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trust**

A step-by-step guide for local authorities on transitioning the taxi trade to electric vehicles



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This Guidance has been created by Energy Saving Trust's Local Government Support Programme, which is fully funded by the Department for Transport (DfT), our services are provided to local authorities at no cost.

Learn more at: <https://energysavingtrust.org.uk/service/local-government-support-programme/>

The programme offers local authorities tailored support including one-to-one workshops on developing EV charging infrastructure strategies, support on engaging with businesses on EVs, and assistance with surveying taxi and private hire drivers and licensing changes to accelerate EV adoption.

Contact the team at LGSP@est.org.uk

Why electrify taxis?

This guide aims to assist local authority officers tasked with accelerating the transition of the taxi and private hire trade to electric vehicles (EVs), in order to address the climate emergency and improve local air quality.

For simplicity, we use the term 'taxis' throughout this guide to refer to both hackney carriages and private hire vehicles or minicabs, unless otherwise specified.

The national picture

In 2020, the number of taxi vehicle and driver registrations reached a record of 298,800 registered vehicles.¹ Private hire vehicles now account for 77% of the taxis in the UK.²

A large proportion of taxis are registered outside London, approximately 60% indicating that taxi engagement and licencing policy changes are worthwhile for all local authorities across the UK to consider.

The UK Government plans to end the sale of all new petrol and diesel cars and vans by 2030, and hybrid cars and vans by 2035.³ By working with the taxi trade, local authorities can help drivers and operators prepare for this phase out while encouraging and facilitating a quicker switch to EVs. Drivers will benefit from the lower running costs of EVs, and it can also help the local area with achieving its net zero ambitions.

Importance of taxis as a mode of transport

Taxis play a key role in social mobility⁴ and transport mobility⁵ as they can help connect people to work, friends and family, especially in areas or at times of the day where there is limited public transport. They can also support individuals with specific needs, such as a disability, and may help some households to reduce their private vehicle ownership.

Impact of taxis on emissions

Taxis account for 4% of the UK's domestic transport greenhouse gas emissions despite accounting for only 0.93% of all registered cars⁶.

¹ UK Government, DfT, December 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/944680/taxi-and-private-hire-vehicle-statistics-2020.pdf

² UK Government, DfT, June 2021 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/997793/taxi-and-private-hire-vehicle-statistics-2021.pdf

³ UK Government, Nov 2020 <https://www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030>

⁴ Social Mobility - is the link between a person's occupation or income and the occupation or income of their parents. Where there is a strong link, there is a lower level of social mobility. Where there is a weak link, there is a higher level of social mobility. <https://www.gov.uk/government/organisations/social-mobility-commission>

⁵ Government Office for Science, 2019 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/780868/future_of_mobility_final.pdf

⁶ UK Government, DfT, Dec 2021 <https://www.gov.uk/government/statistical-data-sets/energy-and-environment-data-tables-env>

Due to their relatively high mileage, mostly urban journeys and vehicle age, taxis also contribute significantly to poor local air quality, impacting the health of residents, pedestrians, and other drivers. According to [Zemo](#), most taxi vehicles are around 7 – 13 years old⁷, most older taxi will be mainly Euro 4 diesels which emit three times as much NO_x (nitrogen oxide) compared to newer Euro 6 diesel vehicles. Some even older vehicles, such as Euro 3 diesels, will emit six times the amount of NO_x as Euro 6 vehicles.⁸

Also it is estimated that approximately 40,000 premature deaths are attributed each year to poor outdoor air quality in the UK⁹, with 28,000 to 36,000 deaths attributable to exposure from nitrogen dioxide¹⁰.

Steps for local authorities

This guide is intended to help local authorities put in place a plan to transition the taxi trade to EVs, most likely alongside wider local or regional climate action plans or an EV infrastructure strategy.

The approach outlined aims to give drivers the opportunity to better understand the costs and benefits of leasing or owning an EV, and to assist local authorities with providing “the right chargepoints, in the right place”. A collaborative approach to engagement ahead of any future licensing policy changes will also help to reduce the risk of taxi trade challenges due to union disputes, potentially delaying taxi consultation deadlines or taxi survey. Early engagement will support a smoother and open transition to zero emission taxis and ensure a resilient taxi trade ahead of the future government changes.

The three key steps are:

1. Engage with taxi drivers and build an engagement plan
2. Develop an electric vehicle charging infrastructure strategy
3. Embedding best practice Taxi licencing on Zero emission policy approaches

⁷Zemo, March 2019 https://www.zemo.org.uk/assets/reports/LowCVP_Low_Emission_Taxi_Guide-March_2019_Update.pdf

⁸ AA, 2017 <https://www.theaa.com/driving-advice/fuels-environment/euro-emissions-standards>

⁹ Royal College of Physicians, 2016 - <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

¹⁰ Public Health England, 2019 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/734799/COMEAP_NO2_Report.pdf

Step 1: Engage with taxi drivers and develop a plan

Proactive engagement with your taxi trade will help local authorities to better understand drivers' needs and how best to support them on the journey to a zero-emission fleet.

Create a Taxi Engagement Group

As a starting point, speak with your council colleagues in taxi licensing, economic development, communications, fleet, highways, asset and facilities management and climate/sustainability teams, in order to better understand how your authority currently communicates with local drivers and operators. You may wish to form an internal working group and could invite key trade representatives and EV champions (local drivers who can be EV advocates).

