energy saving trust

Electric Vehicles Myths

LGSP Team | 06.01.25

Version Control

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THEME	CHANGE MADE	WHO BY	DATE
Regulation	“Petrol & diesel vehicles will be banned”	Dave Rosselli, LGSP	06/01/2025
Fire	Added six slides explaining the cause of the Luton airport car park fire	Dave Rosselli, LGSP	13/01/2025

Energy Saving Trust Index of Myths

- “I can’t drive far enough”
- “It takes too long to charge up”
- “EV batteries degrade quickly & are costly to replace”
- “EV battery production is unsustainable & worse than petrol/diesel”
- "EVs are worse than petrol and diesel” !?
- "EVs produce more emissions than petrol and diesel”
- "My old petrol/ diesel is better than an EV”
- “Is the electricity in EV batteries sustainable?”
- EV emissions
- “The grid can’t cope with all these EVs!”
- “What about hydrogen?”
- “Heavy EVs destroy roads & car parks”
- “Do EVs need special tyres?”
- “Do EV tyres and brakes wear out faster?”
- EV breakdowns
- Running out of fuel
- Loss of tax revenue
- “An EV burned down Luton airport car park”
- Fire risk – Guardian article
- “EVs catch fire more often”
- “EV fires are hard to put out”
- Containing an EV battery fire (1)
- Containing an EV battery fire (2)
- “Do EVs have a handbrake?”
- “Can we have rapid charge points everywhere?”
- References & further information
- “Petrol & diesel vehicles will be banned”

Also see the
Mythbusting Index from the **EVI Training Course**

Got a myth not listed? Want a slide preparing?
Email LGSP@est.org.uk

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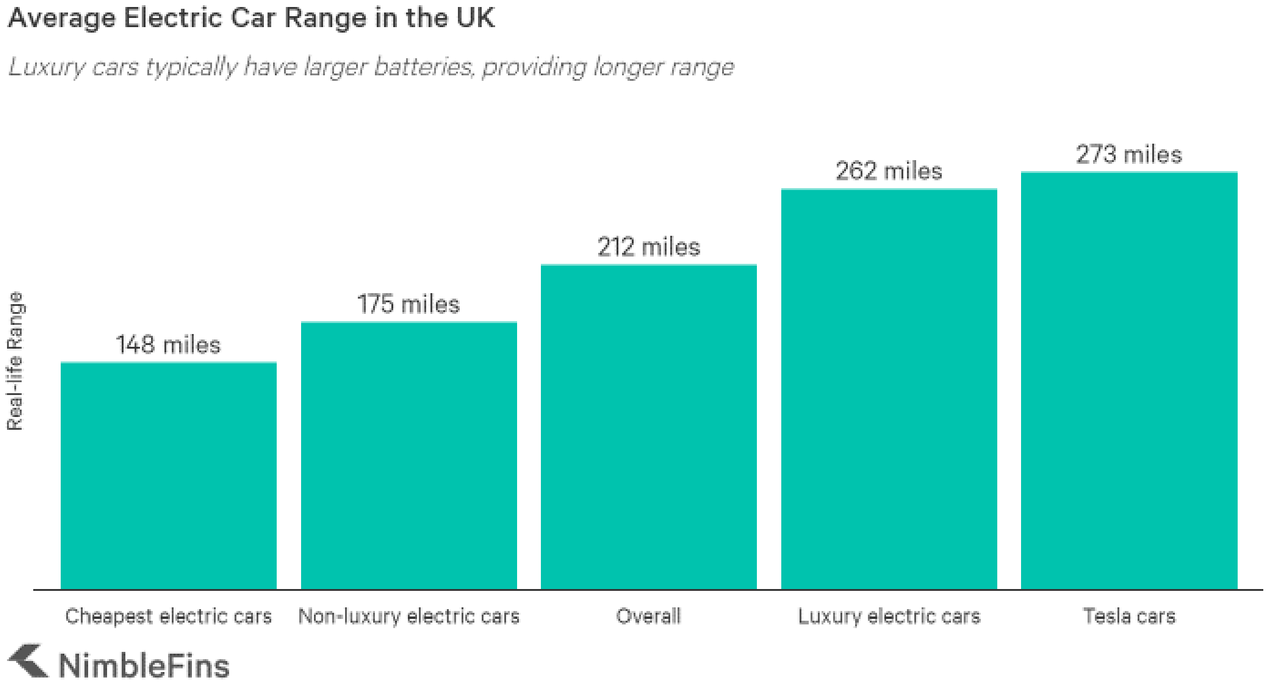
"I can't drive far enough!"

- Average EV range in the UK is c. 212 miles
- Range depends mainly on the battery size
- Cheaper cars tend to have smaller batteries and therefore provide less range



Longest range EVs available in the UK

- Mercedes EQS 450+ **395 miles**
- Tesla Model S Dual Motor **355 miles**

Range of affordable (new) EVs

- MG4 (50kWh) **185 miles**
- Vauxhall Corsa-e **175 miles**
- Nissan Leaf (40kWh) **145 miles**

Range of second-hand EVs

- Nissan Leaf 2012 (24kWh) **109 miles**
- Peugeot iOn 2012 (16kWh) **93 miles**
- Renault Zoe 2019 (45kWh) **186 miles**

https://www.nimblefins.co.uk/average-electric-car-range

“I can’t drive far enough!”

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Longest range electric cars on sale in the UK

- Mercedes EQS 481 miles
- Volkswagen ID.7 437 miles
- Tesla Model 3 436 miles
- Peugeot E-3008 435 miles
- Vauxhall Grandland Electric 435 miles
- Mercedes EQE 429 miles
- Porsche Taycan 421 miles
- Peugeot E-5008 415 miles
- Polestar 2 406 miles
- Audi Q6 Sportback e-tron 402 miles

Source: AutoExpress October 2024. Figures derived from the official WLTP efficiency test, which is more representative of the range drivers will actually get in the real world than the old NEDC test.

The more expensive EVs have very long ranges

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“I can’t drive far enough!”

(more detailed version on next slide)

Range of small EVs (£19,000-£26,000) **100-160 miles**

Range of medium EVs (£26,000-£28,500) **145-185 miles**

Range of SUV style EVs (£29,000-£33,500) **165-215 miles**

Average range of a new EV, based on all makes and models, including high cost EVs:

236 miles

Longest range EV? 481 miles

Price ranges from: https://www.nimblefins.co.uk/cheap-car-insurance/average-cost-cars-uk

“I can’t drive far enough!”

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Range of small EVs (£19,000-£26,000) 100-160 miles

- Dacia Spring (25kWh) 100 miles
- Hyundai Inster (39kWh) 155 miles
- Renault 5 E-Tech (40kWh) 155 miles
- Citroen e-C3 (44kWh) 160 miles
- Fiat Grande Panda (44kWh) 160 miles

Range of SUV style EVs (£29,000-£33,500) 165-215 miles

- MG ZS EV (49kWh) 165 miles
- Peugeot e-2008 (50kWh) 165 miles
- Skoda Elroq (52kWh) 195 miles
- Kia EV3 (55kWh) 200 miles
- Omoda e5 (61kWh) 215 miles

Range of medium EVs (£26,000-£28,500) 145-185 miles

- Nissan Leaf (39kWh) 145 miles
- BYD Dolphin (44kWh) 160 miles
- MG4 (51kWh) 185 miles

Average range of a new EV? *

236 miles

(* i.e. average of all makes & models of EVs including high priced, top of the range EVs)

Longest range EV?

481 miles

Price ranges from: https://www.nimblefins.co.uk/cheap-car-insurance/average-cost-cars-uk

“It takes too long to charge up”

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Approximate charging times

Vehicle			Empty 0% to 100% full charge*			From 20% to 80% full charge	
Model	Battery kWh (useable)	AC to DC # onboard charger (kW)	3.7kW Slow	7kW Standard	Fast	50kW Rapid	Ultra rapid kW**
Hyundai Inster	42 (39)	11	10 hrs 35 mins	5 hrs 35 mins	3 hrs 35 mins	28 mins	19 mins (73)
MG4	51 (50.8)	6.6	13 hrs 45 mins	7 hrs 40 mins	7 hrs 40 mins	37 mins	21 mins (87)
MG4 Long Range	64 (61.7)	6.6	16 hrs 40 mins	9 hrs 20 mins	9 hrs 20 mins	45 mins	15 mins (142)
Peugeot e-2008	50 (46.3)	7.4	12 hrs 30 mins	6 hrs 35 min	6 hrs 15 mins	35 mins	17 mins (101)

When charging using an AC supply (Slow/ Standard/ Fast) the inverter converts AC to DC, and has a designed-in max rate for charging the battery
* Charge time for standard & fast chargers calculated for each vehicle type using the lower of **either** maximum chargepoint power output **or** maximum power that can be received by the battery
** Charge time for ultra rapid calculated using maximum power that can be received by the battery for each vehicle (shown in brackets)
Vehicle data from ev-database.org/uk

"EV batteries degrade quickly and are costly to replace"

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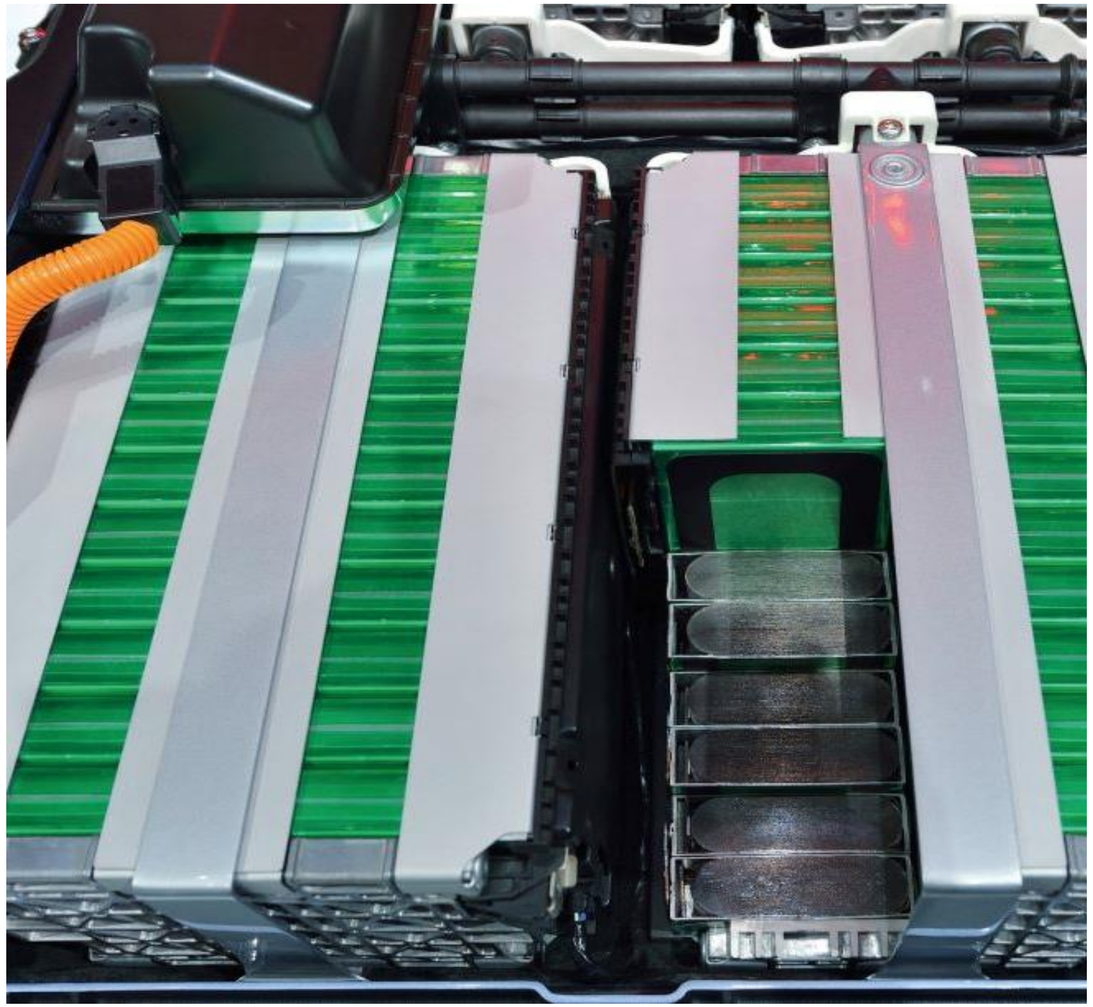

