North Tyneside
Ultra Low Emission Vehicle Toolkit

For North Tyneside Businesses and Third Sector Organisations

North Tyneside Council

ACTION ON CLIMATE CHANGE NORTH TYNESIDE

The North Tyneside Ultra-Low Emission Vehicle Toolkit

Welcome to the North Tyneside ultra-low emission vehicle (ULEV) transition guide. If you're a member of the North Tyneside business community, this guide is your roadmap to explore the benefits of ULEVs for both your employees and your fleet. With the target of 80% zero-emission new cars and 70% new vans in Great Britain by 2030, rising to 100% by 2035, it's time to start planning for the changes ahead.

In this guide, we will assist you in deciding whether ultra-low emission vehicles can meet your business needs. We'll show how ULEVs can benefit your bottom line with lower running costs while demonstrating your organisation's leadership on the path to Net Zero. Whether you're just starting your journey towards electric transport or looking to improve your vehicle operations, this guide is relevant for you. Employees considering a ULEV for personal use can also find useful help and guidance in the following pages.

45.2%

of North Tyneside residents travel to work by car or van (2021)

2055

registered ultra low emissions vehicles (December 2023)

64

public charging points in North Tyneside (October 2023)

This guide serves as a roadmap for your ULEV journey. It provides examples of best practice and highlights the first steps towards the transition. As new technology can come with financial hurdles, we offer guidance on crafting a compelling business case, along with a rundown of available government incentives designed to promote ULEVs.

What are Ultra-Low emission vehicles?

The ULEV category includes all vehicles emitting under 75g of CO2 per kilometre. These may be a combination of traditional Internal Combustion Engine (ICE) and electric, pure electric, or hydrogen powered.

Right now, ULEVs are usually more expensive to buy or lease than regular petrol or diesel cars. But it's expected that electric cars will cost the same as regular cars by 2025 and most already cost less when the costs for running a car and keeping it on the road are included. It's also worth noting that 99% of all car journeys in the UK are under 100miles [1]. This means that most businesses' needs could already be met by EVs. See the main ULEV categories below. For a more detailed look at specific models, check the Electric Vehicle Database [2].

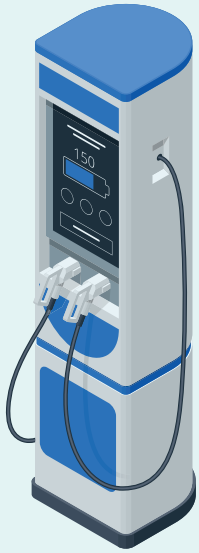
Type	Fuel	Zero-emission Range	Considerations
Battery Electric Vehicle (BEV)	Electricity only	150-400 miles	✓ Zero tailpipe emissions ✓ Lower operating costs ✓ Significant tax benefits × Limited range per charge × Charging infrastructure may be limited
Plug-in hybrid electric vehicle (PHEV)	Electricity and fossil fuel	10-50 miles (Plus 300-600 miles using ICE)	✓ Access to existing petrol/diesel fuelling ✓ Greater range flexibility × Sale to cease by 2035 × Emissions and fossil fuel consumption × Charging needed for full electric mode × Higher operating costs than BEV
Extended range electric vehicle (E-REV)	Electricity and fossil fuel range extender	10-80 miles (additional 100-200 miles nonelectric)	✓ Greater flexibility and total range than BEV ✓ Greater electric range than PHEV × Few in production × Sale to cease by 2035 × Emissions and fossil fuel consumption × Higher operating costs than BEV
Fuel cell electric vehicle (FCEV)	Hydrogen fuel cell	300+ miles	✓ Greatest zero-emission range × Limited availability × Lack of hydrogen fuelling infrastructure × High capital and operating costs

What are the options for charging?

