that in the 18 months going from January 2020 to June 2021, the platform has almost tripled the share of kilometers driven on all-electric mode: from 1.54% to 4.08%. The moderate rise of electric rides in the Uber fleet has had a direct impact on the total emissions: emissions intensity have fallen 6% from January 2020, to 97.2 gCO₂/km.

Uber will need to be much more ambitious if it wants to deliver on its promise of electrifying half its rides in Europe across seven cities. The current electrification levels are still very low—with a share of kilometers driven on all-electric mode below 5%—and Uber only has slightly over three years left to reach 50%. Moreover, Uber's target is an aggregated percentage across seven cities, which means that if London and Amsterdam both reach 100%, Brussels and Berlin can stay at 0%.

Uber's mixed progress to electrify shows need for fleet regulation



Averaged numbers indeed mask huge differences in progress in individual cities. When looking at city level data, there is a substantial gap between the Uber targets to decarbonize and the observed rates of electric vehicle uptake, particularly in cities like Brussels, Madrid, or Berlin —where Uber has hardly made any progress. Uber data shows that Lisbon (9%), Amsterdam (6%), and London (6%) currently have the highest rates of electric rides on the Uber platform. But Paris (1%), Berlin (0.55%), Madrid (0.15%) and Brussels (0.01%) are lagging behind, with near zero rates. How can this be explained?

Uber seems to have done well where they already had to —in London or Amsterdam— because city authorities require company operations to go electric (alongside a successful charging roll-out). Where no regulatory push yet exists —e.g. in Brussels or Berlin— little progress happened.

This goes beyond the availability of sufficient charging for drivers. A deeper look at the regulatory framework in the 7 cities shows how the role of the local governments can influence the speed of the zero emissions transition in ride-hailing, and indicates a need for mandates (or requirements) to ensure the steady uptake of electric vehicles in urban high-mileage fleets. If cities don't set ambitious and clear targets for urban fleets to achieve zero emissions, combined with an appropriate deployment of charging infrastructure, Uber —and other urban high-mileage PHV and taxi fleets— will have little incentive to move away from operating polluting vehicles.

Cities must hence be much bolder, and should introduce new legislative frameworks to require taxi, private hire, car sharing, and ride-hailing services in urban areas to go to zero emissions: all high-mileage fleets operating in urban areas have to be made of zero-emission vehicles from 2025 on, with no exemptions made based on license type. Moreover, cities as well as governments must improve charging infrastructure with a coherent strategy, providing charging at the request of a driver —or group of drivers— in a way that widespread near-home, slow and affordable charging can be guaranteed, in combination with city fast-charging hubs.

Above all, this is a lesson for all delegates at this week's COP conference to take note of: industry commitments on their own are not enough, they require both regulatory push and supportive policies (e.g. charging) to happen on time and within the ambition required by the Paris Accord. With all the frenzy around EV days around, there is nothing better to make it happen than to cement the zero emissions goal for cars, vans, trucks and buses into the law no later than 2035 —alongside a clear trajectory in the 2020s to scale up effectively.

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ABBREVIATIONS

TNC	Transportation Network Company
PHV	Private Hire Vehicle
TCO	Total Cost of Ownership
LEZ	Low Emission Zone
ULEZ	Ultra Low Emission Zone
ZEZ	Zero Emission Zone
EV	Electric Vehicle
ZEV	Zero Emission Vehicle
BEV	Battery Electric Vehicle
PHEV	Plug-in Hybrid Vehicle
ICE	Internal Combustion Engine
CNG	Compressed Natural Gas
COP	Conference Of the Parties

1. Introduction

Ride-hailing has disrupted urban transportation. Ride-hailing platforms —called transportation network companies (TNCs) or private-hire vehicle (PHV) operators depending on the market— put passengers in contact with drivers of vehicles for hire via mobile apps or websites. While taxis can be both hailed and pre-booked, and payment is usually made directly to the driver, ride-hailing drivers are only allowed to pick up pre-arranged bookings, and payment is made through the app. Ride-hailing platforms have experienced a tremendous increase in popularity since 2010, when Uber was launched.

But after 10 years of operations, and with mounting evidence that ride-hailing platforms were adding congestion and pollution to cities, coalitions of green NGOs pressured TNCs to clean their fleets. That is why, in September 2020, Uber announced half of its rides across seven European capitals (Amsterdam, Berlin, Brussels, Lisbon, London, Madrid and Paris) would be emissions-free by 2025¹. Uber also added it would aim for 100% within five years of having the economic and regulatory conditions to make driving all-electric cars as profitable as running combustion engine cars.

Following the announcement, T&E and its partner NGOs agreed to closely monitor Uber's decarbonisation efforts to make sure it delivered on its promises. This briefing hence analyses the progress Uber has made one year after its electrification announcement in Europe.

1.1. T&E's campaign to clean up Uber

In September 2019, a year before Uber's announcement, T&E had already started raising awareness² on the fact that TNCs like Uber or Lyft added congestion and emissions to the cities where they operated, and reduced the use of public transport. To clean up transportation network companies like Uber, the #TrueCostOfUber campaign —a cross-continental coalition of green NGOs— was launched. A report³ was published demonstrating that Uber was adding more polluting car trips to already-clogged European cities such as London and Paris (see figure 1 below), contributing to air pollution and climate change.

The #TrueCostOfUber campaign asked Uber to stop adding fossil-fuelled cars to city roads and to rapidly electrify its existing fleet. It also asked cities to swiftly roll out dedicated fast charging infrastructure for Ubers and Taxis.