- EV batteries are an array of individual battery cells
- It is true that the battery pack has a high value
- But each single battery cell can be removed and replaced if necessary
- Battery degradation estimates are only 1-2%/ year
- Very rare to have to replace the whole battery
- Manufacturers' warranties cover battery performance and degradation
- End of life EV batteries can still be used for energy storage (i.e. they have a resale value)
- Growing industry focused on battery repurposing and recycling

"EV battery production is unsustainable and worse than petrol and diesel"

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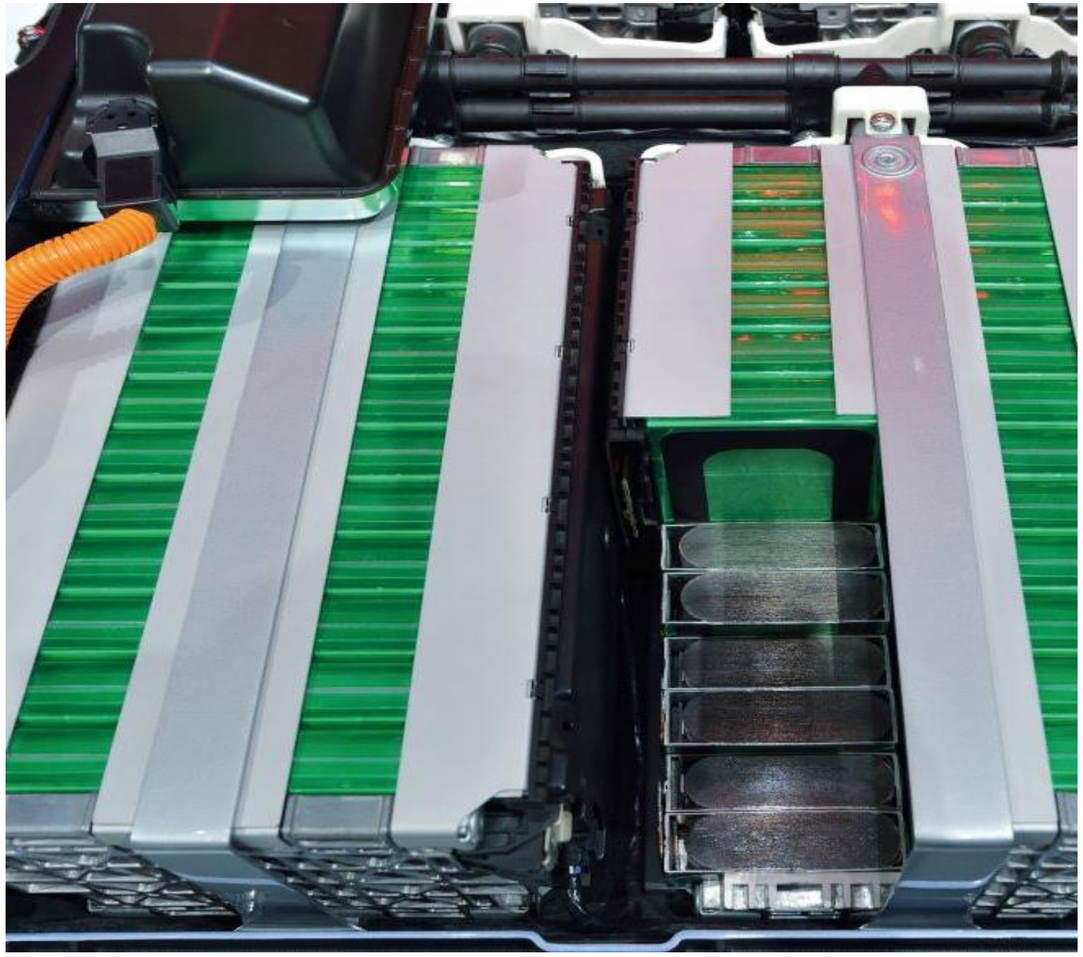

- Many EV battery manufacturers use renewable electric power to reduce the carbon footprint
- Manufacturers are increasingly cautious to ensure ethical sourcing from their supply chains
- Manufacturers are reducing the manufacturing emissions, mainly by streamlining processes
- Improved EV batteries are requiring less rare minerals than before
- New battery chemistries are emerging that will use different elements (ie not Lithium)
- Battery recycling recovers lithium, cobalt & nickel from decommissioned batteries

"EVs worse than petrol and diesel" !?

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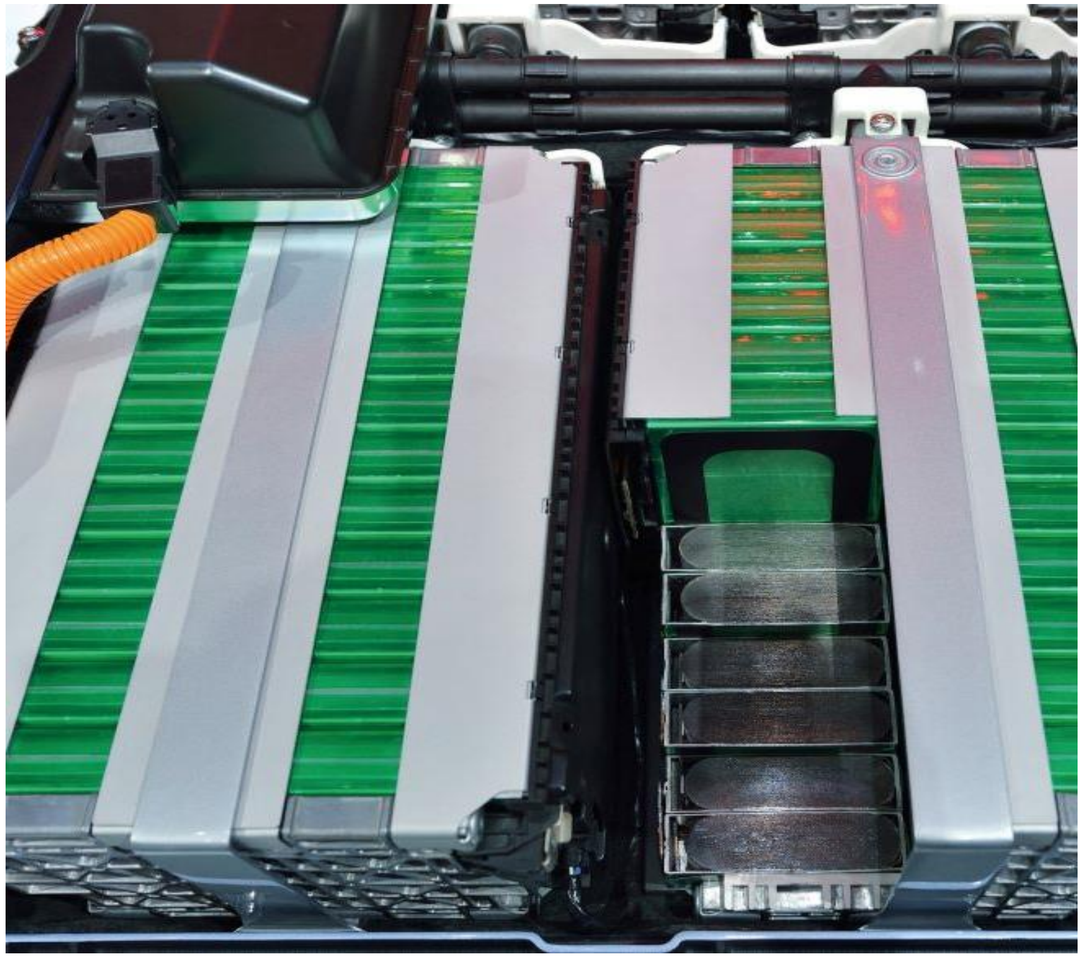

- Drilling and refining oil to make petrol/ diesel are unsustainable and highly polluting
- Burning petrol/ diesel causes carbon pollution
- EVs have zero tailpipe emissions

"EVs produce more emissions than petrol and diesel"

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- The life cycle emissions associated with a BEV is at least **half that** of an ICE vehicle
- BEVs do have an initially larger emissions footprint due to the manufacturing process
- But ICEs generate huge emissions during their life cycle by burning petrol and diesel
- Overall, BEVs emit far fewer emissions than ICE vehicles

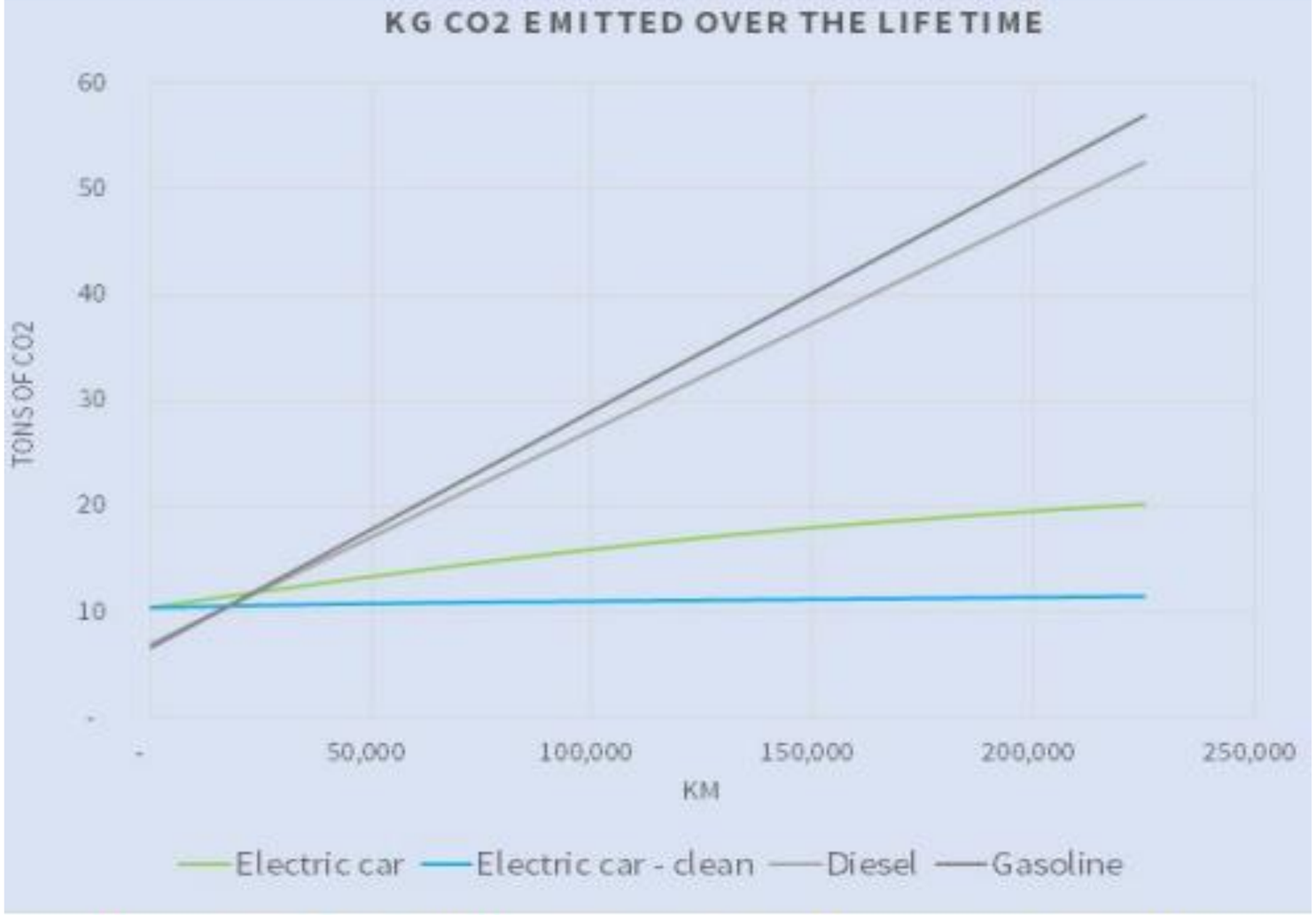

Figure 6: Evolution of lifetime CO_2 emissions of an average and clean EV

Graphs from Transport & Environment research

"My old petrol/ diesel is better than an EV"