Key questions to ask include:

- How often and when do you communicate with your taxi trade? For example, only when there are regulatory changes, via monthly or six-monthly meetings etc
- Has there been any recent communications, and what was the level of engagement?
- What is often the intended purpose of communications? For example, to inform or to gather views.
- Has there been any previous work to engage on the topics of sustainability or electrification? This could support climate, economic, and communication strategies.
- Are there any existing EV drivers in the taxi or council who could be a potential champion?
- Does the authority hold a list of all licenced taxi drivers or operators?

Develop or enhance your engagement programme(s)

When creating or updating your taxi engagement plan, consider the current levels of engagement, any likely challenges or opportunities, resources, and budgets (including business case support). These can be identified and discussed as part of an internal taxi working group.

Sometimes knowing where to start can be difficult. The first immediate step you can take is to raise awareness of EVs. For example, you could use monthly newsletters or emails to detail how EVs can cut carbon emissions and reduce the health impacts of poor air pollution.

As a next step, you could tailor future communications for the taxi trade to encourage open conversations. For example, you could develop a taxi newsletter to help generate support for holding regular taxi trade meetings and then use these to gather feedback and views on decarbonisation initiatives.

Councils could set up an online platform or an enquiry line (for example, a dedicated email address or phone line to a council staff member that has expertise with EVs) that allows drivers to share ideas and ask questions between meetings or events. The council may choose to respond through the platform or via their website, emails, newsletters and so on.

Holding taxi or business events once or twice a year can also be an opportunity for councils to share best practices, provide vehicle demonstrations, gain feedback and ultimately, build trust and connections between the council and taxi trade. These events can also be used to launch or promote driver surveys and could be combined with local green community events or festivals to raise awareness of EVs and seek residents' feedback on electric taxis.

Our Local Government Support Programme can provide pre-event business development support, deliver online 1 hour 'Go Electric' events, and support or co-ordinate taxi workshops and events.

Gather baseline data through a survey

Once there is regular, two-way communication with taxi drivers, this is a good time to undertake an EV baseline survey of drivers and operators to inform your zero emission taxi licensing changes (Step 3).

A survey will help the authority better understand local driver demographics, driving and shift patterns, and driver attitudes towards electric vehicles. It could also be used to seek views on how the council could improve communication with the trade, increasing the effectiveness of your taxi engagement.

Through the Local Government Support Programme, Energy Saving Trust can provide fully funded support to survey the taxi trade in your area about their opinions on EVs and barriers to switching. We will work with you to develop a tailored survey and provide full analysis and summary of the results. We ask councils to distribute and promote the survey.

Once the survey data has been analysed, the next steps are to:

- Share and discuss the findings, including any feedback, with taxi drivers, internal council teams and neighbouring councils (this data could support wider plans where taxis cross authority borders and help influence the county or regional EV strategy).
- Gather mileage and downtime data annually, through vehicle telematic devices or apps, for example. This will help improve the accuracy of mileage and emission estimates, plus identify common journey patterns.

- Use this data to inform your EV infrastructure strategy and future licensing policy, as detailed in Step 3.

Understanding taxi apps and telematics

When exploring the use of taxi apps and taxi telematics to gather more information on your vehicles, you need to be aware of their limitations.

Taxi apps are generally an easy way of tracking taxi data, however this does not give 'in vehicle' details and is dependent on the driver being able to access the app and internet availability. Therefore, education and rules on the use of the app maybe required and need to be monitored to ensure compliance.

Taxi telematics are an "in-cab" software, which normally come with a supporting taxi app. This can give you real time data from the vehicle such as idling, harsh breaking and speeding which can ultimately change driver habits.

It is important when introducing these systems to be open and honest around the benefits this brings for business, to explain how drivers will be supported and to emphasise how most vehicle trackers have privacy features.

Share information and offer support

At all stages, seek to share information on EVs and chargepoints with drivers to help build their knowledge and allow informed decision-making. Here are some suggestions:

- Lead by example and raise awareness of the council's own fleet electrification aims and progress.
- Increase understanding of the EV market. For example, share information on the suitable new and second-hand EV models available, including typical range, purchase or lease and running costs (including fuel, servicing, tax, insurance).
- Signpost drivers to resources or/guidance that can help them understand how to switch to an electric vehicle, such as [Love my EV](#) which allows drivers to compare vehicles. You may also want to raise awareness of local Electric Vehicle Approved dealerships for drivers who wish to talk to someone in person. Operators may be interested in Energy Saving Trust's free [Fleet Health Check](#) and [Fleet management toolkit](#).
- Promote the existing and planned charging infrastructure in the area. Councils could highlight useful resources, such as Zap-Map or similar websites or apps, and provide information on home charging, chargepoint tariffs, payment access and parking restrictions, if applicable.
- Provide information on any local or nearby Clean Air Zones or similar schemes, and how an electric vehicle will enable drivers to avoid paying any local charges.

- Raise awareness of the grants available from the UK Government, such as the Workplace Charging Scheme, and the residential landowners home charging scheme (from April 2022), as well as any local business grants.
- Share successes and learnings from other areas that are encouraging taxi electrification.
- Offer 1-2-1 support for drivers, for example, at in-person 'clinic' sessions, online or over the phone.

Organise EV training and test drives

Opportunities for drivers to try out EVs can be highly valuable: many people find they enjoy the smooth driving experience and quick acceleration. Councils could organise EV training and familiarisation sessions for drivers. To get good attendance, ensure sessions are at times that drivers can attend and in convenient locations to minimise downtime.