¹ UBER Spark! Report, September 8, 2020

https://d1nye1zh1ys8wfo.cloudfront.net/static/PDFs/Uber_Spark_report.pdf?uclid_id=2679f299-34bf-4460-b850-17f7fb9f01a9

² T&E, Uber and Lyft increase pollution and undermine public transport, study shows. September 2, 2019

<https://www.transportenvironment.org/discover/uber-and-lyft-increase-pollution-and-undermine-public-transport-study-shows/>

³ T&E, Europe's giant "taxi" company: is Uber part of the problem or the solution? November 21, 2019

[https://www.transportenvironment.org/wp-content/uploads/2021/07/T&E_Europe%20s%20giant%20taxi%20company%20is%20Uber%20part%20of%20the%20problem%20or%20the%20solut...%20\(1\)_1.pdf](https://www.transportenvironment.org/wp-content/uploads/2021/07/T&E_Europe%20s%20giant%20taxi%20company%20is%20Uber%20part%20of%20the%20problem%20or%20the%20solut...%20(1)_1.pdf)

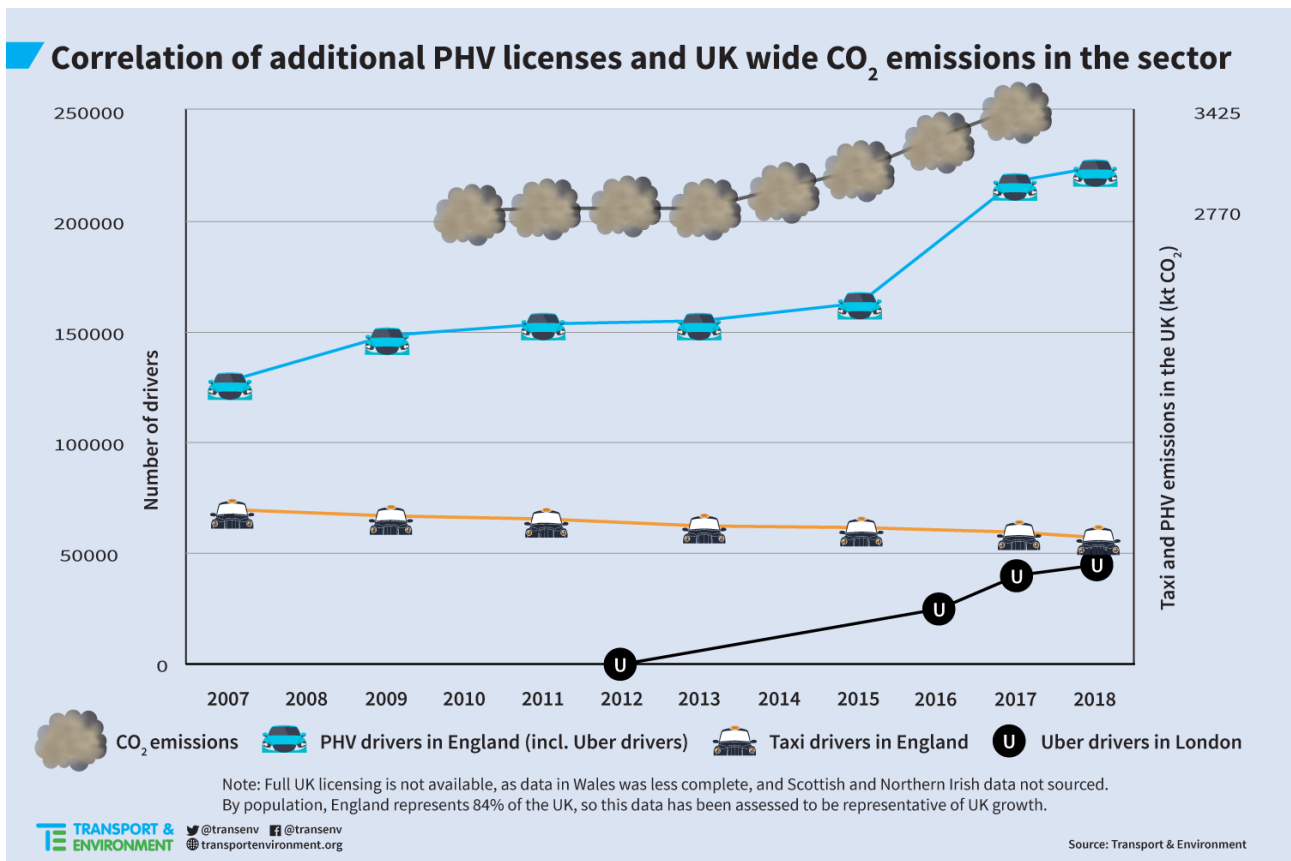


Figure1: Correlation of PHV licenses and CO₂ emissions

After a few months of campaigning, in June 2020 T&E published a new report⁴ analysing the costs of electrifying ride-hailing in Europe. The report proved the economic case to electrify high-mileage fleets (such as ride-hailing services) had reached a tipping point, as cities and nations announced bans on diesel and petrol cars, and the offer of long range and affordable electric vehicles was growing rapidly thanks to the EU’s car CO₂ regulations. The report also showed that electrifying ride hailing services’ would not only lead to substantial CO₂ savings, but also meant better economics for Uber drivers across most vehicle segments in the five EU cities analysed (Berlin, Brussels, Lisbon, Madrid, Paris).

Looking at costs over the whole use period of the vehicle for a typical ride-hailing driver (so-called total costs of ownership - TCO), the overall result showed medium all-electric vehicles were on average 14% cheaper to run than an equivalent diesel when access to slow charging was available, as shown in figure 2 below. The analysis found that where drivers had the possibility to charge their battery-electric vehicle (BEV) either at home or at a depot, they could save up to €3,000 per year with an EV compared to an

⁴ T&E, Why Uber should go electric, June 2020

<https://www.transportenvironment.org/wp-content/uploads/2021/07/Why%20Uber%20should%20go%20electric.pdf>

equivalent diesel car. However, drivers would be worse off in a scenario where they almost exclusively relied on public fast charging.