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- EVs will pay back their excess carbon emissions debt after less than one year of driving (about 13,000 km), if
  - The battery is manufactured using renewable, clean electricity
  - The EV recharges using renewable electricity
- with a battery manufactured using on clean, renewable electric power and running on clean electricity, the excess carbon debt would be paid back after less than one year of driving (about 13,000 km).
- As renewable electricity generation increases, emissions from manufacture and refuelling will fall
- The RAC have found that EVs emit less brake dust than ICE vehicles due to regenerative braking

Figure 6: Evolution of lifetime CO_2 emissions of an average and clean EV

Graphs from Transport & Environment research

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Is the electricity in EV batteries sustainable?

- Q. If the electricity is made using fossil fuels, then are EVs any better than ICEs?
- Some countries (eg Poland) still make their electricity mostly from coal power
- As renewable electricity generation increases, emissions from manufacture and refuelling will fall

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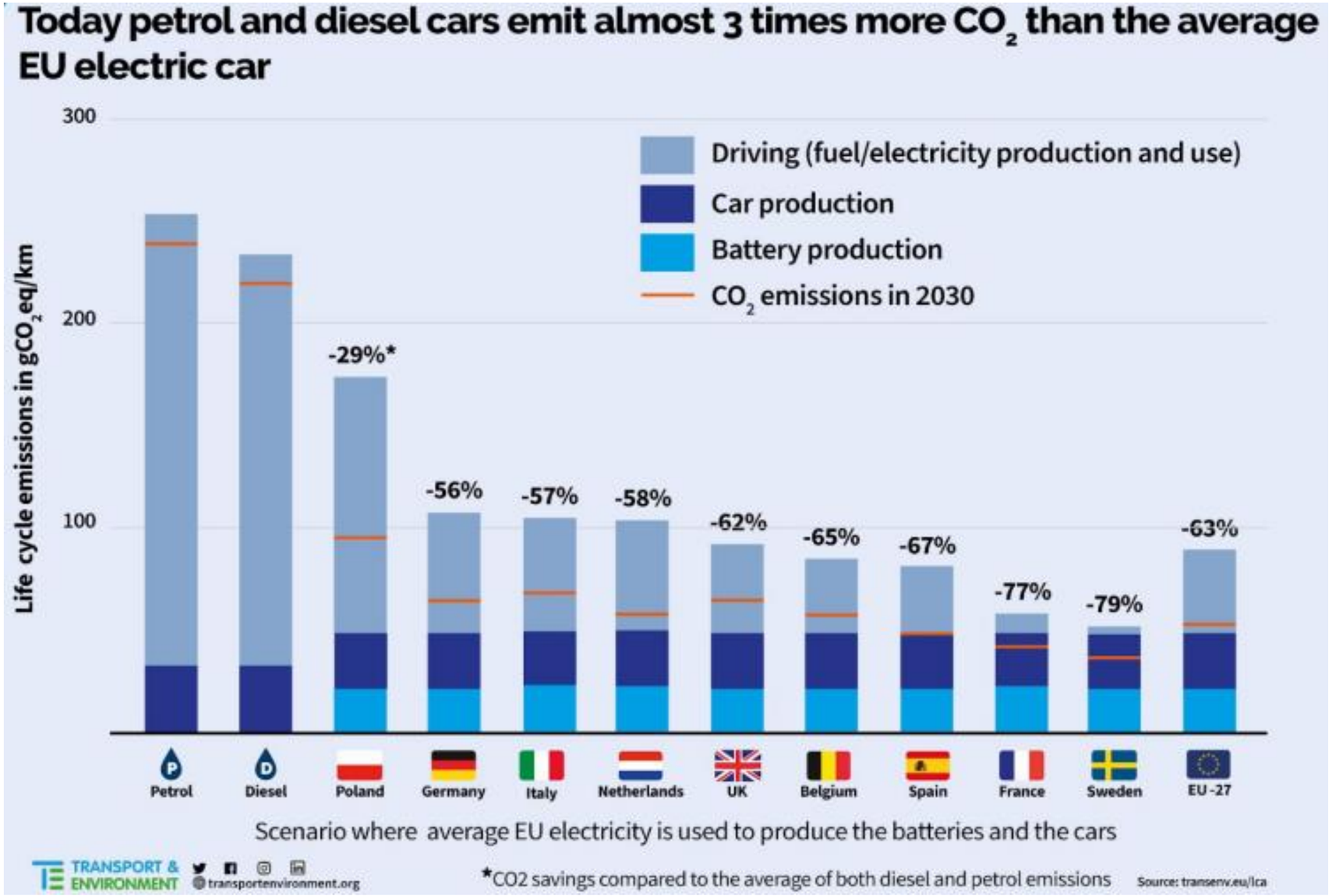

Graphs from Transport & Environment research

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Is the electricity in EV batteries sustainable?

Initially, all UK electricity was coal-fired. Then the UK started to make electricity using

- Nuclear (1950s)
- Oil (1960s)
- Gas (1990s)
- Renewables (2000s)

The UK stopped using coal-fired power in 2024 (first G7 nation to do this).

The carbon intensity of electricity generated has dropped massively

- 1,000g CO2/kWh in the 1950s
- 419g CO2/kWh in 2014
- 124g CO2/kWh in 2024

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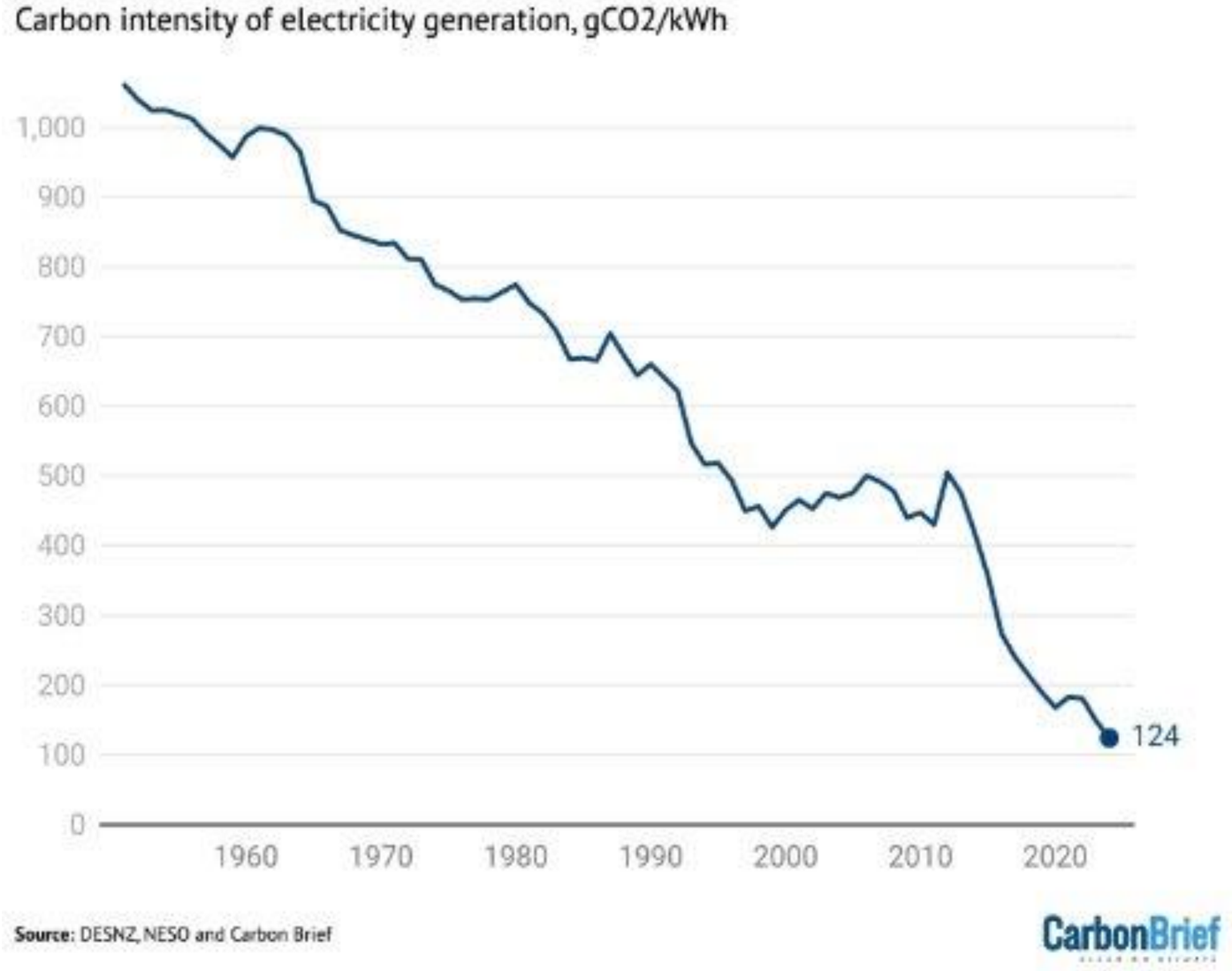

