



2018 - 2024

2025 - 2029

2030 - 2034

2034 - 2040

TECHNOLOGY

Infrastructure

An industry fund worth £400m is established to support infrastructure development

50% of workplaces with car parks have charging infrastructure

Blockchain technology allows consumers to earn money by giving other EV drivers access to their charging point in a peer to peer model

Induction (wireless) charging for use in home garages gains popularity

Government subsidies ensure a rudimentary network of petrol stations on UK's roads for remaining petrol cars is maintained

Autonomous induction charging widely available

Vehicles

A major car company releases an EV with nearly 600 km range. Drivers' range anxiety drops to an all time low.

EVs reach purchase cost parity with petrol equivalents

All new EVs have a 350kW charging capability

Launch of autonomous charging

Substantial decline in need for parking spaces, freed-up space along roads is used for micro housing projects

First section of motorway with induction charging opens

Last manual electric charging stations retire

Fleet

100kWh batteries cost less than £15,000

EV market share of pure-electric OEMs reaches 10%

Most major OEMs have 100% electric versions of all their models

Battery costs reach £100/kWh for typical EVs

ULEVs account for 60% of new cars sold

Nearly 40% of mileage travelled is low carbon

100% of new cars sold are ultra-low emission

CONSUMERS AND PRODUCTS

Customer Offer

First fleet procurement departments negotiate large-scale EV fleet rates

Major logistics fleet declares it will be fully electric by 2025, and announces the launch of a new fleet management software for EVs

50% of all commercial fleet managers have plans for EV fleet deployment

The favourable Total Cost of Ownership makes the business case for an all electric fleet clear. Most commercial fleet managers have either already gone fully electric or are planning to do so.

Public sector fleet is fully zero emission capable

90% of light commercial fleets are EVs capable of 350kW charging

Urban light commercial fleets reach 100% pure EV

Mobility

All major electricity suppliers have special EV tariffs, some offer fully managed charging solutions

Home owners share data with a range of parties via newly launched home data portals for personalised tariff quotes

Suppliers and their partners launch first flex home offerings, including fully financed EV chargers, thermostat and household controls to reduce bills

Customers save ~ 40% on 'total cost of energy' by switching to electric

Integrated bills (£/mile) are commonplace across a range of charging locations

Every second EV is sold with an energy supply contract via the OEMs

Private car ownership drops significantly as economics and convenience of mobility-as-a-service offerings change the traditional concept of car ownership

Single customer offers optimise route planning and charging across roads (congestion and toll road usage) and energy markets

First autonomous taxi service starts operation

Private car ownership drops by 25%

Launch of first autonomous mini shuttle

Autonomous electric taxis are common in urban centres

All major private hire firms are fully electric

Seamless linking across different transport modes improves carbon intensity of travel

Blockchain-based smart contracts for taxis lead to rapid expansion of peer-to-peer ride-hailing

Efficient extended car sharing reduces the cost of road transport by 50%

First flying taxi service in London goes live as a pilot project

Autonomous electric vehicles in all shapes and sizes become the norm for personal road transport across the UK

POLICY

Direct Incentives

First five Clean Air Zone (CAZ) cities in operation

European Commission sets EU-wide 'benchmarks' for sales of full battery electric cars at the level of 15% by 2025 and 30% by 2030

Government commits an additional £1bn to drive uptake of ULEV

Time of Use congestion charging introduced

National petrol scrappage scheme to encourage retirement of remaining non-ULEVs

All major UK cities are Zero Emission Zones

Incentives or government interventions are no longer required as ULEVs have become the norm

Markets & Pricing

National diesel scrappage scheme established

Government directs funding to DNO connections, speeding up infrastructure development

Government renews £220m Clean Air Fund and over 50 local authorities become CAZs

Advances in predictive modelling allows businesses to offer over 90% of available EV battery capacity into flexibility markets

EVs provide essential flexibility to the grid, accounting for 20% of battery storage capacity in Europe

Government tightens cyber-security standards for EVs in response to hacking concerns

Car road pricing introduced to recover losses in fuel duty

Real-time dynamic road pricing across congestion, cost of road infrastructure and emissions