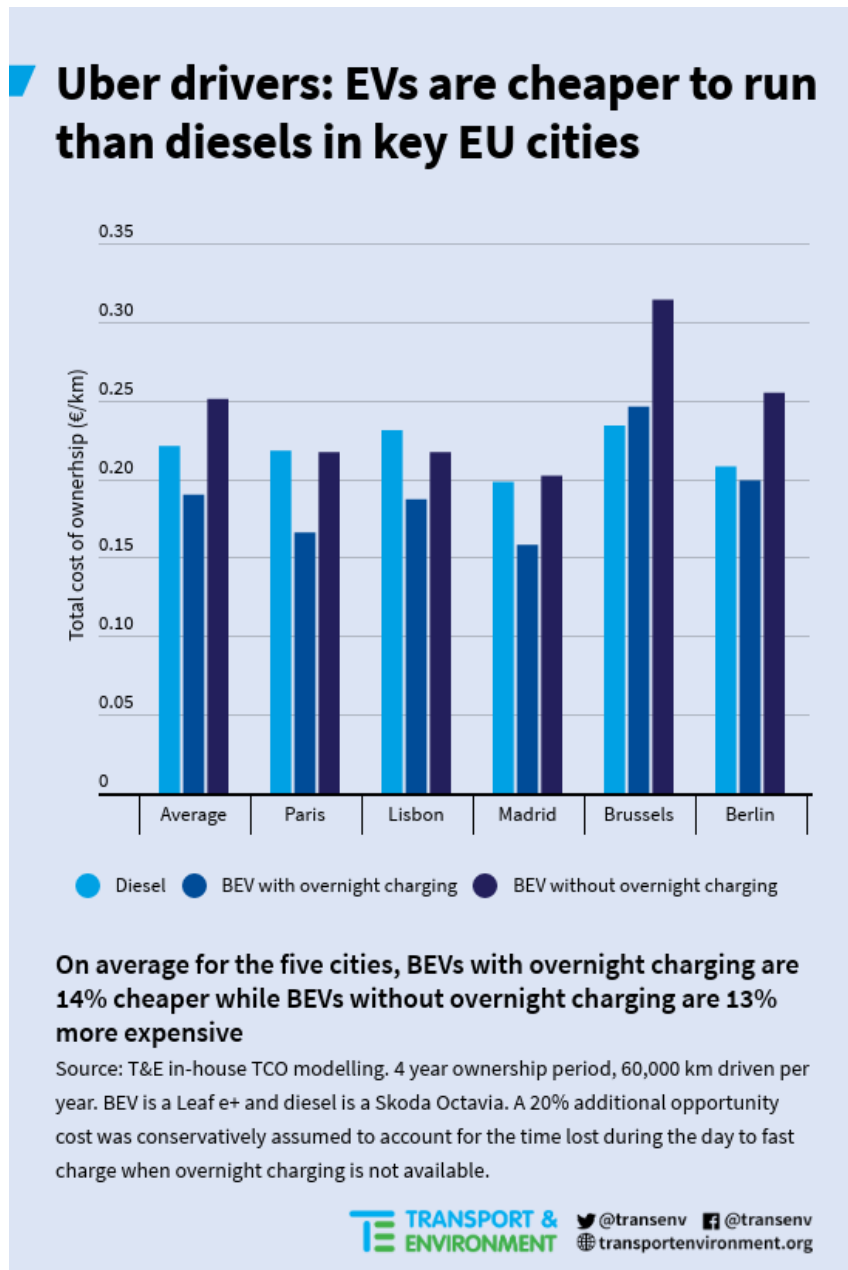


Figure 2: TCO analysis of BEVs vs Diesel

T&E's #TrueCostOfUber campaign also underlined that cities have a crucial role to play in enabling a faster transition to EVs among high-mileage drivers. Key measures to successfully electrify urban high-mileage fleets include mandating taxi and Uber-like services to transition to fully electric operations by 2030 at the latest, with a clear timeline and incentives helping the switch to zero-emission. To facilitate EV uptake, the creation of dedicated fast charging infrastructure is crucial, as well as support for home

and slow on-street charging in residential areas where high-mileage vehicle drivers live. Furthermore, zero-emission zones in cities should be introduced as part of the wider transition to emissions-free mobility.

On top of the crucial role cities have, the #TrueCostOfUber campaign insisted that Uber and other ride-hailing companies needed to firmly commit to electrification in large European cities in order to lead the change and secure the framework needed for all their drivers to switch to EVs. The campaign also stated that such a commitment would be in line with many cities' strategies to ban the internal combustion engine, and would deliver short- and long-term benefits for ride-hailing companies and their drivers.

Ultimately, T&E's campaign underlined that a clear commitment to zero-emission would also need to apply to other high-mileage urban fleets, including delivery vehicles and taxi fleets, which experience similar TCO structures and also account for a disproportionately high mileage in EU cities.

1.2. Uber announcement and commitment

On September 8, 2020, less than one year after T&E and partner NGOs launched the #TrueCostOfUber campaign, Uber announced⁵ that it will provide half of its rides in emissions-free vehicles across seven European capitals by 2025, and is committing to have a 100% electric fleet within five years of the cost of running an electric car reaching parity with a petrol or diesel vehicle. The seven cities are Amsterdam, Berlin, Brussels, Lisbon, London, Madrid and Paris, and the 50% goal will be counted at an aggregated level between cities —i.e. some cities will reach higher percentages, some lower.

Together with the European announcement, Uber also published specific strategies at the national level in France⁶ and Portugal⁷, and at city level in London⁸. These strategies include plans to phase out internal combustion engine vehicles, financial plans to help drivers transition to electric vehicles, and partnerships with charging infrastructure operators to deploy chargers in the areas where drivers live. In France, the platform will reject new diesel vehicles starting in 2022, and will remove all existing ones from its fleet by 2024. Furthermore, Uber has set specific electrification targets for France: 50% of vehicles on the platform will be fully electric (BEVs) by 2025, and 100% by 2030.