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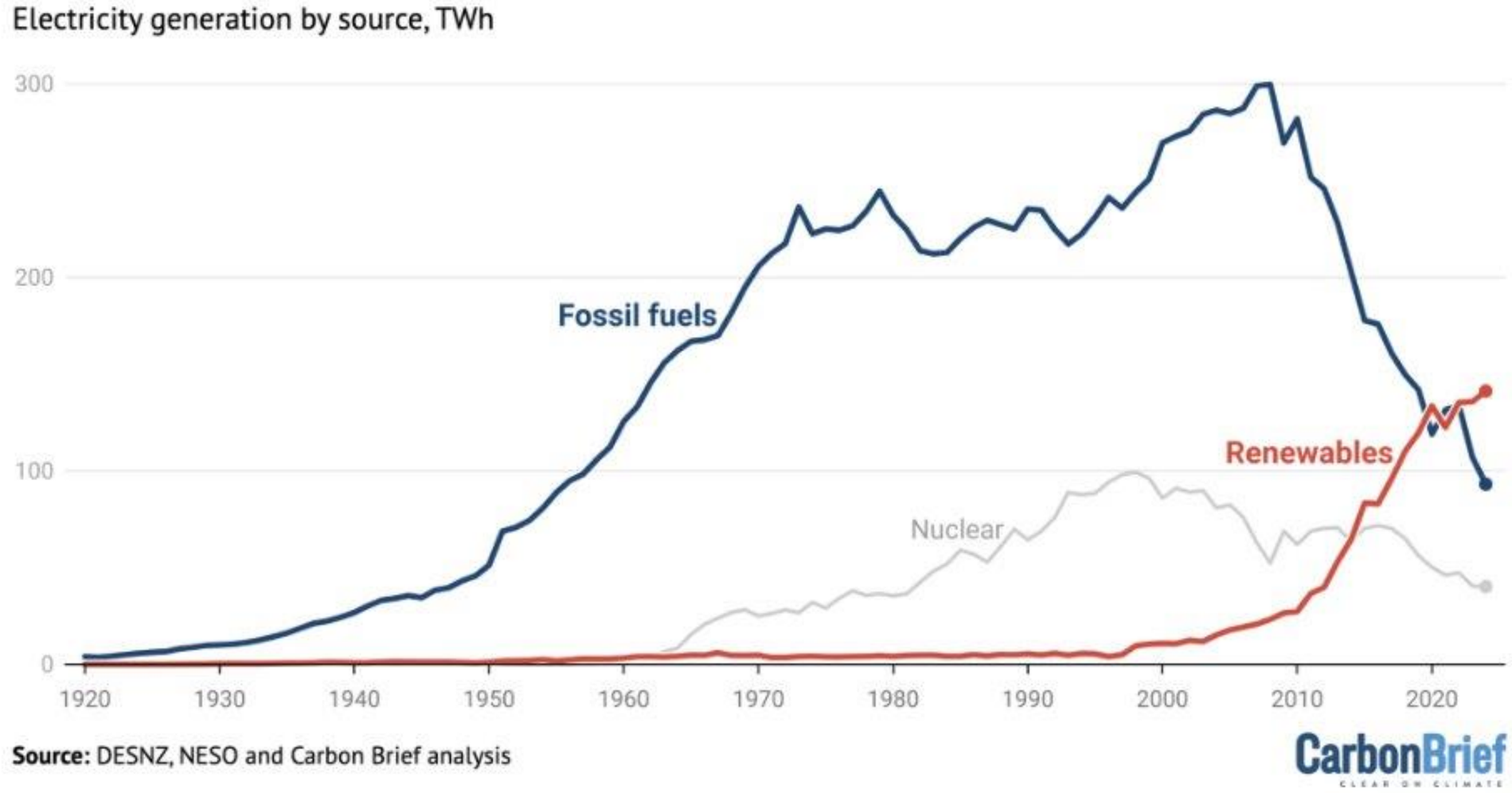
Is the electricity in EV batteries sustainable?

Renewable power has been increasing fast since 2010

Fossil fuel power has been declining fast since before 2010

When EVs recharge their batteries, the stored electricity is increasingly sustainable



UK electricity generation by type, TWh, 1920-2024. Source: DESNZ, NESO and Carbon Brief analysis.

EV emissions

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- The life cycle emissions associated with a BEV is **half that** of an ICE vehicle

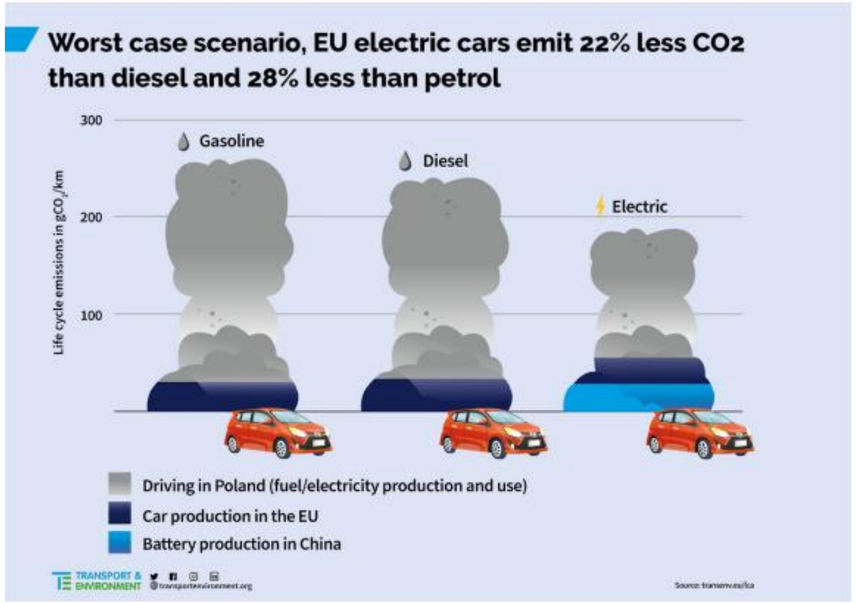


Figure 3: Lifetime CO_2 emission savings from EVs in the worst case scenario

- As renewable electricity generation increases, emissions from manufacture and refuelling will fall

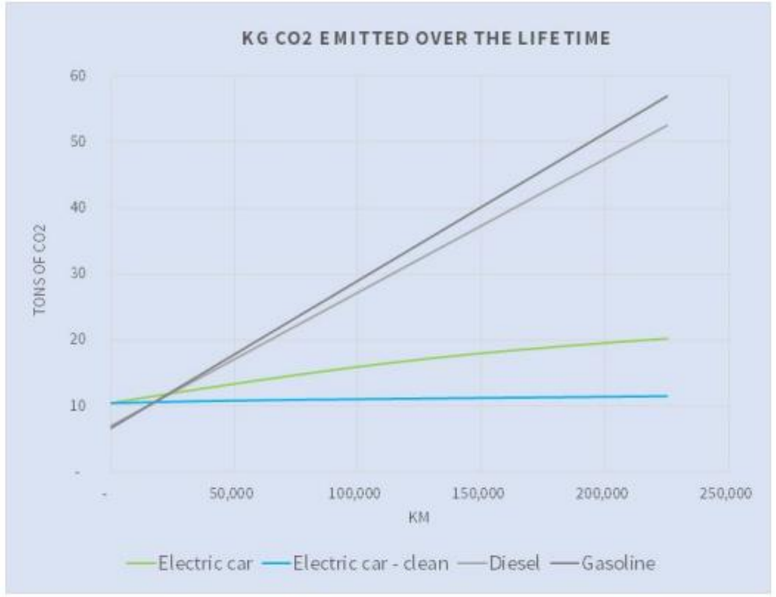
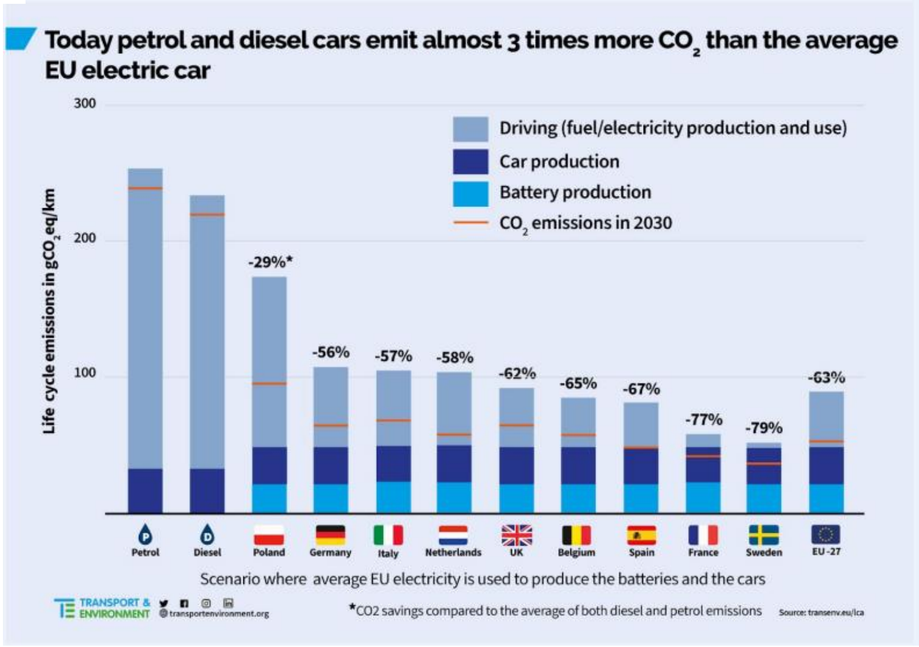


Figure 6: Evolution of lifetime CO_2 emissions of an average and clean EV

- The RAC have found that EVs emit less brake dust than ICE vehicles due to regenerative braking



Graphs from Transport & Environment research

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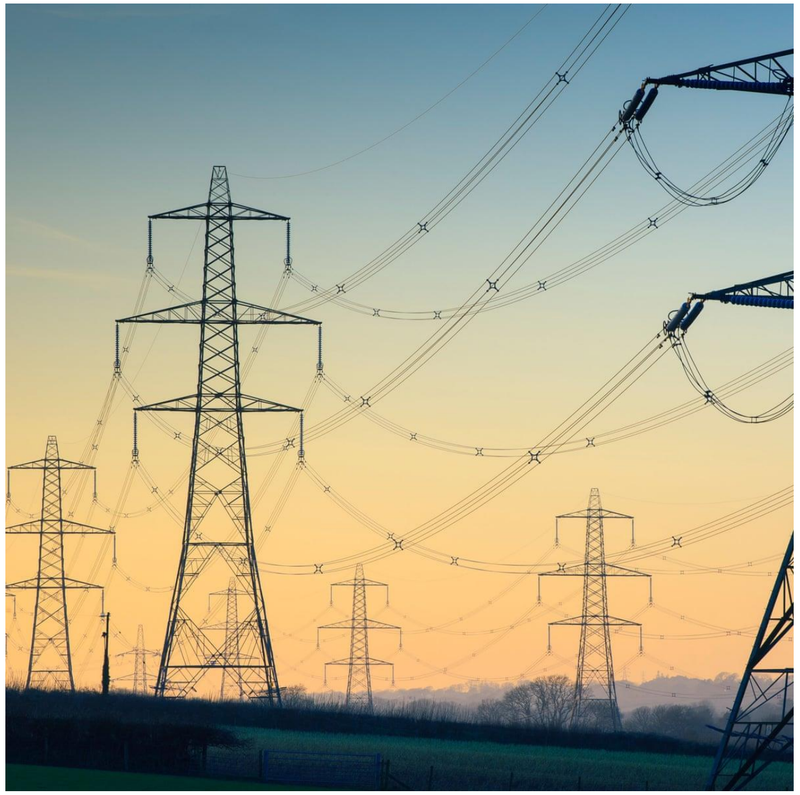
“The grid can’t cope with all these EVs!”

It’s important to remember everyone won’t switch to EVs overnight - it will be gradual.

With the growth in renewable energy the energy will be adequate to meet the future energy demand. Constantly upgrading the network.

The nation’s peak demand has fallen by 16% since 2002 due to improvements in energy efficiency

We can spread out the demand by incentivising smarter charging habits



What about Hydrogen?