Also, ask local EV dealerships if they can offer test drives for taxi drivers. Some councils have 'try before you buy' schemes to allow taxi drivers to experience an EV over a longer period, from a few days to several months, and test its suitability.

Introduce incentives to switch

Councils can also implement a range of fiscal and/or regulatory incentives to encourage EV uptake, as described in the tables 1 and 2. Ensure incentives are regularly reviewed and monitored to understand the impact of these incentives through the Taxi Engagement Group.

Table 1 – Fiscal Measures to support Zero Emission Taxis (ZEVs) uptake

Fiscal Measures	Considerations
Reduced fees for taxi licences and renewals	<ul style="list-style-type: none"> ▪ Lower the cost of licences for ZEVs. Consider a sliding scale reduction fee over time to support early adopters while ensuring financial sustainability longer term.
Stipulate the use of ZEVs for taxis as part of LA procurement guidelines	<ul style="list-style-type: none"> ▪ Include criteria in contract tenders to make these more favourable to operators with ZEV fleets. ▪ Work with local NHS Trust(s) and education authorities to modify criteria of patient/pupil transport contract tenders to require taxi operators to utilise a certain number of ZEVs.
Provide competitive advantages	<ul style="list-style-type: none"> ▪ Work with local landowners, larger businesses, and station operators to provide a package of benefits to ZEV drivers, which allow them to be more competitive.
Offer grants or loans to encourage purchase of ZEVs or EV infrastructure	<ul style="list-style-type: none"> ▪ Offer grants or loans to encourage purchase of new and second-hand ZEV taxis, including wheelchair accessible vehicles. ▪ Local Authorities could purchase and lease ZEVs to drivers for a few months, including free insurance, to reduce the perceived risks of switching and the upfront capital required. ▪ Offer a lower tariff for taxis at public chargepoints.

	<ul style="list-style-type: none"> Offer grants for local business to install chargepoints. Regular use by taxi drivers could increase revenue and commercial viability.
Parking restrictions/permits	<ul style="list-style-type: none"> Allow free access to car parks where dedicated taxi chargepoints are located. Allow free or discounted parking for ZEVs in certain locations and restrict parking of internal combustion engine vehicles in EV-only bays.

Table 2 – Regulatory Measures to support Zero Emission Taxis (ZEVs) uptake

Regulatory Measures	Suggestions
Flexible licensing caps	<ul style="list-style-type: none"> Can be used to give ZEV drivers priority in accessing a new licence.
ZEV-only taxi ranks or priority	<ul style="list-style-type: none"> Introduce ZEV-only taxi ranks or ZEV spaces at the head of ranks.
Introduce concession to address trade issues	<ul style="list-style-type: none"> Putting in place a commitment to ZEVs can help to address concerns raised by the taxi trade. For example, a preference for “green licences” could enable uptake in ZEVs.
Use planning policy to increase chargepoint provision	<ul style="list-style-type: none"> Set planning conditions around EV infrastructure, require charging infrastructure in new developments, ZEV-only parking bays and taxi ranks. Review the potential for section 106 agreements or community infrastructure levy to secure funding for EV infrastructure.
Type of vehicle and age limits	<ul style="list-style-type: none"> Allow a wide range of EV models as private hire vehicles Explore higher age limits for ZEVs
Traffic Road Orders or Car Parking Orders	<ul style="list-style-type: none"> To enforce any restricted parking in EV bays for ICE vehicles and EVs not charging

Case Study - example of incentive for taxi trade

Nottingham City Council engaged with their taxi trade and approved the use of advertisements on the outside of ZEV taxi's to help generate additional income to offset the cost purchasing a ZEV. Also the council also created an app which allowed hackney carriages to be booked online by residents, in which ZEV taxi can be chosen.

Step 2: Develop an Charging Infrastructure Strategy

A high-quality EV charging infrastructure network across the area is vital to enable the electrification of taxis. Due to their unique journey patterns and requirements, taxis should be considered as a distinctive user group when the council is developing an EV charging infrastructure strategy, alongside residents, SMEs, fleets, visitors. Building trust and buy-in from drivers and operators through this process is key ahead of any future licensing changes.

Where a council already has an EV strategy, you may wish to review this to ensure there is adequate consideration of taxis.

In discussions with your taxi engagement working group, some key questions to consider are listed below, with a more extensive list in the following checklist.

- **What mix of public chargepoints will be needed to support electric taxis, in the short and longer term?**

It's important to ensure the right type (in kW) of chargepoints are placed in the right locations. Taxis will require access to conveniently located, rapid chargepoints to be able to top-up mid-shift. For many drivers, this may only be required occasionally, however, having good access to charging improves the confidence of drivers to switch and reduces 'range anxiety'.

Where drivers do not have off-street parking at home, they will also require slower public chargepoints to recharge fully when off-shift, or at an operator's depot if applicable. Having access to both types of chargepoints will be vital for drivers without off-street parking to make the switch. The data gathered through your survey of taxi drivers and operators (see Step 1) will help you identify key parking locations (i.e., at home, within the district, neighbouring districts), regular travel patterns, typical mileage, duration of down-time available during the day and the best time(s) of day to charge.

- **Will the current charging infrastructure and future confirmed installations have sufficient capacity to serve an increasing number of taxis, as well as other user groups?**

Additional and possibly dedicated chargepoints may be required to support a fully electrified fleet. The number of chargepoints required will reflect the pace of policy change and the types of EV permitted. More chargepoints and network resilience will be needed if the policy permits 100% battery electric vehicles only, compared to ultra-low emission vehicles (although drivers should be encouraged to use the zero emission capabilities of these vehicles wherever possible to secure the environmental and financial benefits of switching).