T&E has calculated that switching half of Uber's journeys across the seven selected European cities by 2025 to electric rides will save approximately 500,000 tonnes of carbon dioxide emissions. This is equivalent to removing 275,000 privately-owned cars from the roads. And those figures are based on

⁵ Uber, Driving a Green Recovery, September 8, 2020

<https://www.uber.com/en-AE/newsroom/driving-a-green-recovery/>

⁶ Uber, Nos Engagements Pour Une Mobilité Durable, September 8, 2020

<https://www.uber.com/fr/blog/mobilite-durable/>

⁷ Uber, A Nossa Viagem Rumo à Mobilidade Sustentável, June 30, 2020

<https://www.uber.com/pt/blog/o-nosso-compromisso-rumo-a-mobilidade-sustentavel/>

⁸ Uber, How the Clean Air Plan Works, January 16, 2019 <https://www.uber.com/en-GB/blog/clean-air/>

today's electricity generation —since more electricity is generated from renewable sources every year, electric vehicles are constantly getting cleaner.

With electric cars set to reach price parity with petrol and diesel cars from the mid-2020s, and with EVs being already cheaper to run today, professional drivers like taxis and Ubers can reap the early benefits of ultra-low fuel bills because they drive on average four-to-five times more than private motorists. Uber's announcement hence makes economic sense and shows leadership.

2. Uber progress towards zero emission rides

When Uber announced in September 2020 that it would provide 50% of its rides in emissions-free vehicles across seven European capitals by 2025, T&E agreed to closely monitor the ride-hailing platform decarbonisation efforts.

The data provided by Uber to T&E shows that in the 18 months going from January 2020 to June 2021, the platform has almost tripled the share of kilometers driven on all-electric mode: from 1.54% to 4.08%, as can be seen on figure 3 below.

Share of EV trip kilometres in key European capitals

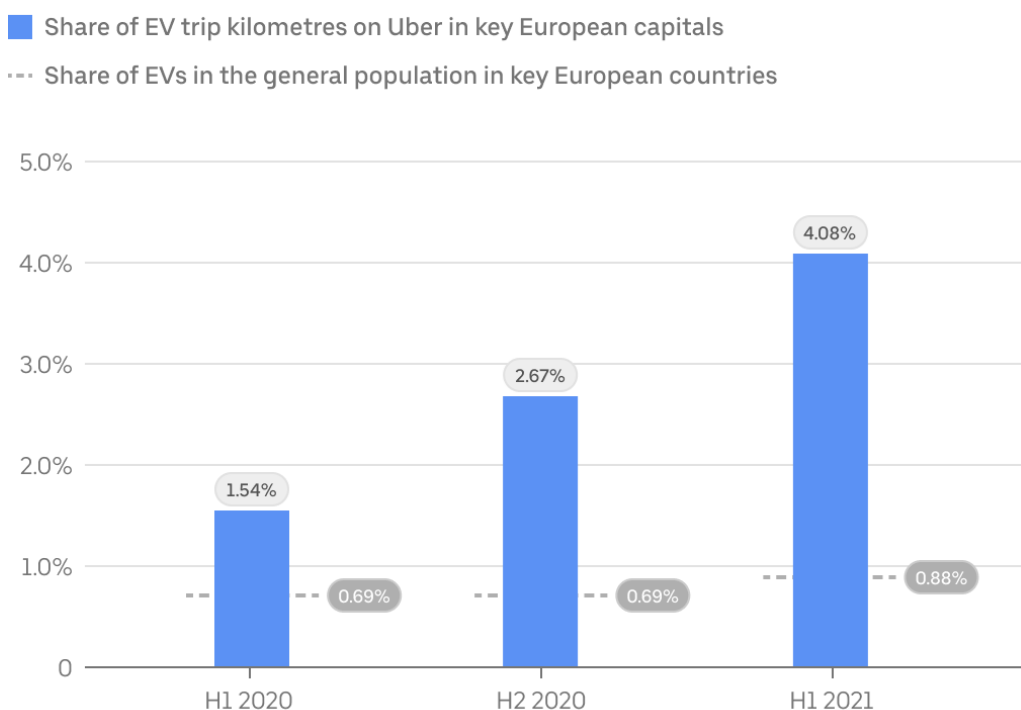


Figure 3: Uber distance driven by fuel type in 7 cities

The moderate rise of electric rides in the Uber fleet has had a direct impact on the total emissions intensity—which has fallen 6%, to 97.2 gCO₂/km.

However, the share of electric rides on a city basis shows a different picture. London may have more than tripled the amount of EVs in Uber's fleet over the past year and a half, but their share of rides is still only at 6%. Amsterdam matches London's 6% with a much more modest increase of EVs in the fleet, but Lisbon is doing better than both with a 9% share of electric rides. The remaining 4 cities show a dire situation in terms of share of electric rides delivered by the Uber EV fleet: Paris has 1%, and Madrid (0.15%), Berlin (0.55%, down from 1.56%) and Brussels (0.01%) are nearing 0%.

While the share of all-electric kilometers is still very low today, and far from the 50% goal to be reached by 2025 at an aggregated level across the 7 cities, it has almost tripled in the first 18 months after the announcement—going from 1.54% to 4.08%—and hence sets a promising trend. Uber will however need to keep building momentum to charge up the electrification of its rides.

3. Regulatory framework in 7 key European cities

The gap between the Uber targets to decarbonize and the observed low rates of electric vehicle uptake, particularly in cities like Brussels, Madrid, or Berlin, indicates a role for stronger government oversight and support to make ride-hailing fleets go to zero emissions. Uber data shows that Amsterdam, Lisbon and London currently have the highest rates of electric rides on the Uber platform: between 6 and 9%. But Madrid, Berlin and Brussels are lagging behind with near zero rates. A look at the regulatory framework in the 7 cities will show how the role of the local governments can influence the speed of the zero emissions transition in ride-hailing.