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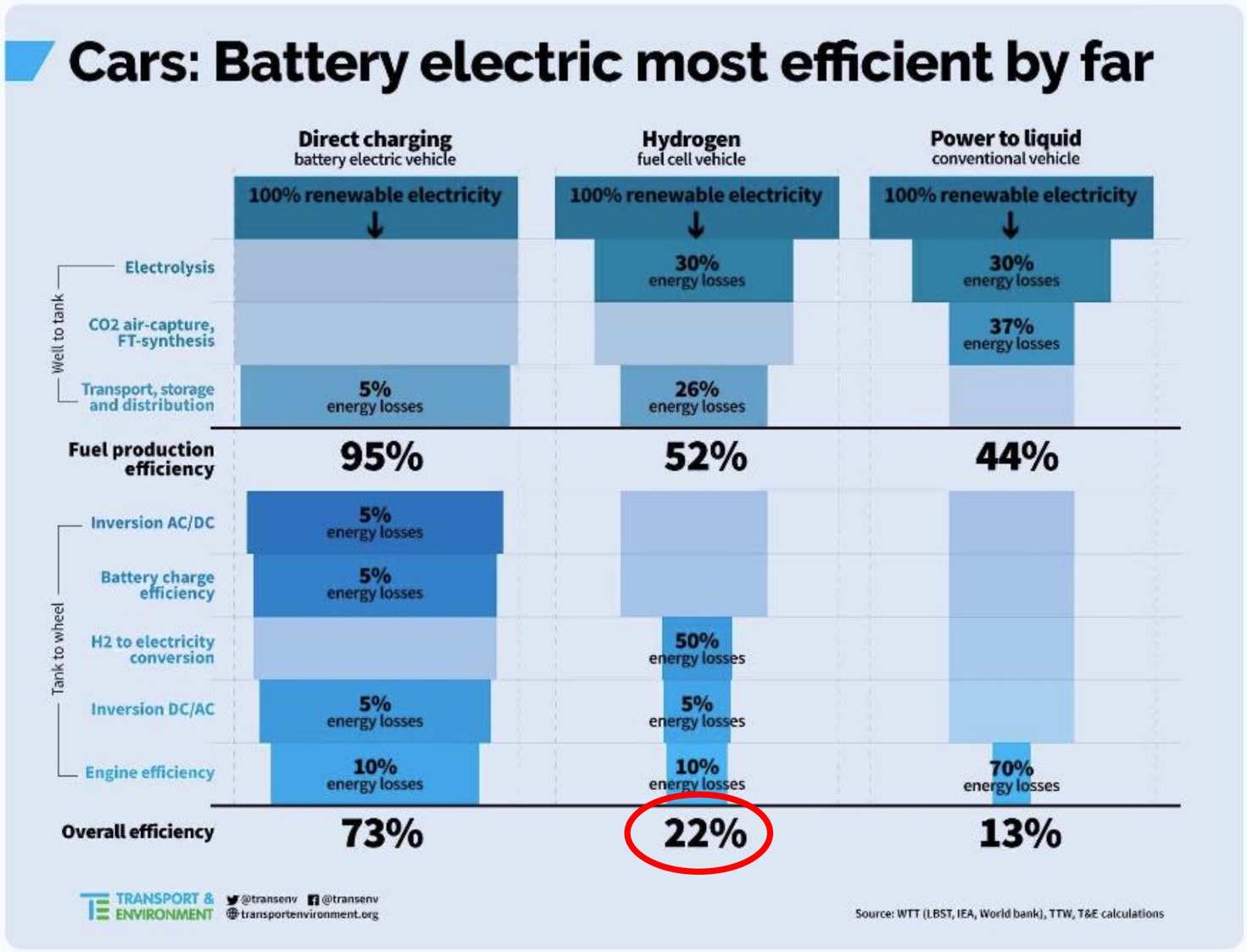

- Comparison of EV with hydrogen and internal combustion engine
- Cost
- Availability of hydrogen
- Green hydrogen

“Heavy EVs destroy roads & car parks”

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On roads

Pothole damage from electric cars is double that of petrol, Telegraph data show

Excessive weight could exacerbate problem on already damaged residential roads that are not designed to cope

Hidden cost of road maintenance due to the increased weight of battery and hydrogen trucks and buses – a perspective

John Low*, Robert Stuart Haszeldine, Gareth Harrison

We find 20–40% additional road wear associated with battery vehicles compared to ICE vehicles; hydrogen leads to a 6% increase.

On car parks

Ageing multi-storey car parks 'could collapse' under the weight of heavier electric vehicles, experts warn

Even though the largest modern EVs are much heavier than cars produced when MSCPs were first built, a car park full of laden EVs (of about 3.5 tonnes each) will not exceed the design load commonly used for most car parks, although there will be an associated reduction of design safety factors.

Do EVs need special tyres?

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Yes, EVs need special tyres:

- **Different tread patterns** to minimise rolling resistance
- **Different rubber** to improve grip and stability
- **Stronger traction** to deal with increased torque
- Able to take **heavier weight** due to battery size
- **Noise reduction** as there is no engine noise
- Some tyre brands are updating their entire range to be suitable for EVs

Do EV tyres and brakes wear out faster?

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Do components wear out faster?

Tyre wear may be quicker:

- Some fleets have found that tyres on EVs wear out ~6000 miles before tyres on ICEs
- Others have found comparable wear between EVs and ICEs
- But sample sizes are small

Brake wear is significantly reduced:

- Use of regenerative braking reduces use of brake pads (and release of PM_{10} & $PM_{2.5}$)
- Dundee taxi firm has seen brake lifespan of 80-100,000 miles and changed due to warping

EV breakdowns

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- Increasing number of breakdown/recovery technicians are high voltage trained
- Some providers can deliver a small charge at the roadside
- Or they will recover you to the nearest EVCP
- However, EVs are generally less likely to break down as they have far fewer moving parts
- Proportion of EV breakdowns attended by the AA in the first half of 2023 was only 3%

The proportion of ‘out of charge’ EV breakdowns was

- only 4% in 2022, and
- only 2% in Jan – May 2023

Running out of fuel

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The highway code

Rule 97 covers licence, insurance, vehicle roadworthiness, driving breaks and time for delays and fuel:

You SHOULD ensure that you have sufficient fuel or charge for your journey, especially if it includes motorway driving

The law

Permits stopping on the hard shoulder:

"by reason of a breakdown or mechanical defect or lack of fuel, oil or water, required for the vehicle"

But you can be issued a fixed penalty & points (£100/ 3 points) if deemed to be:

- driving without due care and attention, or
- reasonable consideration for other road users

Loss of tax revenue

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Vehicle tax

Current situation:

- Vehicles registered between 2001 and April 2017 pay based on vehicle CO_2 emissions
- Cars registered after April 2017 pay based on CO_2 emissions for year 1, and then:
  - Annual £170-180 payment PLUS
  - Additional £390/year for 5 years for vehicles with a list price of over £40,000.
- EVs are exempt from all vehicle tax

From April 2025:

- All vehicles registered after April 2017 will pay based on emissions for year 1 (currently £10)
- From year 2, all vehicles registered after April 2017 will pay a flat rate (currently £180) PLUS
- 'expensive car payment' will also apply to new EVs with a list price above £40,000 for the first 5 years

Fuel duty

'No viable alternative': UK must introduce road pricing, MPs say

Transport committee concludes that drop in fuel-duty revenues from shift to electric requires urgent action

Current situation:

- 52.95p per litre +20% VAT on petrol or diesel
- 20% VAT on electricity at public chargepoints
- 5% VAT on electricity at home chargepoints

The future

- No clear plans as yet
- Road user pricing per mile seems likely, but how to implement it & ensure equity?
- Telematics?
- MOT odometer readings?
- Insurance?

“An EV burned down Luton airport car park”

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It was caused by a diesel car engine fire, which set adjacent ICE vehicles alight

Media reports falsely claimed it was an EV fire

It was definitely not an EV fire

/cont.

“An EV burned down Luton airport car park”

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The Bedfordshire Fire & Rescue Service published a report in October 2024 explaining what happened at the Luton Airport no. 2 multi-storey car park (MSCP)

Summary: https://www.bedsfire.gov.uk/about-us/london-luton-airport-review

Full report: https://www.bedsfire.gov.uk/sites/default/files/2024-10/Significant%20Incident%20Report%20LLA%20Car%20Park%202%20fire.pdf

Vehicle type: The car was ‘*a diesel-powered vehicle.*

To further clarify it was neither a fully electric vehicle (EV) nor a plug-in hybrid electric vehicle (PHEV).’ It was a Range Rover Sport with a diesel engine.

Cause: ‘*As a result of the investigation, all evidence points to the most probable cause being an electrical fault or component failure, which started in the engine bay whilst the car was in motion.*’

/cont.

“An EV burned down Luton airport car park”

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Cause: *‘As a result of the investigation, all evidence points to the most probable cause being an electrical fault or component failure, which started in the engine bay whilst the car was in motion.’*

The vehicle was ‘*lightly smoking*’ from the engine compartment as it entered the car park on the ground floor

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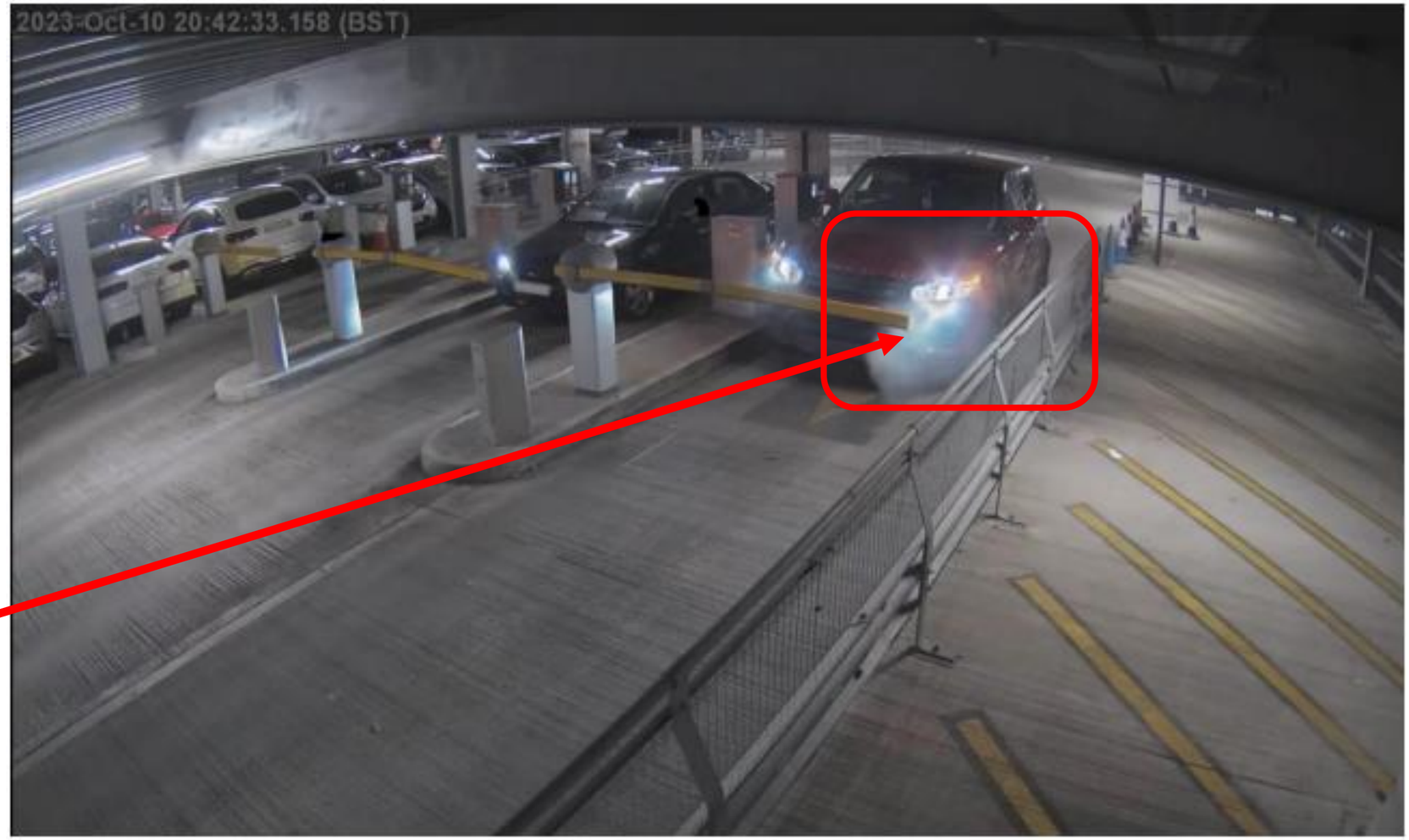