It is typically cheaper to charge an electric vehicle than to refuel with petrol or diesel. Different kinds of chargepoints are available, each with varying power levels and suitability for specific locations. Here are the main options:

Type	Power	Suitable Locations	Use cases	Range added (approximate)
Standard	3.6kW	Home / Work	Overnight charging	10-25 miles per hour
Fast	7kW	Home / Work / Public	Overnight/ top-up charging	30 miles per hour
Fast	22kW	Home / Work / Public	Top up charging	30-100 miles per hour
Rapid	50kW	Public	Commercial vehicles	100 miles per 30 mins
Ultra-rapid	150kW	Public	Refuelling without a break	100-200 miles per 30 mins

To make sure your electric vehicle charging setup matches your business needs, it's important to plan ahead. It's a good idea to check your site's electricity capacity and get in touch with Northern Powergrid [3], the local electricity network operator. They can help guide you on the best ways to connect to the grid and the associated costs, ensuring well-planned EV charging infrastructure.



Workplace

Workplace charging can be practical for vehicles that return to a central base or have off-street parking. Multiple 7kW chargepoints are often sufficient to meet most business needs, allowing for overnight charging and top-ups during the day. Leased sites need to obtain permission to install this charging infrastructure.

Public

Public chargepoints are essential for longer journeys and supplementing your infrastructure. Services like Zap-Map [4] provide real-time maps of charging facilities in the UK, including North Tyneside.

Home

Employees who take their EVs home at night and have off-street parking might be eligible for home charging. According to the RAC Foundation, 75% of North Tyneside households have access to off-street parking, making them suitable for home EV charging. Home charging can often work out cheapest overall, with discounted EV-specific tariffs offered by many suppliers [5].

What do you need to consider?

The ULEV landscape is changing in the UK, with new policies at both national and regional levels. The transition to ultra-low emission vehicles is no longer a question of "if" but "when."

In September 2023, the UK Government announced significant changes in the automotive industry. They declared a plan to ban sales of new petrol, diesel, and plug-in hybrid vehicles, making it a requirement for all new cars and vans to be electric or hydrogen-powered from 2035.

Regionally, a Clean Air Zone has been established in parts of Newcastle and Gateshead, specifically targeting taxis, vans, buses, coaches, and heavy goods vehicles that don't meet national Clean Air Zone emissions standards.
Transport North East is also taking proactive measures to introduce exclusive lanes for buses, bicycles, and electric vehicles, while installing electric vehicle charging stations in Nexus car parks. These changes represent a major shift towards cleaner and more sustainable transportation in the region.

What financial incentives are available?

As of October 2023, the UK Government provides a range of grants to encourage the transition to ultra-low emission vehicles.

- **Plug-in Grant** The grant provides a discount on the purchase price of a brand new eligible plug-in van, truck, accessible car or motorcycle [6].
- **Electric vehicle infrastructure grant for staff and fleets** - The grant provides SMEs money off the cost of installing electric vehicle chargepoints and supporting infrastructure for their staff and fleet vehicles [7].
- **The Workplace Charging Scheme (WCS)** is a voucher-based scheme that provides support towards the upfront costs of the purchase and installation of electric vehicle chargepoints [8].

Organisations can also take advantage of tax incentives for electric vehicles. More information can be found in the Department for Transport factsheet [9].

- **Vehicle Excise Duty (VED)** – Battery electric vehicles are exempt currently from Vehicle Excise Duty (road tax).
- **Corporation Tax Liability** – From the 2021/22 tax year businesses can write down 100% of the purchase price for a vehicle that emits 0g/km CO2.
- **Benefit-in-kind (BIK)** – EV drivers pay significantly less company car tax than those driving petrol and diesel vehicles.

Ultra-low Emission Vehicles may also qualify for exemptions from:

- **Clean Air Zones** – Ultra-low emission vehicles are not charged for entering Clean Air Zones. For more guidance, check the government website [10].

What is the Business Case for Ultra-low Emission Vehicles?

Understanding the financial benefits of switching to ultra-low emission vehicles (ULEVs) is crucial, and one powerful tool for this is Total Cost of Ownership (TCO) analysis.

TCO offers clear advantages in developing the case for ULEVs. It demonstrates that electric vehicles are often more cost-effective in the long term and can improve car scheme management.