3.1. London

The city of London introduced an Ultra Low Emission Zone (ULEZ) in April 2019⁹, covering the same area as the Congestion Charge Zone (a defined area of inner London¹⁰) until 25 October 2021, and expanding to cover the area within the North and South Circular Roads after that date. The ULEZ has tighter emissions control regulations: vehicles that do not meet the emissions requirements must pay a penalty fee to enter the zone (£12.50), on top of the Congestion Charge Zone fee of £15. A wider Low Emission Zone (LEZ) also exists, and London is progressively implementing zero emission streets and Zero Emission Zones (ZEs) where only zero emission vehicles will be permitted from autumn 2022. Furthermore, from January 2023 all new PHV licenses will require zero emission capable vehicles¹¹—i.e. vehicles that emit no more than 50

⁹ Ultra Low Emission Zone, Transport for London, <https://tfl.gov.uk/modes/driving/ultra-low-emission-zone>

¹⁰

¹¹ Emissions standards for PHVs, Transport for London, <https://tfl.gov.uk/info-for/taxis-and-private-hire/emissions-standards-for-phvs>

gCO₂/km and are capable of being operated without exhaust emissions for a minimum range of 10 miles (16.1 km); or emit no more than 75 gCO₂/km and can drive without emissions for a minimum range of 20 miles (32.2 km).

This is what explains why Uber has a high share of electric rides in London and why it has set a target of 100% ZEVs by 2025, which shows ambition as it goes beyond the minimum requirements set by the city (i.e. zero emission capable). It also proves that plug-in hybrids are not attractive enough to be used in high-mileage fleets because of a worse total cost of ownership than all-electric vehicles. But more importantly, it shows how cities can boost the uptake of zero emission vehicles in high-mileage fleets by setting ambitious emissions targets and clear timelines.

3.2. Lisbon

In the city of Lisbon there is also a Low Emission Zone (LEZ) with a regulated access system, called Zona de Emissões Reduzidas da Avenida, Baixa, Chiado¹². The LEZ covers part of the parishes of Santa Maria Maior, Misericórdia and Santo António, and when the access system is active, it allows entering and parking only to vehicles with a sticker. When the access scheme is not active, only vehicles that meet the Euro 3 standard are allowed. The sticker system has a colour code that grants access to residents, health services and emergency vehicles, to drop off and loading/unloading operations, to visitors of residents, garage owners, etc. Taxis are granted a red sticker and are free to access Lisbon's LEZ regardless of the powertrain of the vehicle and its emissions, but PHVs have to use an electric vehicle, which can get a blue sticker that allows access to the LEZ.

This regulatory framework explains why Uber currently has the highest rate of electric rides in Lisbon compared to the other 6 cities on their platform, as for PHV license holders, only zero emission vehicles (i.e. BEVs) can access the low emission zone in Lisbon. This confirms that a clear timeline to reduce emissions is crucial for the transition to zero emission vehicles in PHV and taxi fleets.

3.3. Amsterdam

The city of Amsterdam is working with taxi organisations to ensure that the entire taxi sector, including PHV operators, is emissions-free by 2025¹³. The 'Clean Taxis for Amsterdam' agreement contains a number of goals to make all taxis fully emissions-free by 2025. To that aim, the city government is already taking several key actions, such as: 'Green' taxis have priority, i.e. the taxi ranks at Central Station and Leidseplein are only open to low-emissions vehicles; environmental zones for taxis are in effect since 2018; diesel taxis from 2008 or earlier are prohibited from entering the city; more rapid charge points are being deployed for electric taxis; and parking is free at all charging points for electric taxis with a parking permit. As PHV drivers need to have a taxi licence in Amsterdam, the goal to make all taxis fully emissions-free by 2025 is hence also applicable to Uber.

¹² ZER Lisboa, Lisboa Camara Municipal, <https://zer.lisboa.pt/>

¹³ Taxis policy, City of Amsterdam, <https://www.amsterdam.nl/en/policy/policy-traffic/policy-taxis/>

The regulatory framework in Amsterdam thus directly impacts the share of electric rides found in the Uber platform today, which is as high as in London, and which will have to ramp up to 100% all-electric rides by 2025 to be able to keep offering rides in the city of Amsterdam. Amsterdam's leadership in ZEV high-mileage fleets is clear, with a regulatory framework that makes no distinctions between taxis and PHVs, unlike in other cities analysed in this report.

3.4. Brussels

The city of Brussels has a LEZ that covers the entire territory of the Brussels-Capital Region¹⁴, i.e. the 19 municipalities, with the exception of the Ring and some roads providing access to certain transit car parks. The access criteria for driving in the LEZ depends on the category, fuel and Euro norm of the vehicle, with petrol vehicles registered before 1996 and diesel vehicles before 2000 being banned from entering the LEZ today. The criteria will be tightened in 2022 and 2025, with all diesel cars registered under the Euro 5 or lower category banned from 2025. This translates into 9-year-old diesels still allowed in Brussels in 2025, together with 20-year-old petrol cars.

On top of the LEZ rules, PHV licenses are only granted to vehicles that meet specific technical requirements: a minimum wheelbase of 2.8m, and a sedan body type, among other requirements (PHV services in Brussels are defined as a luxury service). These technical requirements mean that, among the more than 100 different fully-electric models available on the market today, only half a dozen would be accepted to provide PHV services. Moreover, since March 2021, Uber drivers in the city of Brussels can no longer use their smartphones to arrange rides.

Because the city of Brussels' regulations on zero emission zones and emissions requirements for PHVs and taxis are not ambitious by 2025, Uber has almost no electric rides on their platform. This shows that Uber can electrify its fleet quickly when required to do so (i.e. in London, Amsterdam and Lisbon), but will lag behind when there is no regulatory pressure. If the capital of the EU wants to improve air quality and decarbonise transport, it should look at Amsterdam and treat all high-mileage urban fleets equally, setting clear rules and targets to go to zero emissions.