Chargepoints could be dedicated to taxis at certain times of day, one bay could even be reserved for or bookable by taxis. There could be a sunset clause¹¹ on the restrictions depending on utilisation rates, for example.

▪ **Has the potential charging demand from taxis been considered in utilisation rates?**

The potential regular demand from taxi drivers, often high mileage drivers, should be factored in when assessing the potential utilisation of proposed chargepoints, and their associated commercial viability. As well as urban / central locations rapid chargepoints, may be expected to be well used by taxis but slow chargepoints may also be used by the taxi trade if they live nearby. Anonymised, aggregated information on where drivers live within the area could be mapped as an additional factor to inform decisions on locations, or drivers could be encouraged to submit requests for public charging to the council.

Checklist – Considerations when developing a strategy

To help you develop or update your EV infrastructure strategy, this checklist offers prompts to aid your data collection, stakeholder engagement and shape future taxi licencing policy discussions.

Topic	Checklist
Charging infrastructure strategies	<ul style="list-style-type: none"> ▪ What is the forecasted demand for EV infrastructure in the area, for all user groups? What installations are already planned? ▪ Has the council considered taxis within any existing chargepoint project proposals, both in terms of location choices and as a boost to utilisation rates? What about neighbouring authorities' plans? ▪ Are TROs required to restrict chargepoints to only taxis at key times or in certain places?
Current charging infrastructure	<ul style="list-style-type: none"> ▪ Without further action, is there sufficient local EV charging infrastructure to support electric taxis, now and over the next 5 years? Consider the overall number and mix of chargepoint types, locations and utilisation rates. ▪ Are there chargepoints in key locations for taxis e.g., city centres, common destinations, or rest break locations? ▪ Are there any EV taxi drivers already and what are their views on the existing chargepoints?

¹¹ A sunset clause, or a sunset provision, is a contract in a regulation that will automatically expire on a specific date.

<p>EV infrastructure procurement</p>	<ul style="list-style-type: none"> ▪ When developing a tender specification or evaluating responses, have the needs of taxi drivers been considered, e.g., access to a discounted tariff, contactless payment options, ability to book spaces? ▪ Has the council explored the Social Value Model¹² to support EV funding for taxi engagement or funding of chargepoints?
<p>Private home or workplace chargepoints</p>	<ul style="list-style-type: none"> ▪ Could taxi operators install chargepoints on their premises, supported by the Government's Workplace charging scheme grant? Could they share these with other users e.g., businesses or council users at off-peak times? ▪ Could drivers with off-street parking install a home chargepoint? Some may be eligible for support through the Government's Home Charging Grant scheme, others could be supported with information on the installation process and local suppliers.
<p>EV transition through funding and incentives</p>	<ul style="list-style-type: none"> ▪ Is there a business case the council can provide to help the uptake of ZEV taxis? For example, poor air quality, climate emergency and licensing proposals. ▪ Without funding and incentives how challenging will drivers and operators find the uptake of ZEVs and proposed changes to ZEV licensing?
<p>Council Taxi prepared for electrification of taxis</p>	<ul style="list-style-type: none"> ▪ Are the teams who undertake any taxi MOTs / vehicle checks upskilled to support the electrification of taxis? ▪ If looking at ownership of chargepoints, have internal resources and technology upgrade budgets been factored into support this?

For free, tailored EV infrastructure and procurement workshops, guidance, support /advice and independent strategy reviews, contact lgsp@est.org.uk or explore further local government resources on electric infrastructure <https://energysavingtrust.org.uk/service/resources-for-local-authorities-on-electric-vehicle-chargepoints/>

¹²12 – Social Value Model – This is considered as the wider benefit gained by a local community from the delivery of public contracts. This can be the community as a whole, disadvantaged individuals, minorities, businesses and VCSEs, as well as the environment, through the better spending of public money. This is a requirement of Public Services (Social Value) Act 2012 in which requirements can be set in public tenders. More information can be found at: <https://www.gov.uk/government/publications/social-value-act-information-and-resources/social-value-act-information-and-resources>

Step 3: Make changes to taxi licensing policies

Before changing taxi licensing policy to accelerate the transition to electric vehicles, it is vital that there is good two-way engagement with drivers and operators (step 1), and a local EV charging infrastructure strategy in place (step 2). Without these, you are likely to experience difficulties during licensing consultations which could hinder further progress.

As an absolute minimum, all newly licensed taxi and private hire vehicles from 2030 should be zero emission vehicles in order to align with the UK Government's phase out of new petrol and diesel car and van sales. However, local authorities can set out interim steps and more ambitious EV targets sooner.

Setting Vehicle Requirements

Through taxi licensing policies, councils can place restrictions on which vehicles can be used as taxi or private hire vehicles when drivers apply for a new or renewal of a taxi licence.

Two main levers are:

- Revise the conditions of fitness - This can be used to state that newly licensed vehicles must meet certain emission standards as a minimum, such as Euro standard for petrol and diesel vehicles or more ambitiously, be ultra-low emission, zero emission capable or zero emission vehicles only (see Definitions on page 13).
- Revise vehicle age limits - As petrol and diesel engines have broadly become more fuel efficient over time, setting a minimum vehicle age limit can help to remove the most polluting vehicles from the fleet (an alternative is to set minimum Euro standards). In contrast, the age of an electric vehicle is not correlated with its emissions, and therefore age limits are not applicable, from an environmental perspective. Indeed, increasing the maximum permissible age limit for EVs specifically can encourage uptake as it may allow the use of second-hand vehicles and allow savings on running costs to be recouped over a longer period.

