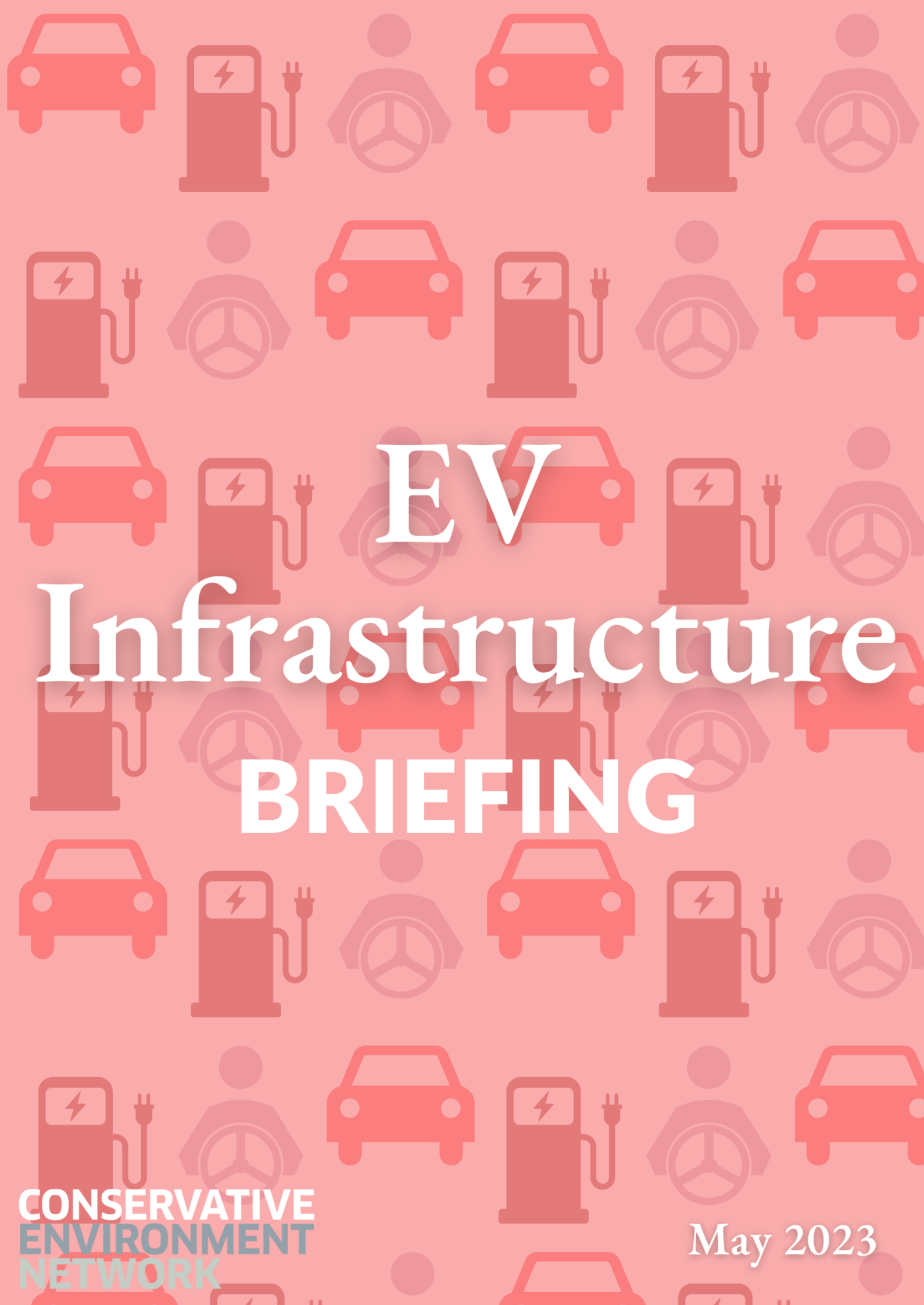

EV Infrastructure BRIEFING

CONSERVATIVE ENVIRONMENT NETWORK

May 2023

CEN Councillor Briefing: Electric vehicles and charging infrastructure

Summary:

- **Rollout of charge points must keep pace with increased uptake of electric vehicles (EVs).** 33,950 charge points have been installed since 2016, while the number of UK EVs increased by over 700,000 in the same period. Charge point availability is often a barrier to those considering the switch to an EV. Without increasing uptake of EVs, the UK will not be able to decarbonise fast enough to reach our net zero targets.
- **Local authorities are well-positioned to facilitate the rollout of EV infrastructure in partnership with the private sector.** There are three key areas for them to do so: on-street parking, off-street car parks, and identifying land suitable for charging hubs. You know your areas best and can identify the location and type of chargers that will most benefit your residents. Council resources can sometimes constrain action, but 92% of local authorities feel that there is a role for local government across both planning and installation of charge points.
- **You have several tools available to accelerate the rollout of charge points in your local area.** These can include writing an EV strategy, putting out charging infrastructure contracts for tender, keeping charge points on pavements tidy, and streamlining the planning process for charge point installation.

Background:

- **Transport is the UK's highest-emitting sector, responsible for a quarter of our total emissions.** Almost all of these come from surface transport such as cars, vans, and lorries. Increasing uptake of EVs will help to reduce emissions from these sources, as well as improve local air quality.
- **Insufficient charge point infrastructure is one of the main reasons people don't feel confident switching to EVs.** Rural and more Northern areas, as well as Scotland and Wales, are especially scant. Rural charge points can be as much as 16 miles apart, compared to 1 mile in London. Greater London has the most chargers at 10,865, followed by the South East with 4,000 and Scotland with almost 3,000. The North East and Wales have less than 5% of the UK's chargers. There is also a shortage of charging hubs (6-32 chargers) critical to longer journeys and densely populated areas.
- **The rate of charge point rollout needs to increase fourfold to keep up with demand and maximise EV adoption, as well as commercial and air quality benefits.** To reach our net zero targets, EV uptake will need to accelerate from 400,000 today, to 23.2 million by 2032, and up to 49 million by 2050. As well as raw numbers, availability and reliability

of charge points are important - the right charger needs to be in the right place at the right time, enabling drivers to access them where and when they need them.

- **Charging speed varies depending on charger type and influences where they should be located.** Incorrect choices can upset drivers, harm EV adoption, waste council money, and lead to a loss of income.
    - **Fast** takes between 8-30 hours, and suits destinations with at least 4-hour or overnight stays. These usually cost £2000-£5000 to install and can be located on street columns and bollards. These are easier to locate and connect to the grid due to their lower capacity, and location depends on council need.
    - **Rapid** and **Super Rapid** take 10 minutes to 1 hour for a typical charge on newer cars, so suit destinations where stays are less than 90 minutes. These are particularly necessary for en-route charging. These usually cost £25,000-£100,000, can charge up to 20 vehicles a day, and usually require substations for larger sites. Commercial investment is typically fully available for funding these, and suppliers can provide income to the council as a share of the profit or a fixed fee.
- **Charging costs depend on the location and type of charge points.** Public charge points charge 20% VAT compared to 5% for at-home charging, meaning the 25% of households who don't have access to off-street parking have to pay more to charge up. Rapid charging is also more expensive than fast charging, but it is important to note that the majority of drivers charge up at home where they can benefit from cheap tariffs.
- **Enabling higher EV uptake by rolling out more charge points can help to improve local air quality.** One in five local authority areas have historically been identified by the government as potentially breaching air quality standards, meaning that the air their residents breathe contains pollutants above safe levels. This can contribute to respiratory issues such as asthma attacks and worsening of lung or heart conditions.