Figure 2: CCTV showing vehicle stopped at the ticket barrier with smoke from the bonnet at 20:42:33

“An EV burned down Luton airport car park”

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Flames emerged

‘By the time the vehicle was on the third floor of the building, flames became visible, and the driver pulled over … located two fire extinguishers and attempted to extinguish the fire’

The fire spread from car to car

‘The developing fire spread to other components, and whilst the owner of the vehicle attempted to fight the fire, the vehicle became overrun with flames and spread to other parked vehicles.’ (see photo)

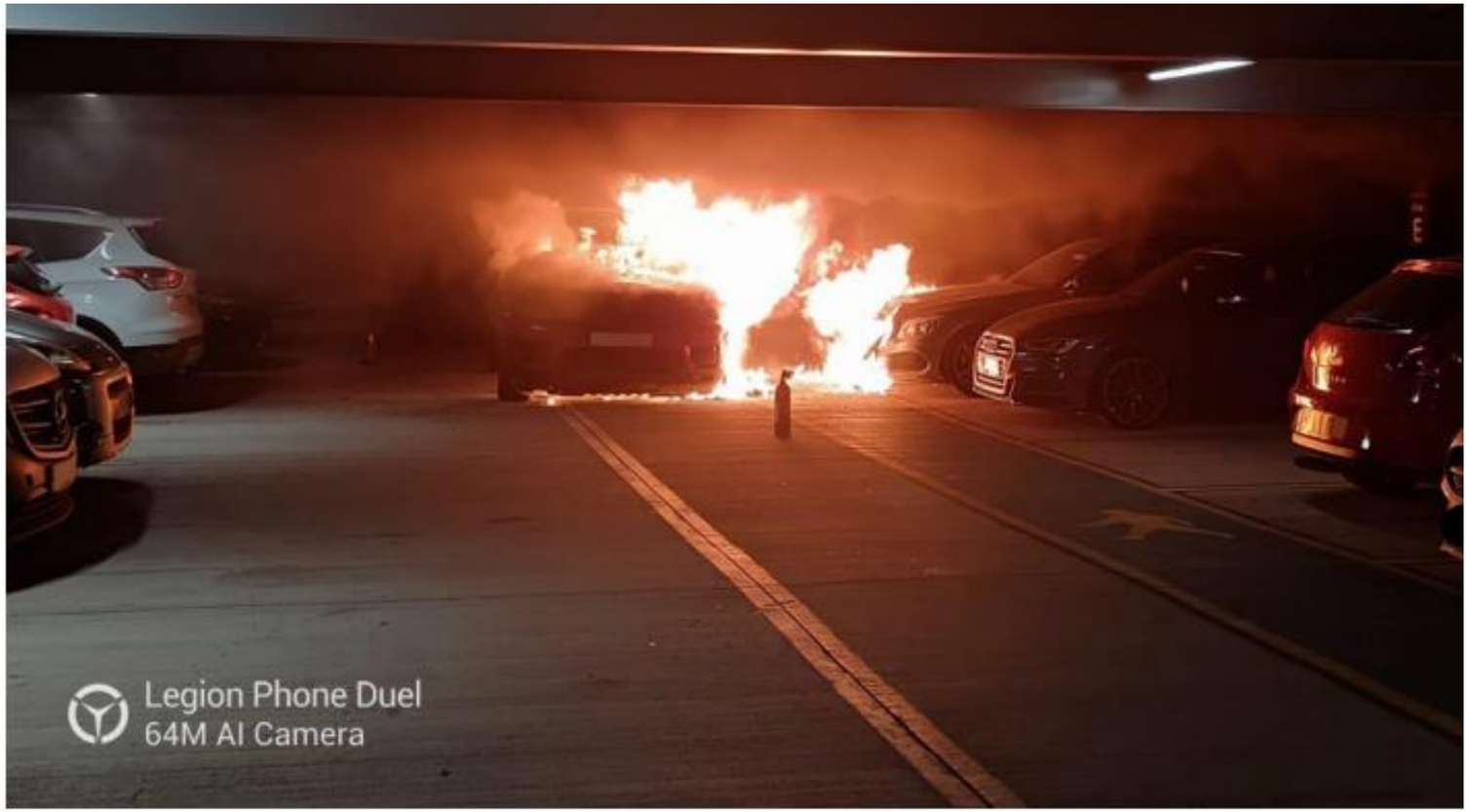

Figure 3 - Car park employee digital image – Red Range Rover on third floor TCP2 on fire

/cont.

“An EV burned down Luton airport car park”

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Factors that helped to spread the fire

- The MSCP had no automatic sprinkler system (legally permitted at the time it was built)
- A 10-mph wind came in via the open sides and fanned the spread of the flames
- The narrow 300mm gap between adjacent parked vehicles facilitated a chain reaction of fire spread due to (a) radiated heat, (b) direct flame impingement
- Car fuel tanks ruptured, (‘*most modern vehicles are manufactured with plastic fuel tanks. These are more susceptible to failure in the initial stages of a developing fire*’) which created liquid flows of burning fuels that ran across the slightly sloping gradient of Floor 3, which
    - Set fire to other vehicles on Floor 3, by flowing near to and underneath those vehicles
    - Went down the rainwater drainage pipes (made of plastic) which melted, thereby spreading the burning fuel flows to Floor 2 of the MSCP

Damage

- 1,352 vehicles burned and were destroyed
- The intense heat weakened the MSCP’s steel frame, and the building partially collapsed
- Afterwards, the whole building was deemed unsafe and was fully demolished

/cont.

“An EV burned down Luton airport car park”

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No sprinkler system: Luton MSCP No. 2 had no sprinkler system fitted (legal when it was built).

However, there are national debates ongoing about this:

- *‘There have been numerous major fires where the rate and scale of fire spread appears to have been linked to the construction of the building which has highlighted the need for strengthened fire safety requirements in buildings in England.’ (Significant Incident Report: London Luton Airport Terminal Car Park 2 page 7)*
- The Dept for Communities & Local Government commissioned BRE to carry out a 3-year project titled Fire Spread in Car Parks. The report stated (paragraph 3.6, page 97):
  - ***‘The effectiveness of sprinklers in limiting a fire to a single car has been demonstrated. This supports findings reported verbally by the fire and rescue service.’***
  - ***‘Sprinklers clearly assist in the reduction of structural damage.’***
- The National Fire Chiefs Council (NFFC) has called for new legislation requiring MSCPs to have a sprinkler system, because research shows that non-dwelling building sprinkler systems have contained, controlled or extinguished the fire in 95% of cases (Optimal Economics Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom: An Analysis from Fire Service Data 2017, Page 57)

/cont.

“An EV burned down Luton airport car park”

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Media reporting was incorrect

- Claims that it was an EV or a diesel hybrid that caused the initial fire: **FALSE** (it was a diesel Range Rover Sport)
- Claims that EVs spread the fire to other vehicles: **FALSE** (it was the burning of conventional ICE vehicles plus their burning fuel released from ruptured tanks)

Social media reporting was incorrect

- Claims that an EV charging its battery caused the fire: **FALSE** (Luton Airport’s charge points were in another, different, car park, not in car park no. 2 where the fire happened)

See https://www.bedsfire.gov.uk/sites/default/files/2024-10/Significant%20Incident%20Report%20LLA%20Car%20Park%202%20fire.pdf page 87

Fire risk – Guardian article

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EV mythbusters

A series of articles that explores the myths, the realities and surrounding electric vehicles

20 November 2023

Do electric cars pose a greater fire risk than petrol or diesel vehicles?

https://www.theguardian.com/business/2023/nov/20/do-electric-cars-pose-a-greater-fire-risk-than-petrol-or-diesel-vehicles

“EVs catch fire more often”

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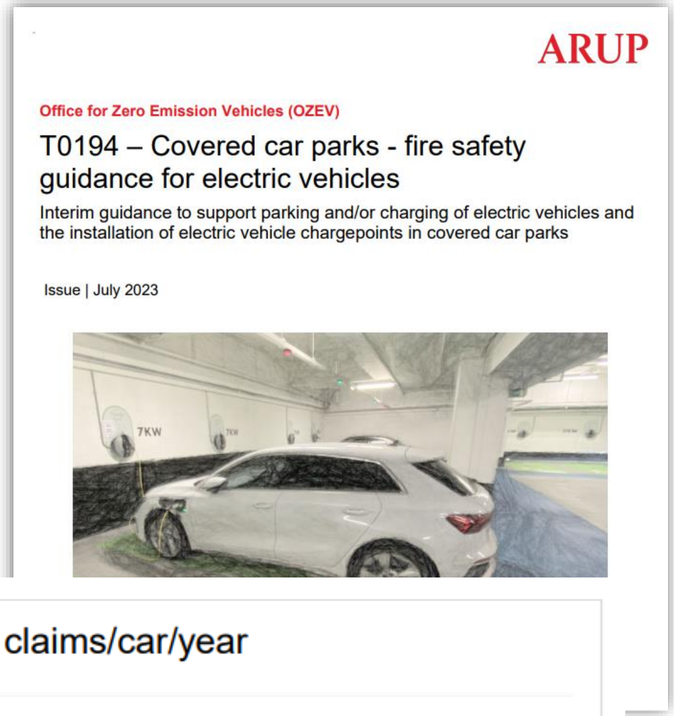
ARUP

Office for Zero Emission Vehicles (OZEV)

T0194 – Covered car parks - fire safety guidance for electric vehicles

Interim guidance to support parking and/or charging of electric vehicles and the installation of electric vehicle chargepoints in covered car parks

Issue | July 2023

EVs are up to **11 times less likely** to have a fire than other vehicle types.

However, national & global research data is incomplete

- Was the EV charging?
- Cause of the fire?
- Was the battery pack involved?

