



21 January 2022

## **SURREY ELECTRIC VEHICLE PUBLIC CHARGEPOINTS PROGRESS AND PREFERRED PROCUREMENT OPTION**

**Purpose of report:** To propose how Surrey County Council (SCC) can support the transition to Electric Vehicles (EVs) in Surrey; to explain the procurement options for an EV public chargepoint roll-out; and to gain feedback on the preferred option of procuring a long-term sole supplier agreement for the installation and operation of a public chargepoint network across Surrey.

### **Introduction: The Transition to Electric Vehicles**

1. In 2019, the UK Government committed to becoming a net zero greenhouse gas emissions nation by 2050. The transport sector has, for several decades, been the largest contributor to domestic emissions. As of June 2021, this figure sat at 27%. Within this, cars and vans contribute over 70%, or 19% of total emissions. In response to this the government announced, following consultation with the independent Committee on Climate Change, in November 2020 that sale of traditional Internal Combustion Engine (ICE) vehicles would end in 2030, with all vehicles sold after 2035 fully zero emission at the tailpipe. Sale of some low emission or hybrid vehicles is likely to be permitted between 2030 and 2035.
2. It is widely expected that battery electric vehicles (BEV) will be the great majority of replacement for ICE vehicles for the foreseeable future, and as such the infrastructure for refuelling such vehicles will be a key factor in their success. Most BEV charging currently takes place at the home of EV users where off street parking is available. The private sector are also delivering an increasing number of EV chargepoints available to the public to cater for in-journey top ups on longer journeys and at destination locations such as supermarkets.
3. However, there are many car owning households that do not have access to off road parking and therefore no easy access to EV chargepoints. Although local authorities have not previously played a role in vehicle fuel supply for private motorists, their control of highways and public car parks makes a compelling case for interventions that will bridge the gap and offer EV chargepoints for EV drivers who would not otherwise have access to convenient charging.

4. There are more than 300 public EV chargepoints installed in Surrey by the private sector, Boroughs and Districts and the County Council. In 2020, a Surrey-commissioned KPMG report forecast that by 2025 1300 public EV chargepoints will be required, and that by 2030, the demand is forecast to ramp up significantly to total 10,000.
5. Charging facilities are most often categorised by speed and locational type:
  - **Slow** charging is AC at speeds of around 3.5kW usually home charging or in lamppost column on-street charging.
  - **Fast** charging also runs on AC but at speed of 7-22kW. These are mainly seen in public locations such as on-street residential areas and destinations such as supermarkets or in workplaces.
  - **Rapid** charging requires DC and charge at speeds between 50-150kW. Often at 'transient' locations such as Motorway Service Areas (MSAs).
  - **Ultra Rapid** charging speeds in excess of 150kW are rarer due to the lack of vehicles on the market able to charge at such high speeds.
6. The design of chargepoint equipment continues to evolve and especially on street infrastructure is the subject of considerable scrutiny. Equipment must be safe and easy to use, but not obtrusive within the street scape. Chargepoints may take the form of on-pavement bollards, wall mounted or installed within a lamppost mounted or even as a retractable bollard concealed in the pavement when not in use. Trailing cables from a residence across a pavement is not allowed by most authorities, and Surrey County Council legal advice is that it is illegal. Trials elsewhere in the UK are taking place to research the use of under pavement covered channels to allow residents to safely charge their own vehicles where circumstances allow. An emerging technology is wireless charging for EVs, which may have a role to play; however, technical difficulties of accurate positioning of vehicles and the potential significant loss of energy will need to be overcome.
7. For the purposes of on-street EV charging, it is anticipated that fast chargepoints will be most common with the possibility of slow chargepoints in some residential locations. Rapid chargepoints may be most suitable for higher demand car park locations.

#### **The Parliamentary Transport Committee Report on Zero Emission Vehicles**

8. The Parliamentary Transport Committee findings published on 28 July 2021 are important for Surrey. It advises that the Government must support local authorities to deliver sufficient and well-maintained charging infrastructure solutions tailored to local needs.

9. The report confirms that future EV charging habits are uncertain and subject to considerable variance from forecast and that there are wide differences in the estimation of required numbers of public chargepoints. The question of network coverage for rural areas and to a degree areas of low average household income is a theme across the report.

