



Engaging users with Smart Charging – Energy UK Policy Insights from the EV Energy Taskforce

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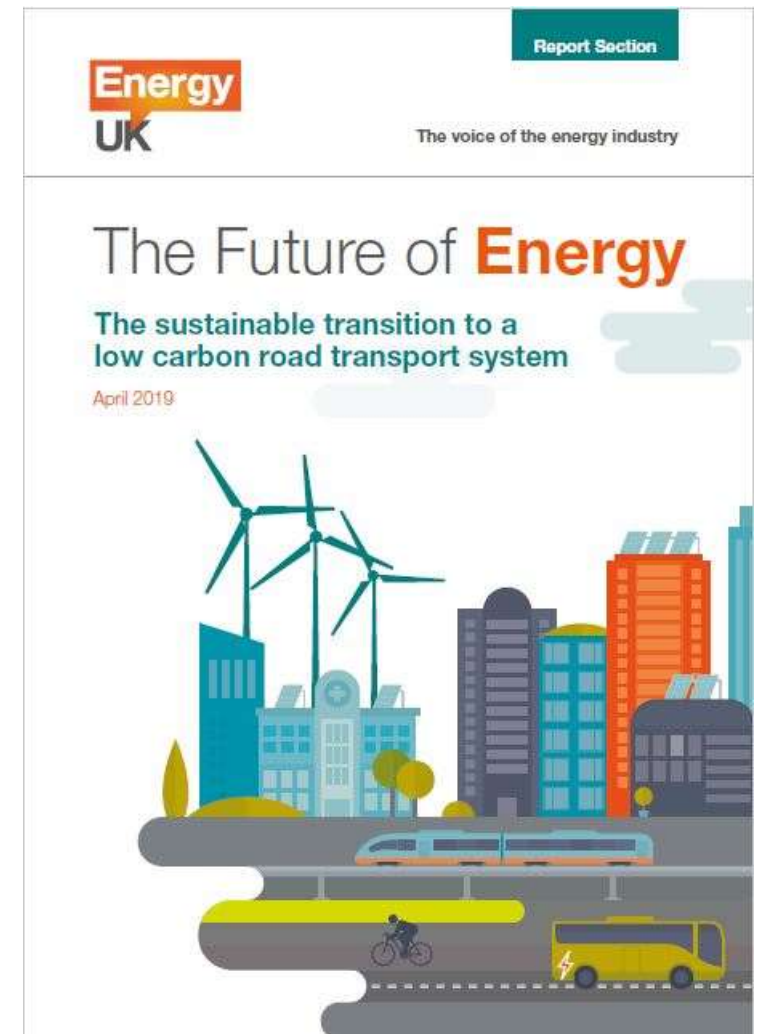
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Engaging Users with Smart Charging: Energy UK Policy Insights



Energy UK is the trade association for the GB energy industry with a membership of over 100 suppliers, generators, and stakeholders with a business interest in the production and supply of electricity and gas for domestic and business consumers.

Our membership covers over 90 per cent of both UK power generation and the energy supply market for UK homes. We represent the diverse nature of the UK's energy industry – from established FTSE 100 companies right through to new, growing suppliers and generators, which now make up over half of our membership.