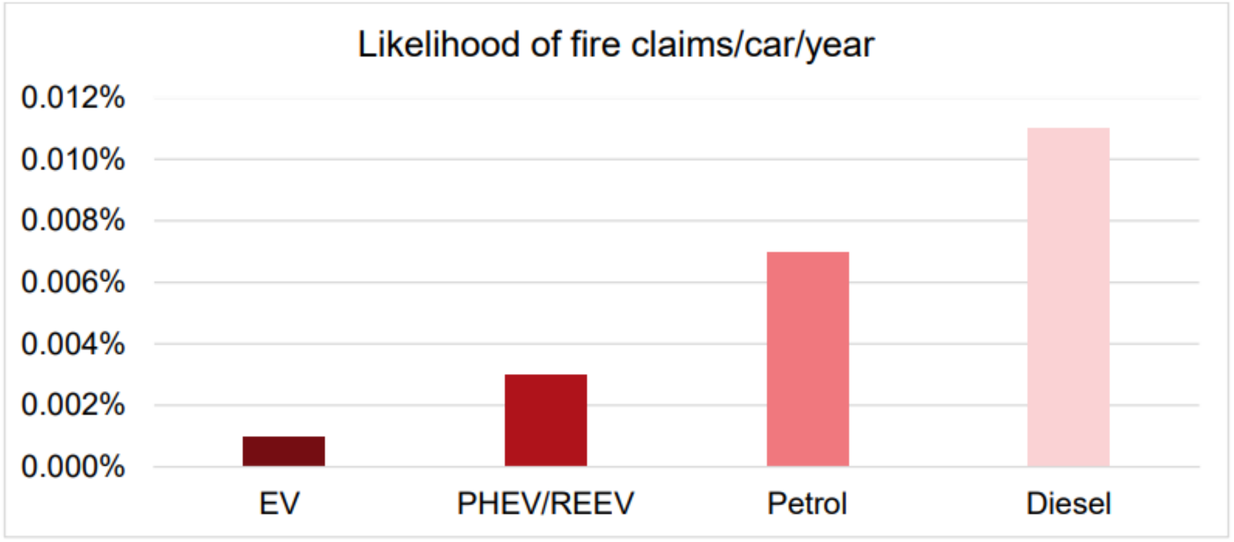

Figure 7: Illustration of likelihood of fire claims per car per year, sorted by propulsion type [10]

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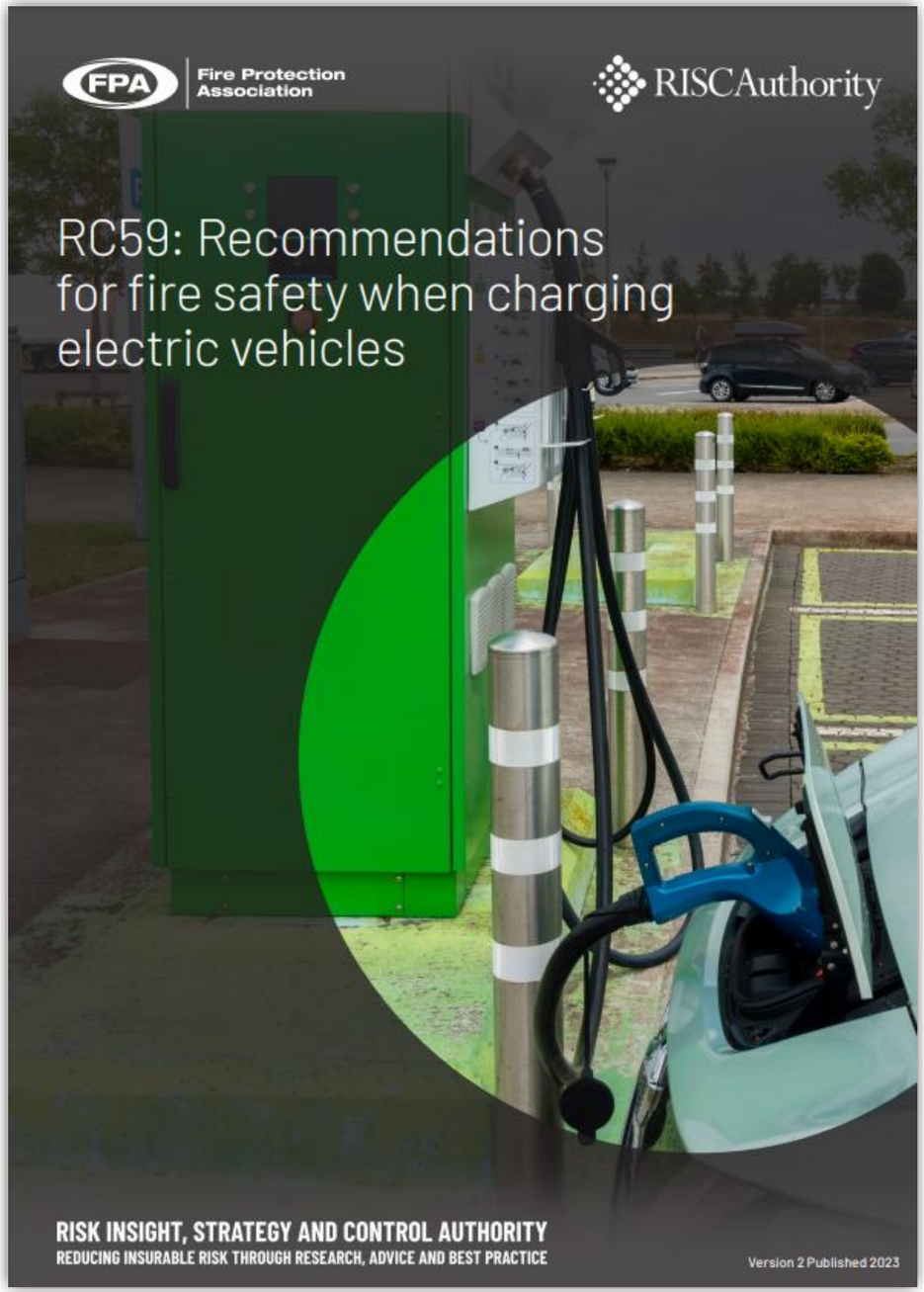
“EV fires are hard to put out

FPA findings

- EV Li-Ion battery fires are rare
- When an EV Li-Ion battery catches fire then they can release gases that are flammable, toxic, asphyxiant, corrosive, explosive
- Reignition of a battery fire is possible though not common
- Special equipment are needed to ensure full and safe extinguishment of an EV Li-Ion battery fire
- **The degree of hazard from an EV car fire vs an ICE car fire are about the same**



Containing an EV battery fire (1)

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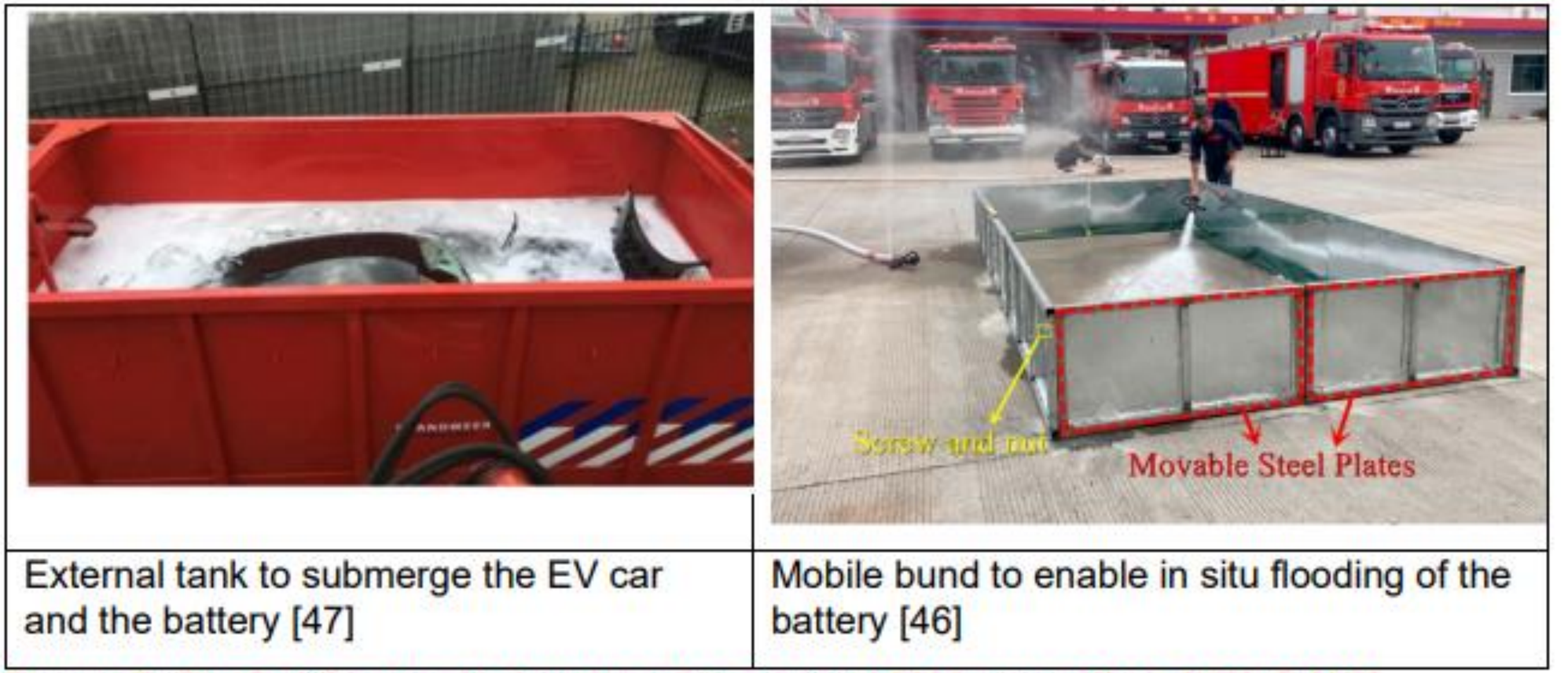

External tank to submerge the EV car and the battery [47]	Mobile bund to enable in situ flooding of the battery [46]

Figure 6: Firefighting tools developed to control EV battery fires [47] & [46]

An external tank or mobile bund can flood an EV battery that is on fire

Coming soon: guidance from EST about fire risk and EVs

Containing an EV battery fire (2)

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A fire blanket can smother an EV where the battery is burning

This will contain the battery fire but will not extinguish it

Coming soon: guidance from EST about fire risk and EVs

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Do EVs have a handbrake?

Sort of…

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"Why can't we just have rapid charge points everywhere?"

A small gas heated development of 25 Flats flats will have a maximum demand of 50KVA

1 x 50kW rapid charger could have the same impact on the network as 25 flats

“Petrol and diesel will be banned”

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Main point: sales of brand-new vehicles using petrol or diesel will end by various dates. But second-hand vehicles of any type, including those using petrol/diesel, will still be legal, subject to passing their MoT test each year.

The Conservative government

- made a law that 80% of **brand-new** cars and 70% of **new** vans sold in Great Britain will be zero emission by 2030, increasing to 100% by 2035
- committed to banning sales of **brand-new** petrol/diesel/ hybrid cars and vans by 2035

The Labour government has committed to banning the sales of **brand-new** petrol and diesel cars & vans earlier in 2030, and hybrids in 2035.

But there are no plans to make buying or using petrol/ diesel vehicles illegal, even after these dates. Existing ICE vehicles will still be legal. However, all vehicles will have to comply with roadworthiness regulations such as passing their MoT test each year.

As the years pass, spare parts for ICE vehicles will be harder to find and older vehicles will be scrapped. Gradually, petrol/ diesel vehicles will decrease on the roads as the supply of second-hand vehicles dries up.

The petrol/ diesel ‘classic cars’ niche will very likely continue long term.