## **Electric Vehicle Chargepoints Surrey Policy Background**

10. The three main policy documents guiding activity to support the rollout of EVs at SCC are the 2018 EV Strategy, 2019 Low Emissions Transport Strategy and 2020 Climate Change Strategy.
11. The SCC EV Strategy was published in 2018 signalled the development of a Surrey-wide plan for enabling residents and businesses to transition to EVs with a clearly defined purpose of achieving environmental goals of reducing transport-related pollutants. A basic framework for EV chargepoint infrastructure roll-out and network planning is outlined in the strategy.
12. Surrey's Community Vision for 2030 contains the ambition that: "Residents live in clean, safe and green communities, where people and organisations embrace their environmental responsibilities." In support of this ambition, on 9 July 2019 the council declared a 'climate emergency' and committed to work with partners to agree Surrey's collective response.
13. The Surrey Climate Change Strategy (2020) states an ambition for organisational emissions to be net zero by 2030 and for the county to be net carbon zero by 2050 or sooner. The main target for the transport sector outlined in the strategy is to see a 60% reduction in emissions by 2035, against business as usual estimates. One of the associated Strategic Priorities, SP3, is to 'Invest in and support the development of the infrastructure required to support the move to zero emission vehicles for journeys that cannot be made on foot, by bicycle or public transport'
14. The 4th Local Transport Plan (LTP4), a statutory document which due to be published in 2022, sets out sustainable transport ambitions for the County for the next 10 years. An updated EV Strategy would act as a subsidiary to the LTP4 and embody its principals and targets. The plan is underscored by three principal values of 'avoid', 'shift' and 'improve', with the latter referring to the switch away from fossil fuels and the promotion of electric vehicle adoption. Although public EV chargepoints will be a primary action, the subject of EV will embrace the Council's own fleet EV transition, promotion of Zero and Ultra Low Emissions Vehicles (ULEV) buses both EV and hydrogen, PHVs, taxis and micromobility

including ebikes, ecargo bikes and if permitted, consideration of scooter schemes.

### Public EV Chargepoint Delivery Business Models

15. A number of different business models have been adopted across the UK in the pursuit of a chargepoint network roll-out. These differ mainly in the ownership share of the local authority versus the private sector partner (PSP), largely dependent on the financial contribution of and risk taken by each side. Generally, greater ownership means greater control over several operational factors such as location selection and tariff setting. The models tend to fall into four main types:

- a. **Business Model 1 (BM1): Fully funded concession model** – the PSP agrees to front all capital costs, owning the chargepoint for the lease term and taking on responsibility for installation, maintenance and operation. This means that the council would likely lose significant leverage over site selection and tariff setting and may only obtain revenue from lease of the land to the PSP rather than from charging. The length of agreement is likely to be 15 years or more to be viable for private sector investment.
- b. **Business Model 2 (BM2): Part-funded concession model** – This model differs in that not all of the upfront cost would be met by the PSP. The council could contribute itself or with available grants. The council often then enters into a revenue or profit share agreement with the. It is expected that the council can still reclaim control of the chargepoint site after the lease term has ended.
- c. **Business Model 3 (BM3): Council owns, PSP operates** – the council fully funds hardware purchase and installation then hands responsibility for maintenance and operation to the PSP. This arrangement allows for full control of pricing and site selection and the collection of all revenue by the council. However, without grant funding the cost to the council is significant and a large financial risk.
- d. **Business Model 4 (BM4): Council own and operate model** – As well as owning the asset, the council would take on responsibility for installation, maintenance, and operations. Whilst this would offer full control around pricing, site selection and revenue collection, the ongoing cost would be significant, especially with chargepoints unlikely to provide significant return on investment for an extended period of time.

16. In each instance, ownership of the land and (most likely) the grid connection, are retained by the Council either from the outset or at the end of any contract term.

## **Chargepoint Delivery Progress Underway**

17. In a first major pilot scheme for Surrey, the installation of 80 chargepoints across 4 participating boroughs, funded by Enterprise M3 Local Enterprise Partnership, is underway. The trial will enhance our knowledge and experience on the chargepoint sector with a low financial risk to the council. Installation is underway and due to be complete by the end of February 2022.
18. Further to this initial trial, an application has been submitted to the Government grant scheme for On-street Residential Chargepoint Scheme (ORCS) to support the delivery of more than 100 additional chargepoints. Through the recently established Surrey EV Forum, Boroughs and Districts in Surrey have been given County Council support to form and submit their own ORCS bids for authority operated carpark sites.
19. The chargepoints being installed have a tariff rate of 30p/kWh with no additional connection charge. This reflects the national charging structure of the chargepoint operator and could be subject to revision as usage rates and market knowledge develops.
20. Where parking charges already exist, these will be applied in addition to the vehicle charging rates.
21. Boroughs and Districts within Surrey currently have over 75 public EV chargepoints in operation mainly in car parks and numbers are anticipated to rise significantly over time.