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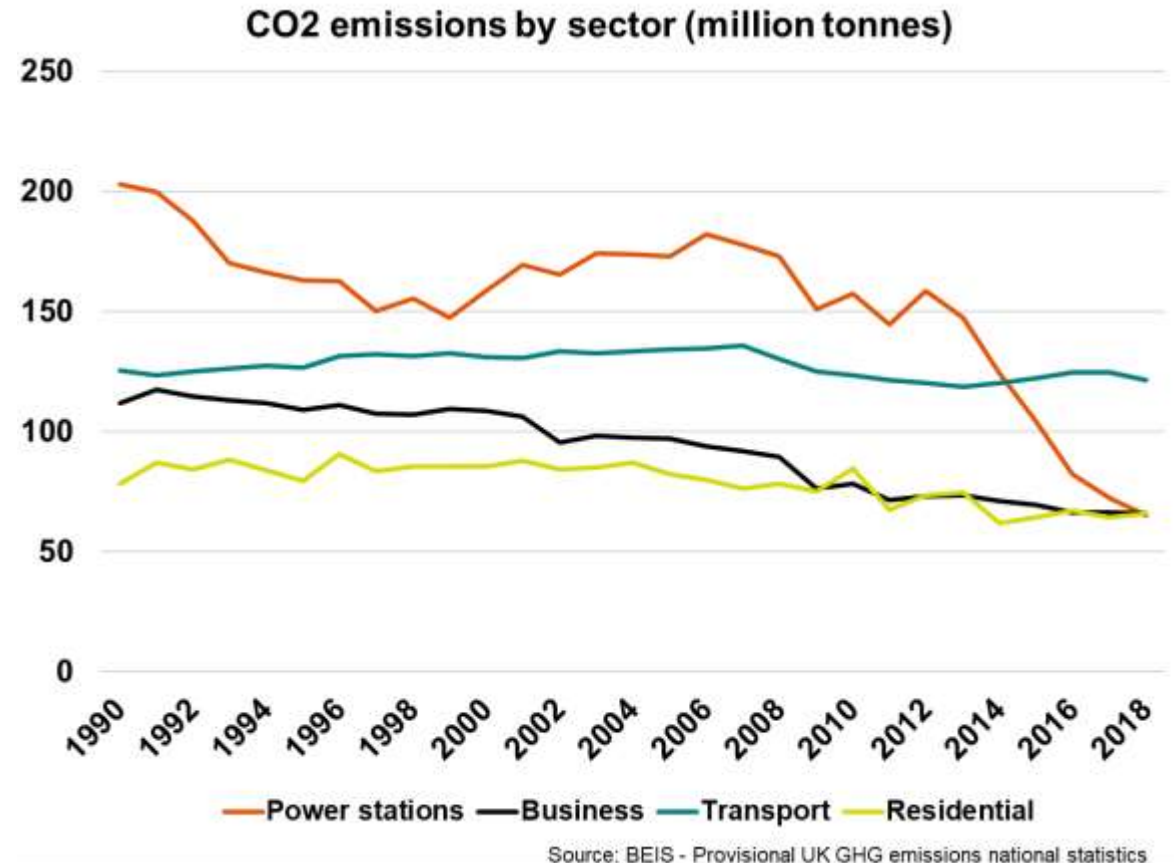
- Where we are today
- Where we need to be
- How to get there

The background features a central orange horizontal band. Above and below this band, there are abstract, blurred light rays in shades of yellow, orange, and white, creating a sense of depth and movement. The overall aesthetic is clean and modern.

Where we are today

A mixed picture on decarbonisation

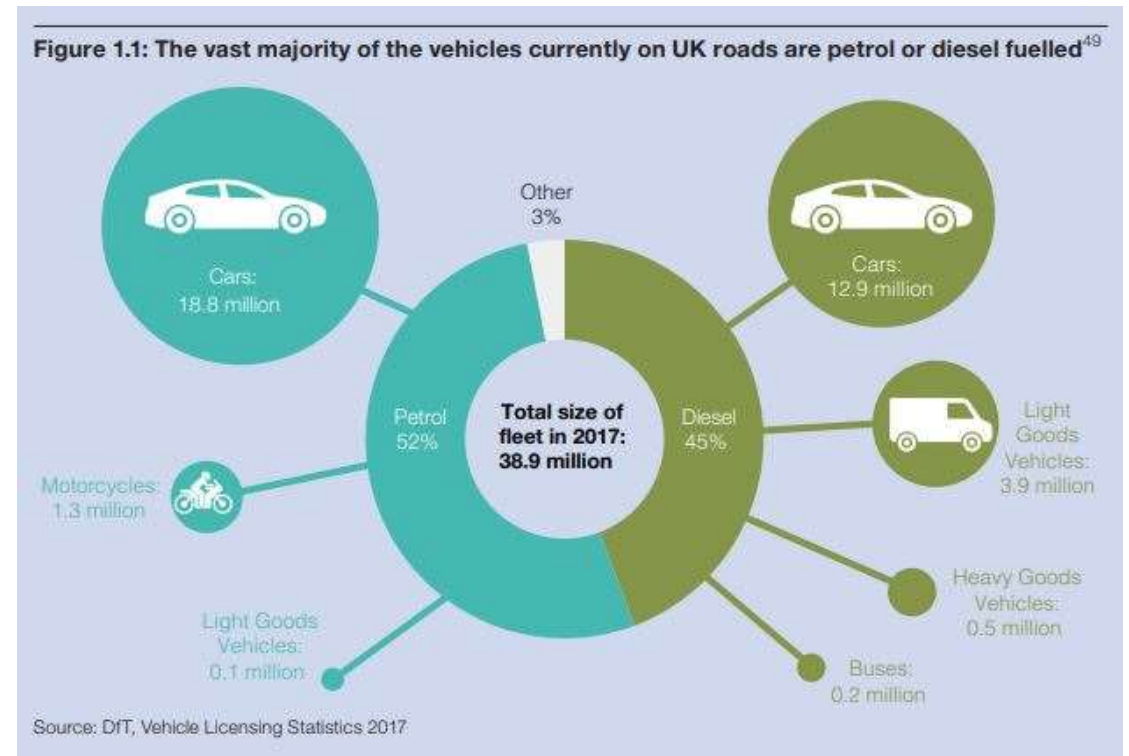
- A 2050 net zero target
- UK emissions down 40 per cent on 1990 levels
- Transport emissions largely unchanged, responsible for 23 per cent of total emissions and largest emitting sector
- Power sector emissions down 68 per cent