3.5. Berlin

The city of Berlin also introduced a LEZ in 2008, where only vehicles complying with certain emission standards are allowed, and today it covers the urban area within the S-Bahn ring. Only diesel cars registered under the Euro 4 norm or above and petrol cars Euro 1 or above, are allowed to enter the LEZ¹⁵. However, in an attempt to manage the city's nitrogen dioxide emissions, the Berlin Senate decided to implement a stricter Euro 6 low emission zone in July 2019 on parts of 8 streets —known as the Diesel Fahrverbot¹⁶ (diesel ban)— which allows only diesel vehicles with a Euro 6 standard or above to operate in

¹⁴ Low Emission Zone, City of Brussels, <https://www.brussels.be/lez>

¹⁵ Low Emission Zone, Berlin Senate, <https://www.berlin.de/sen/uvk/en/environment/air/low-emission-zone/>

¹⁶ Senate bans diesel cars from eight streets, Berlin official website, <https://www.berlin.de/en/news/5842730-5559700-senate-bans-diesel-cars-from-eight-stree.en.html>

specific streets of the city. On top of the LEZ rules, the recently passed amendment of the Passenger Transport Act (PBefG) still requires PHVs to return to their headquarters after they transported passengers: the “return to garage” rule. This produces unnecessary kilometers and leads to higher emissions.

The overall situation in Berlin, with polluting petrol and diesel cars being allowed in the low emission zone, and PHV regulations working against efficiency, doesn't encourage ride-hailing companies to transition to zero emissions fleets. However, there are no major challenges threatening PHV operations (like in Brussels since March 2021) so why isn't Uber more ambitious in Berlin? The data provided by Uber shows a drop in the share of electric rides in the latest 18 months: from 1.56% to 0.55%. Uber hence could and should be much more ambitious in Berlin. And like Brussels, the city of Berlin should look at Amsterdam to set targets for urban fleets to achieve zero emissions.

3.6. Madrid

The city of Madrid has a low emission zone too, combined with a Limited Traffic Zone, that limits how vehicles with certain emissions can enter the zone. It has been in place since November 2018 and has recently been revised¹⁷. Moreover, since April 2019 an emissions sticker is required to be able to drive and park in the municipal area of Madrid: only petrol cars registered under the Euro 3 norm, and diesel cars under the Euro 4, are allowed in Madrid. Vehicles with a zero emissions sticker are allowed to circulate freely in the LEZ and LTZ. Regulations for PHV in Madrid don't include return to garage or minimum waiting times, and mandate new PHVs to either display an ECO (hybrid or CNG vehicle) or a CERO sticker (PHEVs and BEVs/FCEVs). However, the ride-hailing sector in Madrid faces a regulatory uncertainty as a Decree from 2018 modified the national Transport Bill, limiting PHVs to only inter urban trips, with a 4 years transition period ending in September 2022. Beyond that date, unless there is regional regulation specifically addressing PHVs, license holders won't be allowed to continue providing urban trips.

In Madrid, the local regulatory framework combined with the low emission and limited traffic zones present an appropriate incentive for ride-hailing companies to go to zero emissions. While the lack of legal certainty is acting as a deterrent, Uber data in Madrid is disappointing: only 0.15% of their rides are electric. Like in Berlin, Uber could and should show much more ambition in Madrid.

3.7. Paris

The city of Paris was the first metropolitan area in France to establish a low emission zone¹⁸, in an attempt to reduce air pollution from transport. The Paris LEZ restricts access according to vehicles' classification in France's Crit'Air system, which is based on a vehicle's registration under the Euro emissions standards and its fuel type. The LEZ in Paris currently excludes cars registered under the Euro 4 standard at

¹⁷ Madrid 360, Ayuntamiento de Madrid, <https://www.madrid.es/portales/munimadrid/es/Inicio/Actualidad/Noticias/MADRID-360-la-estrategia-para-cumplir-con-los-objetivos-de-calidad-del-aire-de-la-Union-Europea/?vgnextfmt=default&vgnextoid=3d6c1609d818d610VgnVCM2000001f4a900aRCRD&vgnnextchannel=a12149fa40ec9410VgnVCM100000171f5a0aRCRD>

¹⁸ Zone à faibles émissions, Mairie de Paris, <https://www.paris.fr/pages/la-zone-a-faibles-emissions-zfe-pour-lutter-contre-la-pollution-de-l-air-16799>

minimum, but the criteria for entry into the zone will become progressively more stringent from now until 2030. By 2030 only zero emission vehicles (battery-electric and hydrogen fuel cell vehicles) will be permitted to enter the LEZ, but an important milestone will be reached long before: all diesel vehicles will be banned from the LEZ from January 2024. On top of the LEZ rules, in Paris PHV licenses are only granted to vehicles that meet specific technical requirements, which include a minimum vehicle length of 4.5m. However, EVs are exempt.

The regulatory framework and the low emission zone in Paris are appropriate to encourage ride-hailing fleets to go to zero emissions, but only by 2030. It is therefore no surprise that Uber aims at 50% electric rides in Paris by 2025, focusing on phasing-out diesel cars from their platform first. Paris could show more ambition by bringing forward the zero emissions date to 2025 for high-mileage urban fleets —both for taxis and PHVs, following Amsterdam’s lead. And Uber could show leadership by going the extra mile and fully transitioning to electric rides earlier than required.

4. Charging infrastructure in key European cities

T&E clearly underlined that cities have a crucial role to play in enabling a faster transition to EVs among high-mileage drivers. Key measures to successfully electrify urban high-mileage fleets include mandating taxi and Uber-like services to transition to fully electric operations by 2030 at the latest, with a clear timeline and incentives helping the switch to zero-emission.

To facilitate EV uptake, the creation of dedicated fast charging infrastructure is also crucial, as well as support for home and slow on-street charging in residential areas where high-mileage vehicle drivers live. To date, public charging infrastructure has been concentrated in wealthy areas, or in high visibility locations, but high-mileage drivers face a different situation. They are likely to reside in less wealthy areas with limited access to public chargers. Many drivers live in rented houses or apartment buildings rather than larger detached houses, which means they are also less likely to be able to install a private charger in their own parking space. Hence, the need for access to on-street slow overnight charging infrastructure is key.

