Drivers for change

Remarketing EVs & PHEVs - challenges and opportunities

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Energy Saving Trust

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Background

- Provide advice to fleets to help them reduce emissions and costs, better manage grey fleet and transition to ULEV
- Eco-driving training schemes for fleet drivers
- Manage incentives and programmes to enhance uptake of ULEVs, installation of chargepoints and clean vehicle retrofit.
- **Support low emission transport skills, to build expertise and best practice across the automotive supply chain.**

Independent

Impartial

Pragmatic

Department for Transport | Transport for London | Office for Low Emission Vehicles | Transport Scotland | highways england

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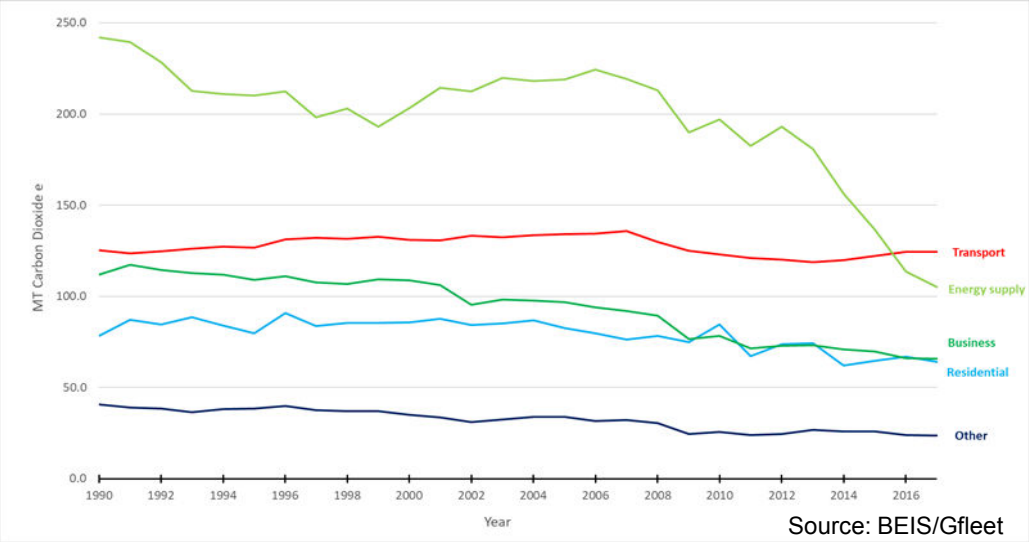
Drivers for change - UK Carbon Emissions



Source: BEIS/Gfleet

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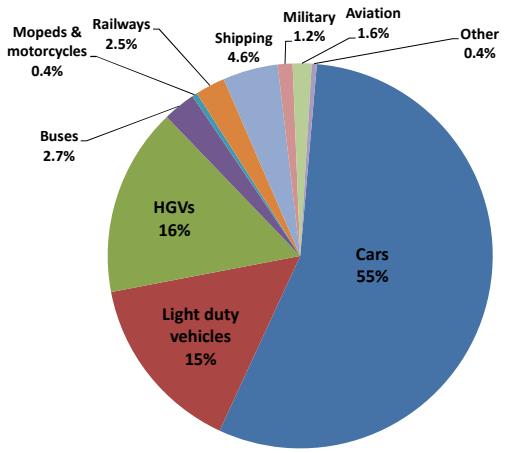
Drivers for change – transport greenhouse gas emissions

- 33% of greenhouse gas emissions were from transport in 2016 (BEIS 2018)
- Cars emit >55% of CO_2
- Transport emissions are a priority to meet EU CO_2 targets
  - 20% reduction in GHG by 2020 (from 1990 levels)
  - 80-95% reduction by 2050



Measured in $MtCO_2e$

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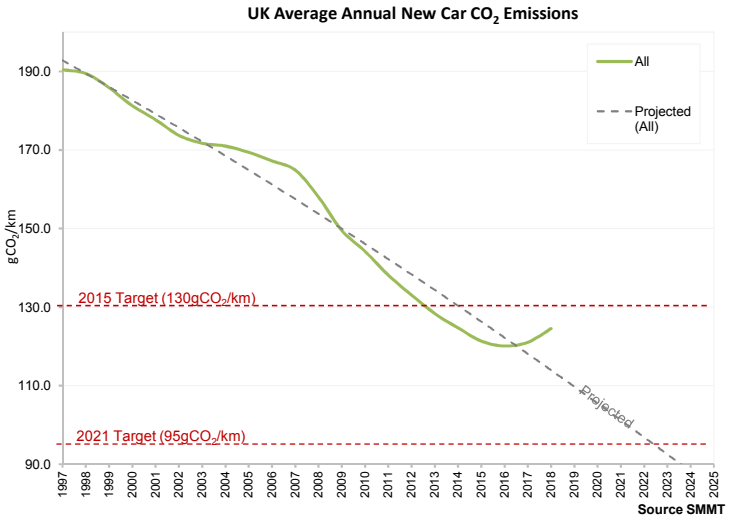
Drivers for change - EU CO_2 Emission Targets