Source: CCC, [2019 Progress Report](#)

The current picture

- 39m vehicles
- 220,000+ plug-in vehicles
- ~15,000 public chargepoints in ~9,500 locations
- 130 plug-in models



Sources: DfT, [Road to Zero](#), 2018; [Next Green Car](#); [Zap Map](#)

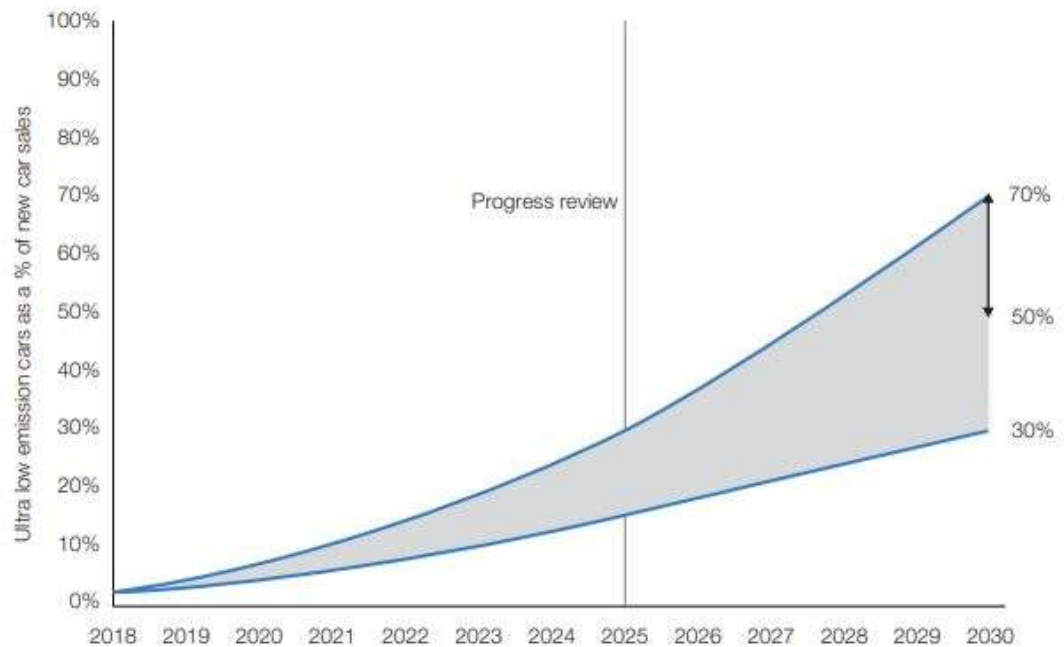
The background features a central horizontal band of solid orange color. Above and below this band, there are abstract, blurred light rays in shades of white, yellow, and light blue, creating a sense of depth and movement. The rays appear to originate from a central point and fan out towards the edges of the frame.

Where we need to be

Opportunities and challenges

- Opportunity to leverage progress in power to decarbonise road transport
- Battery range, vehicle choice and public chargepoint infrastructure improving year on year
- EVs to reach upfront price parity by mid-2020s

Figure 1: Illustrative ultra low emission car uptake trajectory as a percentage of new car sales



Opportunities and challenges

- 30-40m EVs on the roads means increased energy demand
- If charging takes place at the “wrong” time would require significant additional network and generation capacity
- Shifting charging time key to making best use of existing assets

