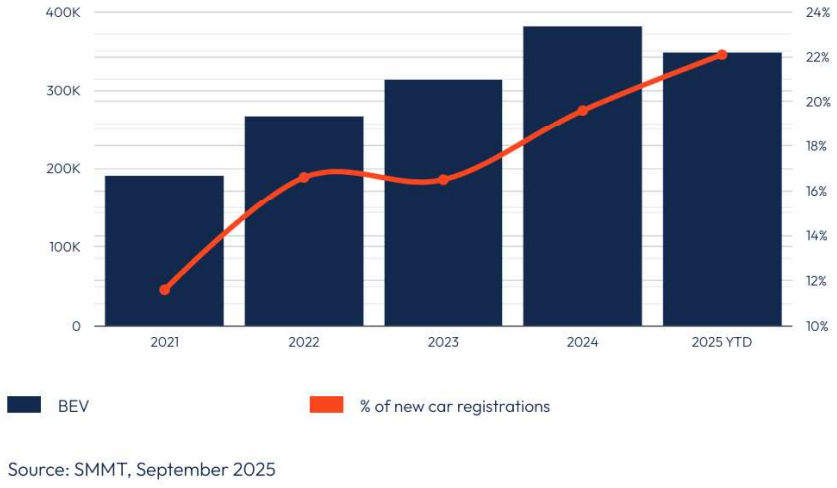
ELECTRIC VEHICLES (EVs)

I did it : myths, truths and lessons from 6+ years of driving and specifying EVs

My Current Car: Hyundai Kona electric - 64kWh battery, 300 mile range. Hatchback, seats 5, roof rails. Purchase price £15.9k from dealer; 3 years old, 23k miles, 2 years remaining warranty. Have done 11,000 miles in the year since purchase.

- Electric vehicles (EVs) are not the same as cars with internal combustion engines (ICEs) - one shouldn't expect them to be
- EVs are to ICE cars what smartphones were to Nokia and Blackberry - a game changing new technology that **requires a different approach** … !!
- EVs are fun to drive, quiet and, when charged at home, economical to run
- EVs have great, integrated technology e.g. timers, limiters,charge optimisers, sat nav, user profiles, etc - use it to optimise the use of your EV
- Some new EVs have ranges over 400 miles, second hand ranges are smaller
- Winter energy economy (miles/kWh) can be up to 20% less than summer
- The charging network is extensive and growing so lower EV ranges less of an issue. Typical charging: 60-70% home; 20-30% destination; 10-20% en route
- Understanding your vehicle usage model (number, length and frequency of journeys) is critical to vehicle selection
- Bigger electric vehicles have bigger batteries, use more resources, have higher running costs and take up more space … just like bigger ICE vehicles
- Planning each longer outbound journey (beyond 40% EV range) is sensible
- There are multiple types of charger - understanding them is crucial to successful and efficient use
- Much of the charging network is Apple IoS/Android App based and needs a smartphone to access it optimally
- EV prices are reducing with growing second hand market
- So far battery life is not a problem - Up to 250,000+ odometer miles at 88% of original range have been achieved and are still active
- Battery technologies are improving all the time, higher power, lower weight, fewer rare minerals used which are mined more sustainably. Battery reuse and recycling processes are available and happening as end of life EV volumes increase

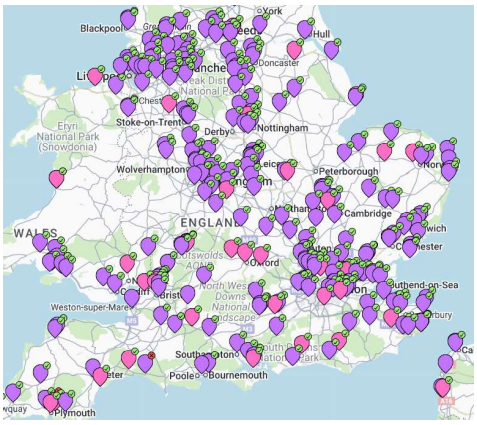
Rate of EV adoption



Source: SMMT, September 2025

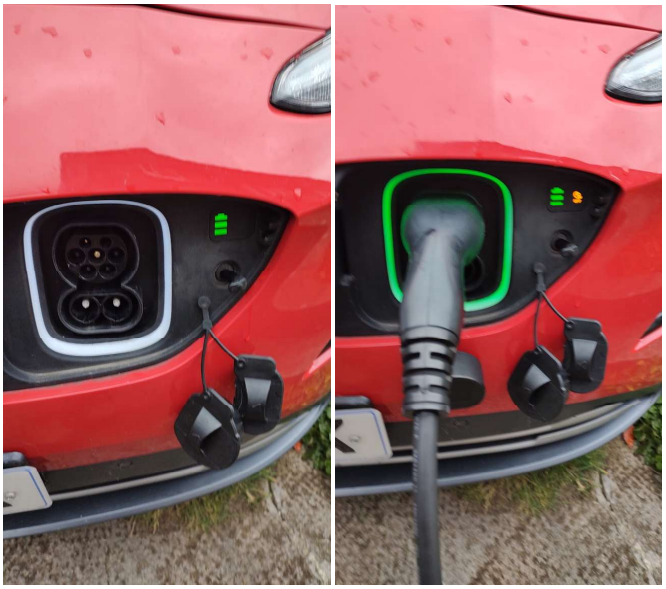
- 1.3m EVs registered in UK (early 2025) which is 4% of all UK cars (32m)

How big is the charging network ? (middle picture shows some rapid (50k+) chargers only)



- AC chargers: 3kW - 22kW; DC chargers: 25kW - 350kW;
- Car charging capability matched to its battery size
- Try to plan not to charge from less than 15% nor to much more than 80% (except at home)

Connector types



- Type 2 (AC) and CCS Type 2 (DC) are the most popular/common connectors

Chargers home (slow); home (fast) and en route (rapid)

- Use apps like “Zapmap” to plan outbound journeys longer than 40% of your range
- You will need Apps on your smartphone to access best prices and slower chargers e.g. *Podpoint; Gridserve; BP Pulse; Mer; Geniepoint; ConnectedKerb; eVolt*
- Bristol to Birmingham, London, Bournemouth are all in range for me without charging
- You don’t always have to keep your car at 100% - charge cheaply at home or opportunistically to get the job done if not at home
- Slower chargers are better for your battery and cheaper/kWh. Overnight charging is best: I only charge 1 - 3 times per week
- Get an “EV tariff” from your utility company tailored to your energy use and equipment
- Some utilities have their own public charging networks or agreements - worth exploring