## **Options for Forward Procurement**

22. The main finding of our pilot projects is that if we maintain or even increase this current rate of installation in coming years based on this more ad hoc model, it will not achieve the scale of increase in public chargepoints required. A more ambitious approach is therefore needed.
23. Following research with a range of chargepoint providers, local authorities with EV chargepoint experience and workshops with the Energy Saving Trust and the Office for Zero Emission Vehicles, a Strategic Option Assessment was conducted in June 2021 to compare the alternative business models described in para 13.
24. The models part funded by either single or multiple private sector suppliers ranked highest. There was a consensus that these options would significantly reduce the investment required by the Council, provide the flexibility of approach needed to best meet the changing needs and behaviours of residents whilst

retaining the appropriate level of Council control and potential for income generation.

25. The assumption was made that 'part funded' could mean obtaining a significant contribution through Government funding, currently in the form of the On-street Residential Charging Scheme; in addition, there is the option of the Council committing to providing part capital funds itself.
26. Through research and outreach to other local authorities, officers were made aware of a relatively advanced plan by a neighbouring authority to procure a sole concession for a large scale EV chargepoint roll out in which Surrey could participate. However, despite the arrangement offering a generally good fit for our purposes, our due diligence process revealed a contractual risk that the contract ceiling value was not sufficient for our needs which guided against taking this route.
27. That said, investigating this concession arrangement showed that a range of chargepoint equipment can be effectively procured through a single supplier rather than more complex arrangements of operating multiple contracts to achieve the same goal.
28. The nature of the partnership and the specification of the concession investigated demonstrated that a long-term sole supplier agreement can offer good commercial and delivery terms, which supports the assessment that the part funded sole long-term arrangement meets Surrey's needs.

#### **Rationale and Structure of Proposed Sole Supplier Long Term Arrangement**

29. The fundamental benefit of a county-wide sole supplier long term arrangement is the opportunity to scale up installation numbers far beyond the capability of SCC alone. The Council would be the lead party with participating Boroughs or Districts named as a Key Delivery Partner. Other Collaborating Organisations with suitable public sector or community car parking locations including the NHS could also participate.
30. The supplier would typically fully fund, operate and maintain 7KWH or 22KWH and a more limited number of 50+KWH chargepoints across Surrey, both on-street and in car parks. The exact specification and level of provision would be set out by SCC in the contract and flexibility would be included to enable the provision of alternative chargepoint equipment where suitable. This might include lamppost chargepoints and also new technology as it develops such as wireless charging.

31. There would be a requirement for the supplier to propose a blended approach of chargepoint sites covering less commercially attractive locations to achieve a comprehensive and socially equitable network.
32. Tariffs would be subject to competition but are expected to be at or below market average for the duration of the contract.
33. For the majority of public chargepoint installations delivered through the proposed model, the arrangement will require no capital funding from Surrey or its partners. Where a commercial case is difficult to demonstrate, grant funding, for example, through the Government's On-Street Residential Chargepoint Scheme (ORCS) would be applied for and further applications would be made to any successor scheme offered by the Offices for Zero Emission Vehicles (OZEV).
34. Where such grant funding is not possible and particularly in the first few years of the contract, the Council will have the option of investing its own capital funds in order to achieve chargepoints in otherwise uneconomic locations to improve equitable access across the County.
35. Although operated by the supplier on a commercial basis, the County and Key Delivery Partners would receive a share of gross revenues. The proportion of revenue return would be the subject of the competitive tender.
36. The maximum contract term of operation is yet to be decided but would be no longer than 15 years extendable by a further 5 years. The supplier would be responsible for all management, maintenance and necessary technology upgrades both of the chargepoint equipment and user interface software.
37. The arrangement would offer the flexibility for SCC or partners to purchase compatible chargepoints to be installed in offices or depots where required.

<b>Conclusions:</b>
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38. After exploring the range of options, a long-term sole supplier agreement through which a private company would fund a large-scale installation programme across Surrey has been identified as the preferred option. This would be supported where necessary with Government grant support and where appropriate, with limited initial SCC capital funding to help to achieve a comprehensive and equitable network of chargepoints.

<b>Recommendations:</b>
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39. It is recommended that the Communities, Environment and Highways Select Committee:

- a) note and review progress on the options for procurement of public chargepoint infrastructure in Surrey; and
- b) review and provide views on the preferred option of procuring a single supplier to work in partnership with Surrey County Council to deliver public Electric Vehicle (EV) chargepoints at a large scale across Surrey subject to a further decision to proceed once the outcome of the procurement exercise is known.

<b>Next steps:</b>
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40. Following consideration of the advice of this Select Committee, Surrey Cabinet is requested to support a procurement to put in place a long-term sole supplier arrangement. Procurement activities will commence immediately following the decision by Cabinet with the intention of an appointment by September 2022. Once the contract is in place, the roll-out of EV chargepoints will commence building on the current roll-out being undertaken through the pilot phases.

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**Sources/background papers:** Future Options Appraisal Workshop: Summary of Findings for Electric Vehicle Chargepoint Business Model – July 2021; Electric Vehicle Strategy – Surrey Transport Plan - 2018