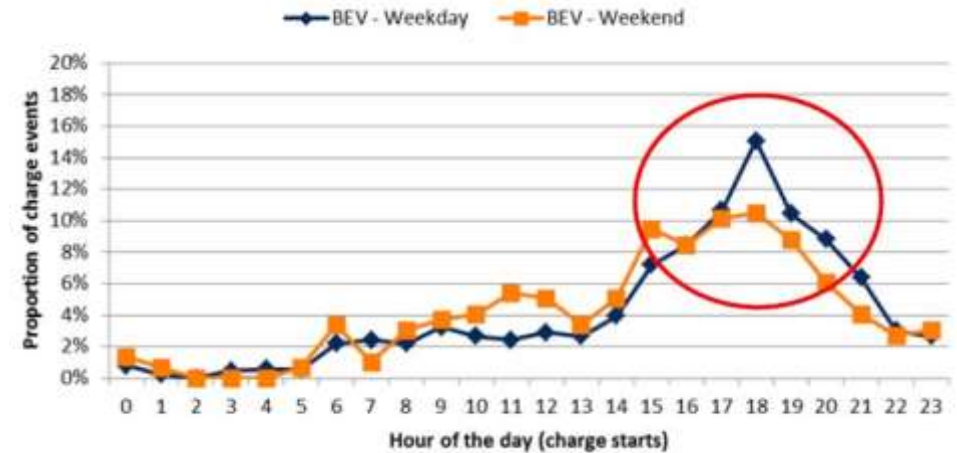
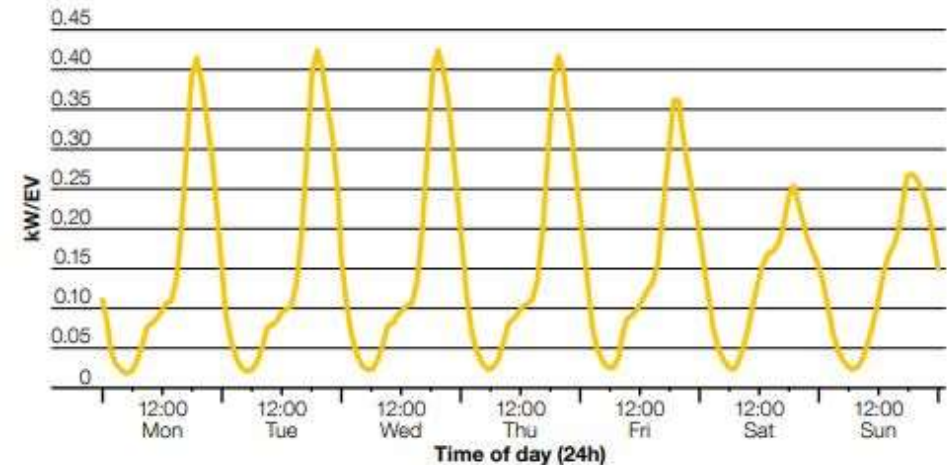


Figure 4.25
Average residential charging profile (typical week)

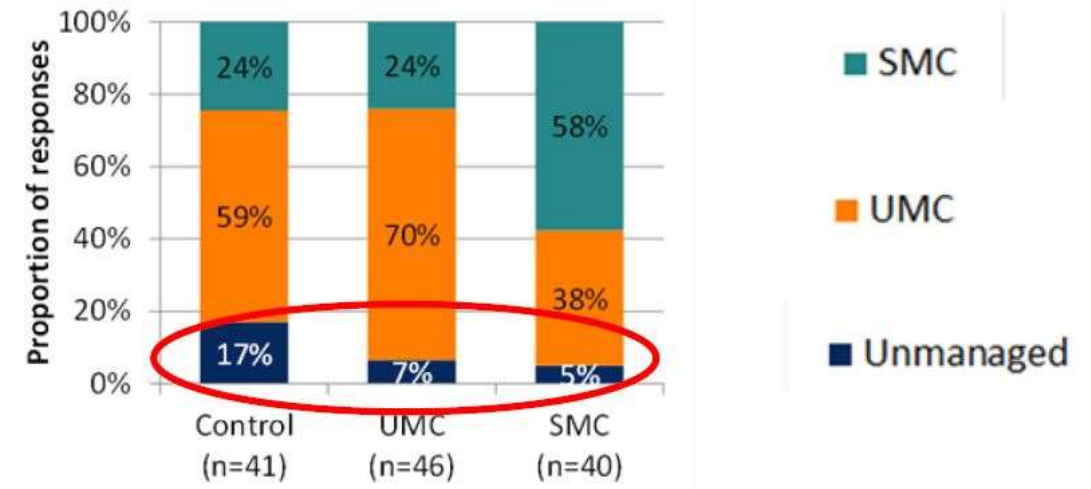


Sources: ETI, [CVEI Consumer Charging Trials](#), 2019 & National Grid, [Future Energy Scenarios 2019](#)

Smart charging as the norm

- Smart charging is effective at changing charging behaviour
- Consumers are not only open to – but actually prefer – smart charging
- Half hourly settlement and smart meters are unlocking new time of use tariffs and EV offerings

Preferred scheme if BEV trial participants owned a BEV...



User experience is everything

- Drivers likely to be risk averse
- The charging experience needs to match, if not surpass incumbent technology
- Tackling “experience anxiety” and making smart charging the easy option key to getting buy-in



How to get there

How to get there

- Smart charging standards important first step in the short term
- Continue building up the evidence base through innovation trials, e.g. Project Shift
- Avoid top-down decision making and heavy-handed regulatory interventions.
- Market-led approach to deliver competition, innovation and variety: an element of trial and error key to working out the most compelling offerings

EV Energy Taskforce Recommendations

- Smart charging “by default”
- Government-funded independent & impartial advice service
- Common, principle-based complaint handling standards
- Full review of customer protections for EV services (suggested as part of Future Energy Retail Market Review)
- Promote best practice information provision at point of sale
- Chargepoint labelling standards re: interoperability
- Public facing communications campaign