2030 Agreement (December 2018)

- 37.5% reduction by 2030 (31% for vans)
- Compromise of Commission @30% & Parliament @40%
- Based on 2021 levels, intermediate 15% cut for both cars and vans by 2025

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Drivers for change – air quality

Nitrogen Dioxide

- Irritates eyes and lungs
- Affects lung function

Particulate Matter
Ultra fine airborne particles

- Linked to heart attacks and strokes

Around 40,000 premature deaths a year.

Costs society £20bn a year

Source: Royal College of Physicians

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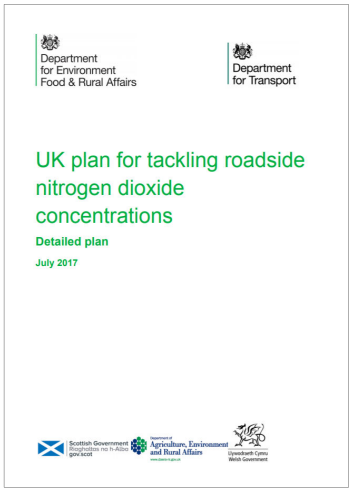
Government response - Air Quality Plan & Clean Air Strategy



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Government response - Clean Air Zones

The **CAZ standard** is:
Euro 3 for motorcycles (13 years old in 2020)
Euro 4 for petrol cars, vans and minibuses (<13-14 yrs old in 2020)
Euro 6 for diesel cars, vans and minibuses (<4-5 years old in 2020)
Euro VI for lorries, buses and coaches (<6 years old in 2020)

					
Birmingham: D	✓	✓	✓	✓	✓
Derby: none (or D?)	✗	✗	✗	✗	✗
Leeds: B	✓	✓	✓	✗	✗
Nottingham: none	✗	✗	✗	✗	✗
Southampton: A or B	(✓)	(✓)	✓	✗	✗

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Government response - London ULEZ

Central London ULEZ in **2019**
(all non-compliant vehicles)

£12.50* per day

£100* per day

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Government response - London ULEZ for Heavy Vehicles

London-wide ULEZ in **2020**
(all non-compliant heavy vehicles)

Up to **£100*** per day

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Government response- London ULEZ extension

Inner London ULEZ in **2021**
(all non-compliant vehicles)

Up to **£12.50*** per day

Up to **£100*** per day

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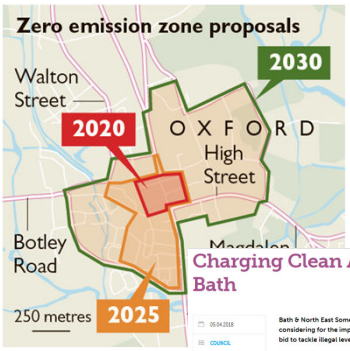
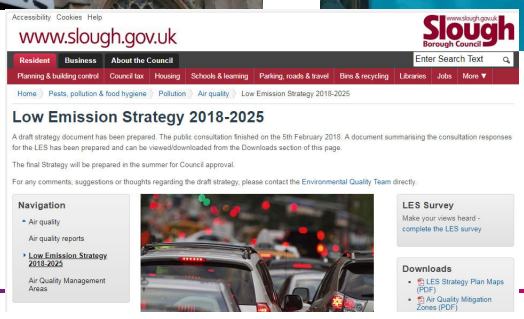
Government response - Others consulting





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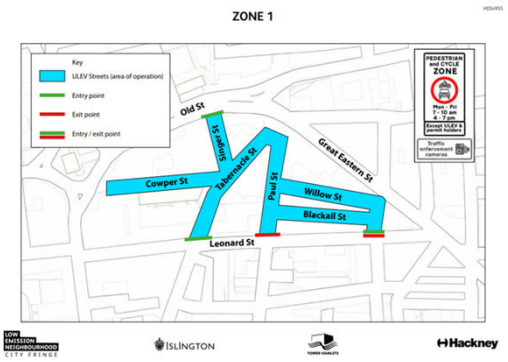
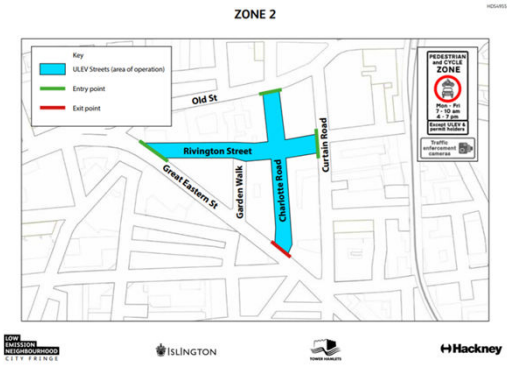
Government response - Ultra-low emission streets