4.1. London

The highest number of charge points in the city of London can be found in Westminster, which has the third highest median salary of any London borough¹⁹. However, Newham in East London (the borough with the second lowest median salary) is where most drivers using the Uber app live. As we can see on the map in figure 5 below, if PHV drivers go all-electric, charging demand would be highest in East London, but that area is poorly served by public charging infrastructure. If slow and cheap overnight charging is

¹⁹ Uber, SPARK! Partnering to electrify in Europe, September 8, 2020

https://d1nyezh1ys8wfo.cloudfront.net/static/PDFs/Uber_Spark_report.pdf?uclick_id=16a4c12d-04ef-4006-9d7d-eff24e7bbeee

not available in that area, switching to a BEV will likely mean that drivers' only option is to use rapid charge points during the day, which worsens the economics of operating a fully-electric vehicle, deterring drivers from moving away from ICE vehicles.

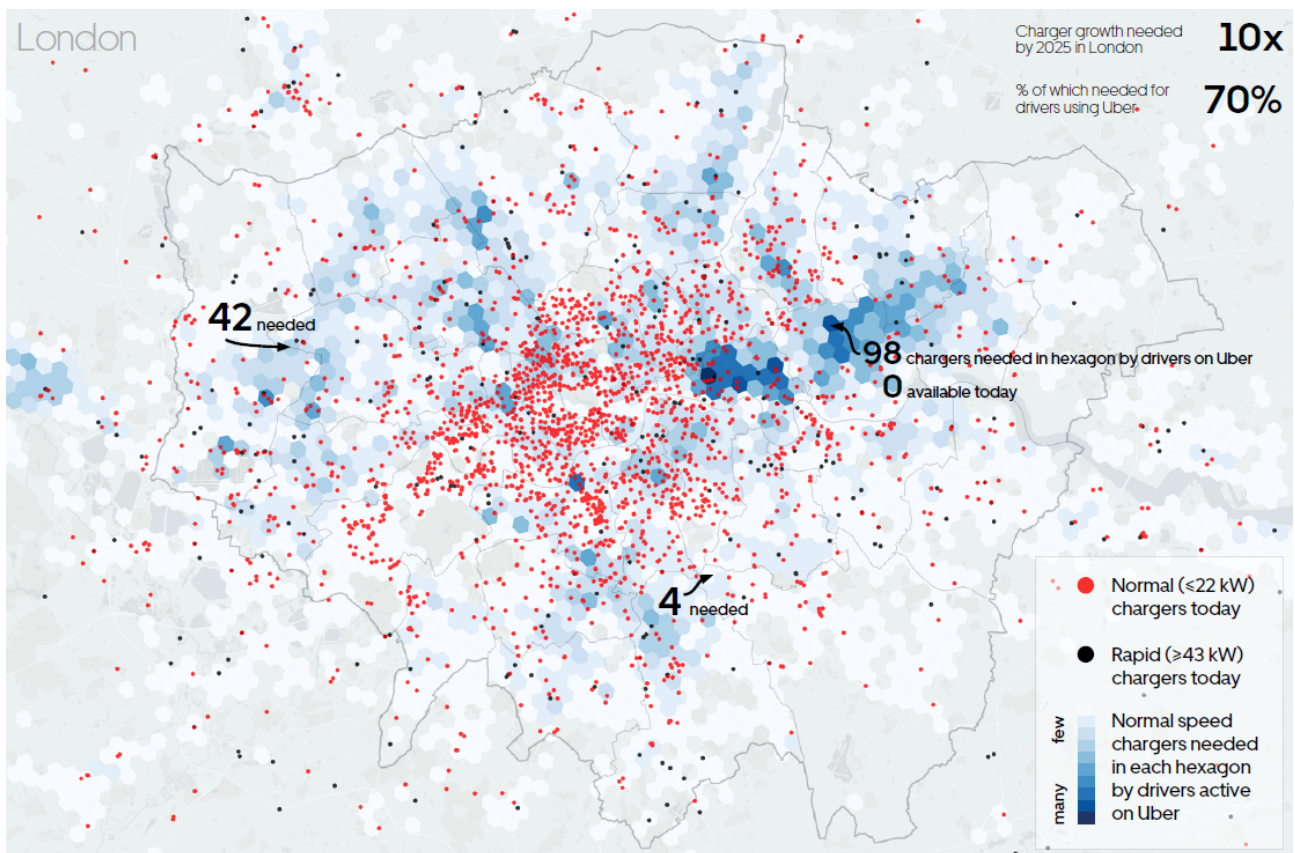


Figure 5: charging infrastructure location vs PHV charging needs in London

If Uber is 100% electric in 2025, the city of London will need around 10x more slow overnight chargers in residential locations. Of those, around 70% would be needed by PHV drivers using the Uber app. When comparing the charging needs of BEV drivers in ride-hailing platforms to the actual number, type and location of charge points available, it becomes clear that charging infrastructure is currently not adequate to support the city of London's targets to electrify PHV fleets.

4.2. Paris

Paris shows a similar situation to London: the highest number of charge points can be found in the 20 city districts (arrondissements) and in the most affluent suburbs West and South of the city. However, where the majority of Uber drivers live is in the areas North of Paris, as figure 6 below shows, such as Seine-Saint-Denis and Val d'Oise, but also in more remote areas such as Essonne, Seine-et-Marne, Yvelines.

Just like in London, if PHV drivers in Paris want to transition to zero-emission vehicles, the charging demand would be highest outside the boundaries of the city, in particular in Clichy, Saint-Ouen, Aubervilliers, and Bobigny, but those areas have poor public charging infrastructure.