Why not share one mini-cab driver's experience of driving an EV for 4 years?





Video link <https://youtu.be/TkPk6n2joSY?list=PLk5HJfULJ4GxbvOHY19ZJONlahOb4nmIH>

Current EV market options

The number of electric vehicle models suitable for the taxi trade is ever increasing.

Private hire drivers can choose from a wide variety of EV saloon vehicles, with the most popular being the MG5, Nissan Leaf and various saloon electric vehicle models. Private hire drivers can compare EV models through our [online EV tool](#) or similar tools.

Wheelchair accessible hackney carriages are still a developing market, but choice is growing. It should be noted that when developing policies, several current options are 'Zero Emission Capable', rather than 100% battery electric or 'Zero Emission Vehicles', as shown in Table 3. For more information on vehicle types, see Definitions on page 13.

Table 3– Electric taxi examples			Vehicle details and estimated mileage
Hackney Carriages and Wheelchair Accessible Vehicles	LEVC – London Electric Vehicle Company TX Electric Taxi		ZEC – 1.5l petrol engine & 31 kWh battery 5 Passenger seats Battery electric range: 50-80 miles Total mileage range: 350 miles
	Nissan Dynamo		ZEV – 40kWh battery 6 passenger seats Total Zero carbon mile range : 120-150 miles
Wheelchair Accessible Vehicles	Mercedes-Benz Vito Taxi		ZEV – 100 kWh battery Total zero carbon miles range: 250 miles
	Ford Tourneo Taxi (mild hybrid)		ZEC – 1l eco-boost petrol engine 13.6kWh battery Battery electric range: 35 miles Total mileage range: 300 miles
Private Hire Vehicles	MG 5 EV		ZEV – 61 kWh battery Total zero carbon miles range: 250 miles
	Nissan Leaf		ZEV – 62 kWh battery Total zero carbon miles range: 239 miles
	Kia e-Niro		ZEV – 64 kWh battery Total zero carbon miles range: 283 miles
	Tesla Model 3		ZEV – 60 kWh battery Total zero carbon miles range: 308 miles
	Skoda Enyaq iV		ZEV – 62 kWh battery Total zero carbon miles range: 256 miles

Electric retrofitting or 'repowering' of taxis

Within the sector, there are discussions about the role of 'retrofitting' existing taxis, where a petrol or diesel engine of an existing vehicle is completely replaced by an electric battery and powertrain (not to be confused with [retrofitting vehicle engines to meet Euro 6 standards](#) to improve air quality). However, this is not currently commercially available in the UK.

To learn more about second-hand EV options, including information on different models, range, battery specifications and charging cables, visit

<https://energysavingtrust.org.uk/advice/buying-a-second-hand-electric-car-or-van/>

Definitions

Due to inconsistencies in how terms are applied across the sector, we recommend that all local authorities very clearly define their vehicle requirements and all terminology used in their licensing policies. This will ensure it is clear for drivers and that the policy ultimately supports the transition to vehicles with zero tailpipe emissions.

For further detail on vehicle types and definitions, see [Zemo Partnership's Vehicle Powertrains: Jargon buster](#).

Ultra-Low Emission Vehicles (ULEV) – Vehicles that emit less than 75g CO₂/km. Reflecting advances in technology, this definition is expected to be revised to vehicles which emit less than 50g CO₂/km. ULEVs include battery electric vehicles, some plug-in hybrids and range extended vehicles.

Zero emission vehicle (ZEV) – This only applies to 100% battery electric vehicles, or hydrogen fuel cell vehicles, as these vehicles have no tailpipe emissions of CO₂ or air pollutants.

Zero Emission Capable Vehicle (ZEC) – This term includes plug-in hybrid vehicles but sets a minimum distance or range that the vehicle must be able to be driven without any exhaust emissions, as well as a maximum g/CO₂/km or minimum Euro standard. As of March 2022, this zero emission range or 'capability' was the subject of a [Government consultation](#), although several local authorities have already set their own definitions, such as Transport for London for [taxis](#) and [private hire](#). [Transport for Greater Manchester](#) bases their definition on [OZEV plug-in vehicle grant eligibility](#), which is a minimum of 70 miles for cars.

Actioning a taxi zero emission ambition

Sometimes it can be hard to know where to start with licensing and timeframes. Drawing on the existing policies of numerous councils described in the following section (see Figures 3 & 4), we have identified common key actions to consider.

Immediate actions

These are simple steps that councils can take to help to early adoption of EVs in taxi fleets within the next six to twelve months:

- Consider any local climate emergency targets and air quality plans implications, in line with the [Environment Act](#), to initiate discussions around the need for electric taxi licensing changes and setting proposed timeframes for taxi trade consultation.
- Consider removing or extending the vehicle age limit for EVs as this supports the uptake of new and second hand EVs.

Short term to medium term actions – by 2025

These actions should be considered in the next 24-48 months to ensure that there is sufficient time for consultation and for the taxi trade to prepare for the shift to EVs.