Government policy:

- The **Local Electric Vehicle Infrastructure (LEVI) Scheme** is supporting the rollout of EV charging infrastructure by assisting local authorities with additional capital and capability funding to provide charge-points for residents without off-street parking.
- The **On-Street Residential Charge Point Scheme (ORCS)** has funded nearly 2,900 charge points. £37 million has been made available for this financial year.
- The **EV Infrastructure Strategy** set new short term targets for charge points including 300,000 public charge points by 2030.
- The **Ten Point Plan for a Green Industrial Revolution** announced 2030 as the end date phase out date for the sale of new internal combustion engine vehicles, and 2035 for vans.

What councils can do:

- **Develop an electric vehicle strategy.** Councils can decide which users or priority areas to target for rollout of charge points, as well as the types of charge point (fast, rapid, super rapid). This will be especially critical for rural areas to address concerns about range anxiety that can arise due to charge points being located further apart. Strategies are also cheaper than a piecemeal approach, allowing councils to make sure their policy is joined-up and maximise their value for money.
- **Put out charging infrastructure contracts for tender.** This allows councils to scale up rollout of EV infrastructure without adding the cost onto their residents' council tax bills. Using existing frameworks or using fast track procurement will avoid delays and minimise costs. It is worth separating contracts for fast and rapid/super rapid charging, as the latter will attract more commercial investment but needs longer contract terms.
- **Keep pavements tidy when installing EV chargers.** Pavement clutter is often cited as a downside to charge points. CEN MP Stephen Hammond is currently campaigning to change local bye-laws to enable kerb cable gullies to keep them tidy. Installation points should leave space for pedestrians, as well leave footways navigable for those with wheelchairs, buggies, or sight loss. When assessing charge point sites, councils should prioritise building out pavements over using existing limited space. Cables should be kept tidy to avoid posing a hazard. Charge points should also be disability-accessible.
- **Engage with local enterprise partnerships to facilitate charge point rollout.** Leveraging private sector investment can minimise both council tax burden and demands on council resources.
- **Streamline the planning process for charge point installation.** Using LEVI funding to fast-track planning applications for charge points would prevent council resources being diverted away from other projects. Extending permitted development rights to cover clusters of 2-3 charge points would reduce the burden on planning departments and make it easier for the private sector to ramp up installation of EV infrastructure.

Conservative case studies:

- **West Sussex County Council: public access on-street EV charging.** The company 'Connect Kerb' won a tender from the Council to install charge points in public sector car parks and community facilities. Most charge points will be 7kW, which would take just under 8 hours to charge from empty to full. Some rapid points will be deployed in strategic locations. The charge point network looks to complement the council's walking and cycling targets.

- **Westminster City Council (pre-May 2022): Electric Avenue.** The Council partnered with Siemens and Ubitricity to convert 24 lampposts on Sutherland Avenue into electric vehicle charging points. Installing charge points into lamp posts eliminates pavement clutter. The charge points' power ranges from 3kW to 50kW. Siemens provides, maintains, and manages the 1,000 charge points.
- **Essex County Council: approving the UK's first entirely electric vehicle forecourt.** The forecourt has 36 electric vehicle charging bays, a multi megawatt on-site battery storage and solar PV canopy. The chargers can deliver up to 350kW charging power and can give users up to 200 miles range in 20 minutes. The forecourt is powered by the solar power canopies above the chargers, and a network of hybrid solar farms operated by the project partner Gridserve.

Resources for councillors:

- The **Energy Saving Trust** has compiled a list of current guidance and resources on charging infrastructure for local authorities.
- The **Local Government Support Programme** helps local authorities to decarbonise transport, improve air quality, and increase EV uptake.
- The **Local Government Association** has a broad range of guidance and information on how local authorities can help to increase EV uptake and charge point rollout.
- **Western Power Distribution** has guidance on buying and installing charge points for council electric vehicle fleets.
- **BEAMA** has very comprehensive guidance on electric vehicle infrastructure, including information on vehicle types, charging equipment, installation locations, and market development