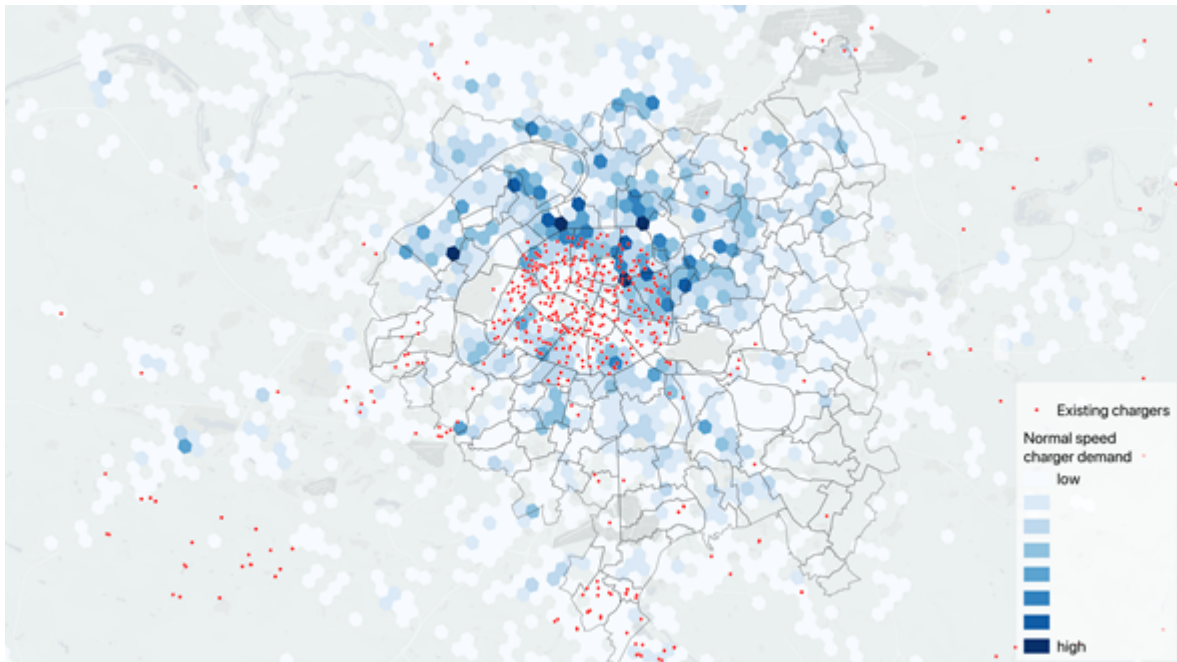


Figure 6: charging infrastructure location vs PHV charging needs in Paris

If slow and cheap overnight charging is not available in those areas, the only option for PHV drivers will be to use rapid charge points during the day in the city center. And with the higher costs of rapid charging, the economics of operating a fully-electric vehicle in Paris worsen, and drivers will be deterred from moving away from ICE vehicles.

4.3. Amsterdam

Amsterdam today is ahead of other cities in terms of charging infrastructure. Its EV charging infrastructure policy²⁰ is an example of a comprehensive strategy and demonstrates that a large network of on-street charging infrastructure can operate break-even without subsidies, and without billing drivers excessive prices.

²⁰ Charging and parking electric vehicles, City of Amsterdam
<https://www.amsterdam.nl/en/parking/electric-charging/>

Amsterdam has a unique demand-led approach to charging provision: a ‘right to charge’ initiative, designed to give a right to request a charger installation to those either owning a BEV or intending to purchase one, and with no existing chargers within 300 metres of their residence²¹. A charger is then installed and operational within 4-6 months. The policy has been a success: it successfully solved the availability of chargers problem, and resulted in high utilisation, as chargers were placed where demand was assured. This strategy proved much more effective than installing chargers at key locations (such as shopping areas and government buildings), which were underutilised. It also makes overnight slow charging the norm, which has two advantages: this removes the need for rapid charging during the day, significantly reducing the stress imposed on the grid, and it makes charging more affordable: rapid charging in Amsterdam costs roughly €0.65 per kWh, while normal on-street public charging can be used for €0.34 —only €0.12 more than home charging and without the upfront cost of installation. The ability to charge overnight can make or break the economics of operating a BEV for PHV and taxi drivers. The model that Amsterdam has used to date has gone a long way to improve the economics of BEV adoption in high mileage urban fleets, and other cities should consider it.

5. Conclusions and recommendations

Uber was clearly pushed towards a zero emission path by both its competition (Lyft was first to announce, in July 2020, a transition to zero emissions with 100% ZEVs by 2030) and coalitions of green NGOs. However, once on the zero emissions path, it has shown ambition to successfully accelerate the transition, by going the extra mile in London (where the city requires only zero emission capable vehicles by 2025, but Uber will go fully electric), or in Paris (where Uber is the only ride-hailing or taxi company currently phasing out diesel cars from its fleet).

However, Uber will need to be much more ambitious if it wants to deliver on its promise of electrifying half its rides in Europe across seven cities. First, because the current electrification levels are still very low —with a share of kilometers driven on all-electric mode below 5%, and only three years left to reach 50%— and secondly, because Uber’s target is an aggregated percentage across seven cities, which means that if London and Amsterdam both reach 100%, Brussels and Berlin can stay at 0%. Uber should be doing much more to increase the number of electric rides in Madrid, Brussels and Berlin. Having near zero percentages in those three cities should trigger warnings at Uber, and immediate action is required in those three cities.

Moreover, the analysis of the regulatory framework and charging infrastructure at city level that this report has performed shows that, when cities set ambitious and clear targets for urban fleets to achieve zero emissions, combined with an appropriate deployment of charging infrastructure, Uber and other urban high-mileage PHV and taxi fleets accelerate the transition. This also shows that Uber is electrifying its rides only where it needs to —to comply with local regulations— but doesn’t show ambition to electrify where it does not have to. It is hence clear that industry commitments on their own are not enough: they require both a regulatory push and supportive policies (especially around charging infrastructure) to happen on time and with the ambition required.

²¹ Openbaar oplaadpunt aanvragen, City of Amsterdam, <https://oplaadpuntaanvragen.amsterdam.nl/>

Cities must therefore be much bolder, and should introduce new legislative frameworks to require high-mileage fleets such as taxi, private hire, car sharing, and ride-hailing services in urban areas to go to zero emissions: all high-mileage fleets operating in urban areas have to be made of zero-emission vehicles from 2025 on, with no exemptions made based on license type. Crucially, cities must also improve charging infrastructure with a coherent strategy, providing charging at the request of a driver—or group of drivers—in a way that widespread near-home, slow and affordable charging can be guaranteed, in combination with city fast-charging hubs. Cities should not leave any more room for PHVs or taxis to lag behind in the much needed decarbonisation efforts.