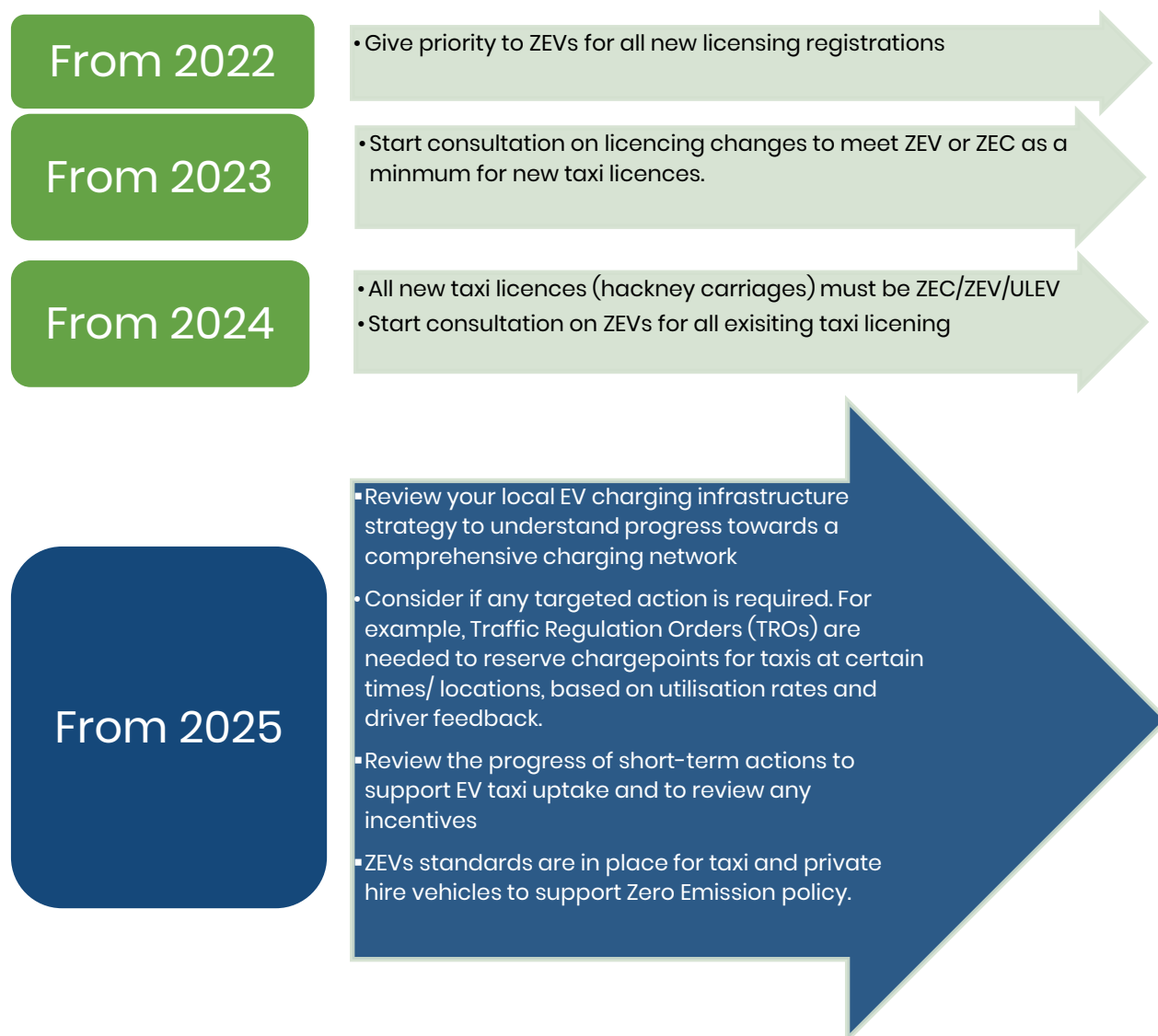
It is noted that all councils are at different stages of charging infrastructure in the local area. For councils with a good EV charging network and infrastructure plans that support installations of charging points, we recommend implementation of a zero-emission policy for taxis by 2025 for all newly licensed vehicles and by 2028 for renewals.

For those lacking in EV infrastructure and future plans, councils are recommended to remove the most polluting petrol and diesel vehicles from the fleet (e.g. by setting an emission standard = maximum grams of CO₂ per km), whilst transitioning to Zero Emission Capable Vehicles.

Fuel Efficiency is the ability of the car and its engine to maximise the amount of energy (fuel) used to drive a particular distance, measured as “miles per gallon” (MPG). When looking at zero emission cars, the same efficiency or “use of energy” can be applied, measured as MPGe or miles per kWh.

Find below a timetable of actions for local councils to transition the taxi fleet (figure 1)

Figure 1 – Short to Medium term zero-emission taxi actions by 2025



Medium to Long Term actions – From 2026 to 2030

By 2026 at the latest¹³, electric vehicles should have reached price parity with ICE vehicles¹⁴. Putting in place the above short-term actions will help prepare the council and the taxi trade for the zero-emission policy.