TCO includes all expenses associated with purchasing and using a vehicle throughout its expected lifespan. This includes obvious costs like financing, maintenance, and insurance, as well as less apparent expenses such as fuel, mileage reimbursement, and various taxes.

Considering all these elements empowers employers and staff to make informed decisions regarding the transition to electric vehicles. While just looking at the upfront price or apparent costs might make EVs seem pricier, factoring in the less visible expenses often reveals that traditional internal combustion engine (ICE) vehicles can be significantly more costly.

The Carbon Trust's Green Business Fund have developed a tool for SMEs to help understand the costs for leased vehicles [11].

How to make the change?

Step 1: Where you are now

You can begin by assessing current fleet and business travel practices to gain a clear understanding of the existing arrangements. As a starter, consider the questions in the following checklist.

- ☐ How often and how far is each vehicle is driven? This can help you identify underutilised vehicles or those with higher fuel costs.
- ☐ How much do you currently spend on: Fuel, Insurance, Tax, Maintenance, Depreciation?
- ☐ What is the fuel efficiency and emissions rating of your current vehicles?
- ☐ Do you have a vehicle base or do your drivers have off-street parking at home?
- ☐ What are the current requirements of your vehicles e.g. payload, size, type?

Use our case studies, as well as examples of best practice [12] to compare against your current position.

Step 2: Where you want to be

To make an informed decision about electric vehicles EVs, begin by researching the different types and models available in the market. Consider which ones match your specific mileage and usage needs, ensuring they align with your daily travel patterns. Additionally, think about your charging needs to determine if you require home charging stations, workplace charging infrastructure, or access to public charging networks.

Step 3 How you will get there

Begin to assemble a business case for transitioning to ULEVs.
The total cost of ownership (TCO) approach detailed above provides a good basis for the financial case. If there is a strong rationale for adopting EVs, engage with your staff to gain insight into their requirements and educate them about the advantages of EVs, as well as how to make the most efficient use of these vehicles.

Step 4: Run a trial

Use your learning to begin a trial of ULEVs and chargepoints. Starting small can give you a sense of how the vehicles might fit into your operations in the longer term.

North Tyneside Council is ready to help your business through the EV transition. Please contact us for guidance and support.

Additional Resources

To explore the idea further, we've gathered some useful links and additional resources.

[1] Common Misconceptions About Electric Vehicles, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1103266/common-misconceptions-about-electric-vehicles-leaflet.pdf

[2] Electric Vehicle database, https://ev-database.org/uk

[3] Northern Powergrid, "Electric Vehicles," https://cms.npproductionadmin.net/electric-vehicles

[4] Map of EV Chargepoints, https://www.zap-map.com/live/

[5] EV Energy Tariffs, https://www.uswitch.com/electric-car/ev-energy-tariffs/

[6] Plug-in Vehicle Grants, https://www.gov.uk/plug-in-vehicle-grants

[7] Electric vehicle infrastructure grant for staff and fleets, https://www.find-government-grants.service.gov.uk/grants/electric-vehicle-infrastructure-grant-for-staff-and-fleets-1

[8] Workplace Charging Scheme, https://www.gov.uk/guidance/workplace-charging-scheme-guidance-for-applicants

[9] Ultra Low Emissions vehicles Tax Implications, https://www.gov.uk/government/publications/ultra-low-emission-vehicles-tax-implications

[10] Clean Air Zone guidance, https://www.gov.uk/guidance/driving-in-a-clean-air-zone

[11] SME Fleet Upgrade Tool, https://gbfcalc.azurewebsites.net/gbf/fleet

[12] Best Practice for Fleet Managers (page 14), https://www.carbontrust.com/our-work-and-impact/guides-reports-and-tools/electric-and-smart-vehicles-guide

Further information
https://www.gov.uk/government/publications/recovery-operators-working-with-electric-vehicles/recovery-operators-working-with-electric-vehicles

Contact
North Tyneside Council

Email: carbon@northtyneside.gov.uk

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