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Welcome to the

Electric Vehicle Infrastructure Training Course

CPD MEMBER
The CPD Certification Service

EVI training course

Index

Also see Energy Saving Trust's Index of myths

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Sales of EVs are falling

FALSE

September 2024

Monthly UK plug-in car registrations and market share

zapmap

Source: SMMT, August 2024

Problems:

- Appears to be based only on number of EVs sold to private customers
- Does not account for changes in overall sales, nor prevalence of EV sales via companies

Fact:

- Proportion of all sales has plateaued in 2024 to around 15-20% (although 22.6% in Aug 24!)
- EV Sales were 24.4% higher in Sep 2024 than 2023
- Second-hand market is growing strongly

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ZEV Mandate is forcing OEMs out of business

FALSE

September 2024

The Telegraph News Sport Business Money Opinion Ukraine US election Travel Health Lifestyle Culture Puzzles

Economy Companies Markets Tech

Why electric vehicle apathy is forcing carmakers to take desperate measures

Net zero rules and a lack of consumer incentives to buy EVs risk pushing the market to failure

Matt Oliver
Industry Editor

Related Topics
Automotive industry, Electric cars, Net Zero

03 September 2024 6:01pm

Problems:

- Press articles are part of a concerted lobbying attempt by some car makers to protect their core business
- All policies have wider (un)intended consequences and connections to Industrial Strategy and World Trade

Fact:

- OEMs who rely heavily on ICE vehicle sales are under significant pressure – many Chinese manufacturers are committed strongly to ZEVs.
- Vast majority of car makers are still committed to phasing out ICE vehicles at or before 2030
- Overall sales of vehicles are also falling: 2.5m per year down to closer to 1.5m per year

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Producing EVs is bad for the environment

Feb 2024

The Coalition of Concerned Manufacturers & Businesses of Canada
'Bravely safeguarding Canadian jobs'

PARTLY TRUE

Problems:

- The 'tons' of rock/ ore for the raw materials are often the same
- This is from a lobby group of "concerned manufacturers and businesses" in Canada
- It's a strawman argument - no one is claiming that a 'Zero Emission Vehicle' does not have any emissions associated with its manufacturer

Fact:

- EVs do required a range of materials to be produced
- EVs are zero-emission at the tailpipe (they have no tailpipe!)
- Many modern EV batteries do not contain cobalt, but petrol and diesel production does use cobalt

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EVs are not zero-emission

PARTLY TRUE

Feb 2024

The Telegraph

News Sport Business Money Opinion Ukraine US election Travel Health Lifestyle Cultu

Economy Companies Markets Tech

Electric cars are not 'zero emission', says advertising watchdog

Carmakers ordered to take account of CO2 used in manufacturing and charging

Matt Oliver
Industry Editor

Related Topics
Net Zero, Electric cars, Automotive industry

07 February 2024 12:55pm

Electric cars cannot be advertised as completely "zero emission" because of the carbon dioxide that is generated when they are made and charged, the advertising watchdog has declared...

Problems:

- Claims of "zero-emission" being taken very literally by complainants
- Carbon intensity of electricity has dropped 40+% since 1990, with last Coal Power Station offline from 1 Oct 2024

Facts:

- EVs do produce CO_2 emissions in their manufacture, operation (where not using 100% renewable electricity) and disposal
- But most EVs break even compared to ICE around 17k miles
- EVs do produce slightly more brake/ tyre wear than their ICE equivalents

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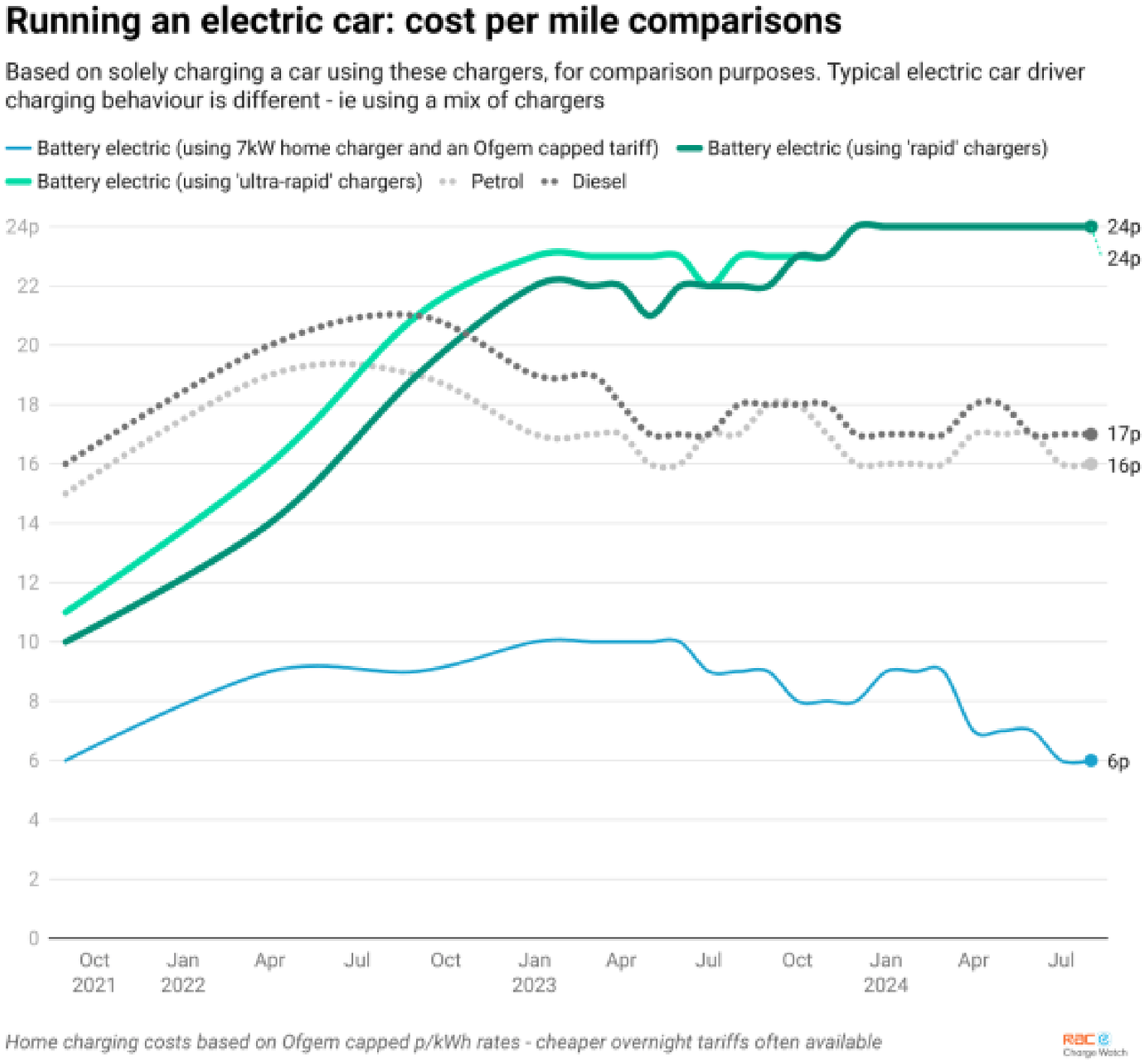
EVs are expensive to drive

PARTLY TRUE



Problems:

- Focuses only on the cost of public charging

Facts:

- EVs are much more efficient than Internal Combustion Engine (ICE) vehicles
- A UK driver on standard 2024 domestic tariff would save £700+ a year over a petrol car
- It should be noted that public charging is more expensive than petrol and diesel in some cases

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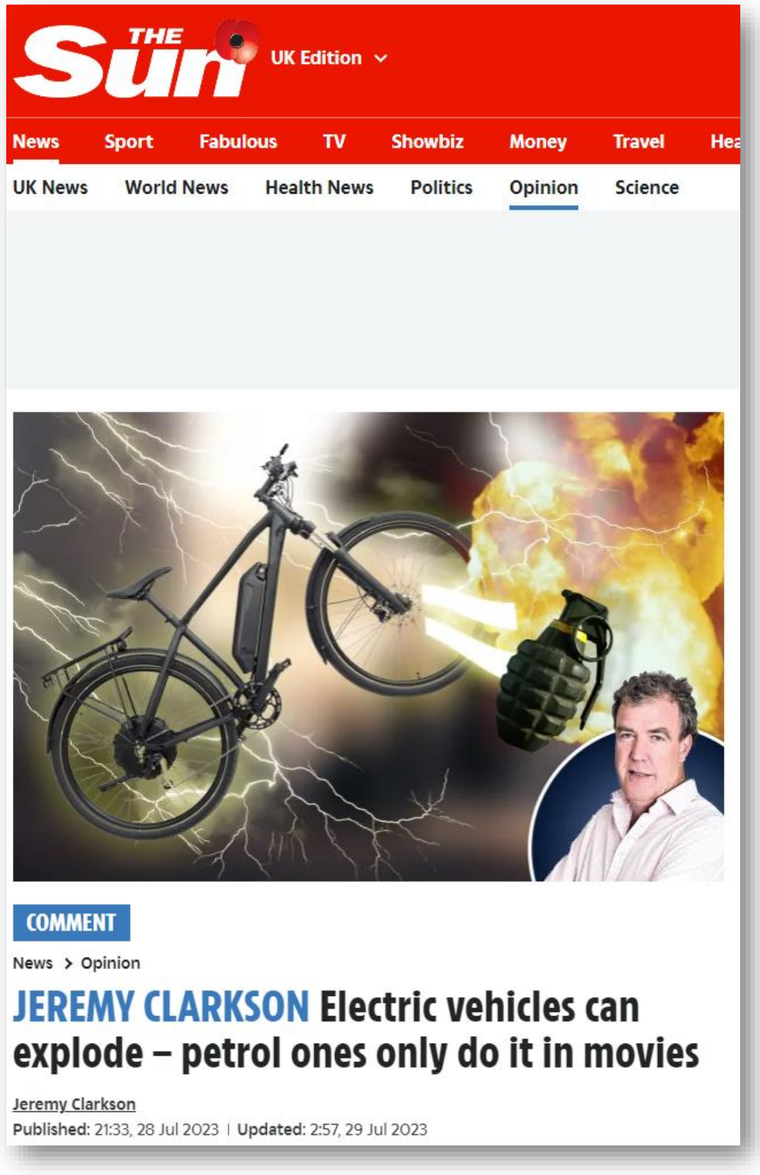
EVs catch fire more often

FALSE

July 2023



Problems:

- Focuses on fires on ships and car transporters
- Emphasises Richard Hammond's Rimac battery fire, which lasted for nearly a week

Facts:

- EVs are around 20 times less likely to catch fire than ICE vehicles (Tusker, Swedish Contingency Agency)
- But battery 'thermal runaway' fires do require specialist equipment

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EVs are too heavy

FALSE

April 2024

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Are electric cars responsible for Britain's pothole problem?

- The Asphalt Group and Shadow Minister for Roads have addressed the claims
- Reports have suggested EV bulk is a major contributor to crumbing roads
- RAC attended 10% more pothole-related breakdowns this March versus 2023

By FREDA LEWIS-STEMPEL
UPDATED: 08:26, 1 July 2024

Share 37 shares 1.5k View comments

A leading road surface company wants to put an end to speculation as to whether electric vehicles are the cause of an increase in potholes on roads.

The Asphalt Gr called for a bett network.

It comes after so SUV versions - a

Heavier cars are blamed for the £16 billion cost of Britain's pothole plague as crumbling roads reach 'breaking point'

- Over 107,000 miles of local roads risk crumbling if not re-built within 15 years

By DAVID CHURCHILL CHIEF POLITICAL CORRESPONDENT
PUBLISHED: 00:05, 19 March 2024 | **UPDATED:** 12:09, 29 May 2024

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News & commentaries > Commentary

Daily Mail admits making up story about electric vehicles causing potholes

Commentary on 24 April, 2024

Problems:

- Misquotes from one comment about EVs buried deep in one report
- Focuses on the heaviest models
- Ignores 3 tonne ICE vehicles such as Land Rovers

Facts:

- EVs are typically heavier than their ICE equivalents
- The shift to SUV-type vehicles has increased the size and weight of all vehicles, regardless of fuel

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