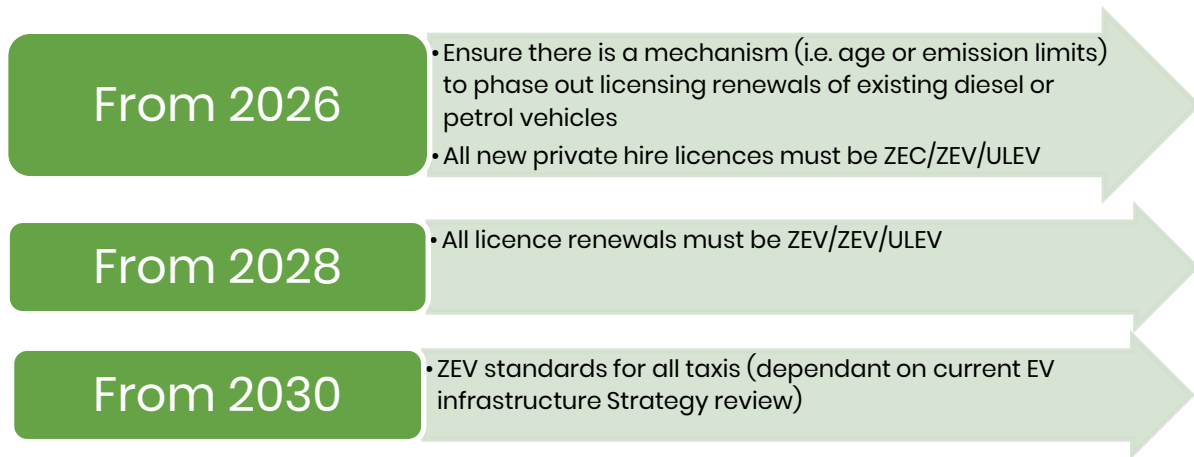
At this stage the council will have reviewed the local progress with charge point infrastructure strategy to understand how achievable the electrification of taxi trade by 2030 and what

¹³ BloombergNEF's, May 2021 - <https://about.bnef.com/electric-vehicle-outlook/>

¹⁴ Commercial Fleet, Dec, 2021 - <https://www.commercialfleet.org/news/van-news/2021/12/10/commercial-evs-to-reach-price-parity-with-ice-vehicles-by-2024>

additional measures are needed (as noted in step 2) to support the below actions needed to decarbonise your taxi trade:

Figure 2 – Medium to Long term zero-emission taxi actions by 2030



Air Quality – In the UK, poor air quality contributes to 36,000 premature deaths per year from long-term exposure. Air pollution also particularly affects the most vulnerable, including children and older people and those with existing lung and heart conditions.

Roadside emissions account for the most significant air pollutants that impact health. It accounts for 34% of nitrogen oxides and 11-13% of PM_{2.5} and PM₁₀ emissions which are fine atmospheric particulate matter (PM) which have a diameter of 2.5 and 10 micrometres. These emissions are harmful to the health of humans.

Examples of local authority licensing policies

Many councils have already started their journey to decarbonise their taxi trade. Figure 3 & 4 provides a timeline of licensing policy change proposals, along with any key initiatives put in place by the councils to encourage early EV adoption. This evidence may be useful in supporting your taxi engagement group discussions and build a business case, for example.