In operation Monday- Friday, 7-10am & 4-7pm

Started 3rd September 2018





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Vehicle and charging developments - vehicles

2011	2016	2017	2018
109 miles NEDC	174 miles NEDC	250 miles NEDC	300 miles WLTP
24kWh	33kWh	40kWh	64kWh

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Vehicle and charging Developments - charging




2010	2011	2012	2018 ➡
< 3kW	3.7-22kW	50 kW	150-350 kW
12 + hours	2-9 hours	20-30 minutes	5-20 minutes

Time on charge to gain c.80 miles range

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Vehicles and charging developments - vehicles

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Industry engagement - why promote used EVs?

Wider choice of cars for used buyers, & opportunities for those unable to afford a new vehicle to benefit from EV ownership

Wider ownership leads to less pollution in towns and cities (& broader acceptance of measures to tackle the issue?)

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Industry engagement - UK market

2016	2017	2018	2019
c.6,000	10,199*	26,000?	39,000?

*Source: SMMT

Growing market, but still tiny compared to c. 8 million used car market in UK

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Industry engagement - participants

Industry engagement through trade bodies and contacts:

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Industry engagement - content

Module	Content
1	The vehicle emissions agenda
2	Vehicle technology
3	Vehicle charging and infrastructure
4	Current landscape – future developments
5	EVs & PHEVs Checklists
6	ULEV myths – Quiz

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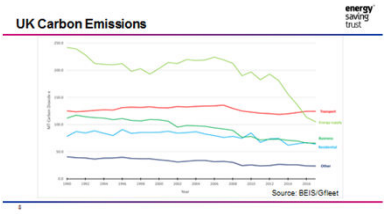
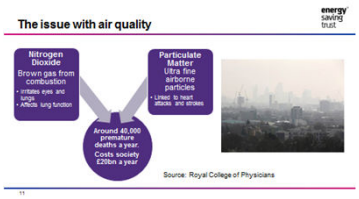
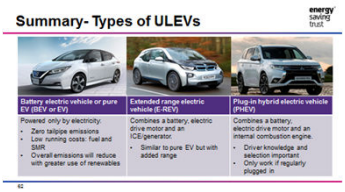
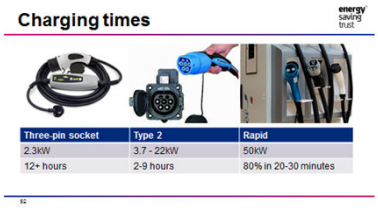
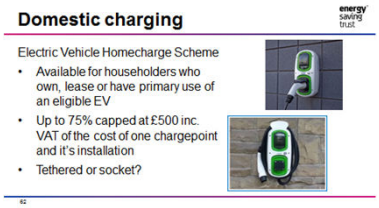
Industry engagement - content

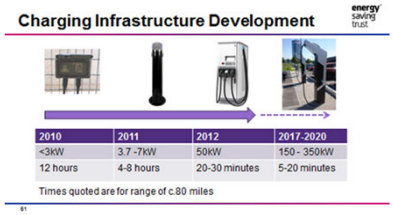












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Industry engagement – hot topics

Air Quality: London ULEZ and Clean Air Zones

Vehicle specifications: Battery size, model identification

	Domestic	Type2	CHAdeMO	CCS
Slow	2.3kW (10A) 10 miles/hr	3.7kW (16A) 15 miles/hr		
Fast		7.3kW (32A) 30 miles/hr		
		22kW (3ph) 80 miles/hr		
Rapid		43kW (3ph) 70-80 miles/30 mins	50kW (3ph) 70-80 miles/30 mins	50kW (3ph) 70-80 miles/30 mins

Charging: Speeds, connectors, No. of chargepoints

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Industry engagement - concerns

Difficult to identify vehicle specifications

Only identified as “Electric Vehicle” on the V5 (vehicle registration document)
Battery size & charging rates not obvious

Battery leases

Uncertainty around lease transfers
Cost as vehicle ages

Funding

Finance companies not always willing to fund ULEVs

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Industry engagement - concerns

Cost of delivering vehicles by transporter

Delivery drivers not confident to drive BEVs in particular

Dealing with depleted batteries

Movement on site & loading onto transporters

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Industry engagement - opportunities

Local market leadership

Emerging market providing growth

Source of expert advice

Increased margins

Customer retention

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Industry engagement - opportunities

"Stock levels have been steadily increasing year on year and now 4-5% of our stock is alternative fuel vehicles"

Unbeatable car supermarket Crawley

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