Figure 3 - Taxi Licencing examples

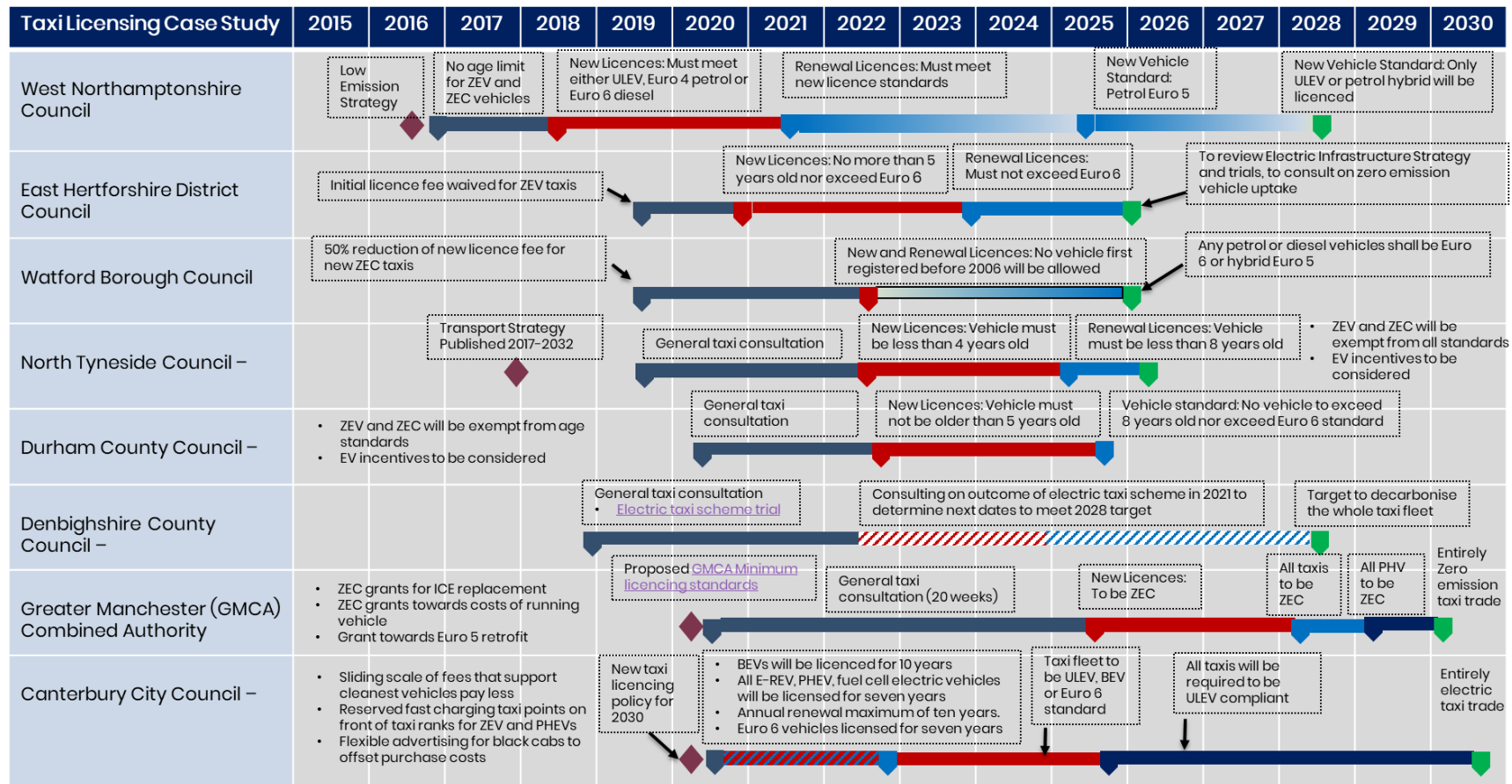
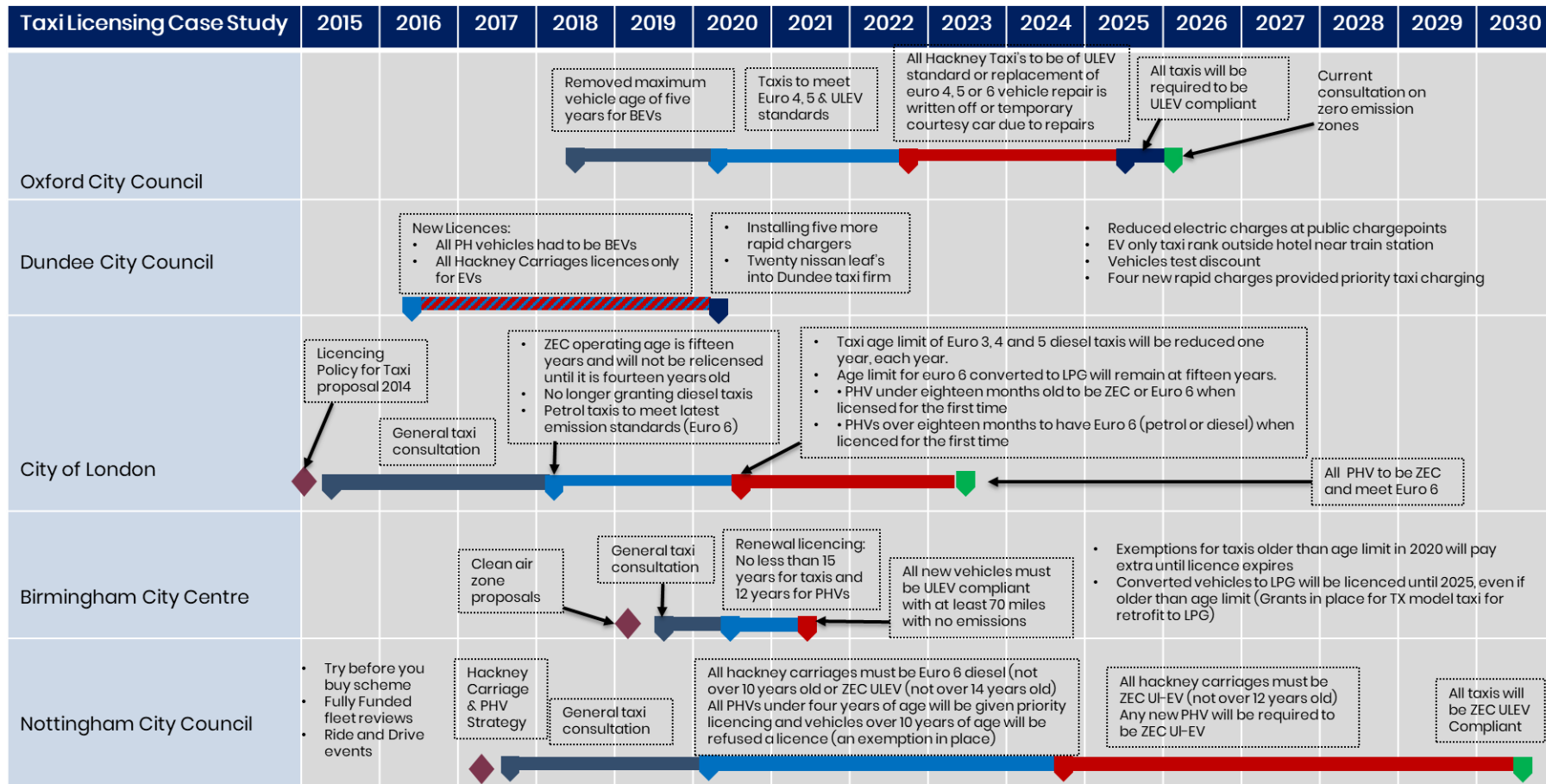


Figure 4 - Taxi Licencing examples (continued)



Taxi Licencing Sources: West Northamptonshire Council – [Link here](#) / East Hertfordshire District Council – [Link here](#) / Watford Borough Council – [Link here](#) / North Tyneside Council – [Link here](#) / Durham County Council – [Link here](#) / Denbighshire County Council – [Link here](#) / Greater Manchester (GMCA) Combined Authority – [Link here](#) / Canterbury City Council – [Link here](#) / Oxford City Council – [Link here](#) / Dundee City Council – [Link here](#) / City of London – [Link here](#) / Birmingham City Centre – [Link here](#) / Nottingham City Council – [Link here](#)