energy saving trust

Department for Transport

Procuring electric vehicle chargepoints for local authorities

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Introduction

This guide aims to assist local authority officers with procuring public chargepoints to enable residents, visitors and businesses to transition to electric vehicles and address the climate emergency.

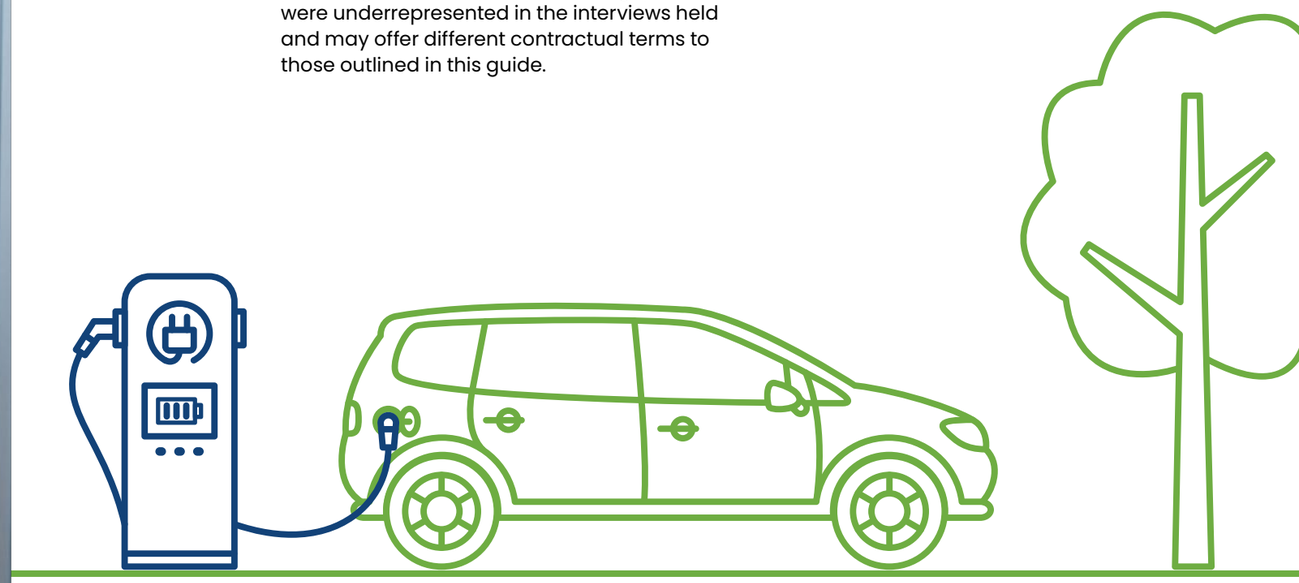
As the electric vehicle (EV) charging infrastructure market has matured, so has the variety of business models and funding options available to local authorities when procuring chargepoints. Combining grant funding with investment from the private sector is increasingly common, enabling local authorities to develop charging infrastructure without significant direct capital investment. However, this approach has some drawbacks and not all sites are currently considered commercially attractive by suppliers.

This guide provides an overview of the two broad approaches available to local authorities, 'own and operate' and concession agreements, and outlines what a local authority can expect from a chargepoint operator based on interviews held with various suppliers. Please note that suppliers providing on-street lamppost chargepoints were underrepresented in the interviews held and may offer different contractual terms to those outlined in this guide.

There is also advice on preparing for procurement, including proposing sites for chargepoint installations and developing a specification. The guide concludes with a table that summarises a range of local authority projects.

Further resources to help local authorities develop an EV strategy and deliver chargepoints can be found on the Energy Saving Trust website. Resources available include webinars, application guidance for the On-street Residential Chargepoint Scheme (ORCS) and a document compiled in partnership with the Electric Vehicle Energy Taskforce that provides links to publications covering each step of delivering charging infrastructure.

Local authorities in England can also access free, tailored and impartial assistance through the Local Government Support Programme on EV strategy development and delivery, funded by the Department for Transport.



02

Local authority network ownership

The ‘own and operate’ model describes an approach in which a local authority appoints a supplier to install and manage chargepoints on council-owned land for the contract period and fully funds the installations, typically using grant funding and local authority capital.

The local authority will take on full ownership of the chargepoints and have the autonomy to select chargepoint locations and set charging tariffs, while receiving 100% of the revenue. An operating and maintenance contract will be agreed, often with the same chargepoint supplier. The local authority is responsible for covering the ongoing costs for example, insurance, back office software and electricity supply, as well as maintenance of the chargepoints.

With this approach, the commercial risk sits with the local authority. Therefore, this model has mainly been seen where very substantial grant funding was available to cover the initial capital expenditure. This approach may be appropriate for small-scale or low-cost projects, such as retrofitting lampposts with charging sockets or straightforward, small car park installations. A local authority may also decide to invest capital specifically in locations that are not commercially viable, either due to anticipated low demand or very expensive grid connection costs, but which are important for network integrity or equitable access for residents.

This approach has been adopted by Transport for Greater Manchester for the Be-EV network, Go Ultra Low West for the Revive network, Tees Valley Combined Authority, Kent County Council and Durham County Council for some installations, among others. For more information, see Section 5.

Table 1 summarises the advantages and disadvantages of this approach.

Table 1 - Evaluation of the ‘own and operate’ model from the perspective of local authorities. Adapted with permission from a Go Ultra Low Nottingham presentation.

Advantages	Disadvantages
The local authority retains full ownership of the charging network and collects revenues.	Limited central government and local authority funds available.
The local authority can determine locations, irrespective of commercial viability, ensuring equity of access for residents and businesses.	Use of public funds comes with accountability to taxpayers and therefore political risk.
Easier procurement route because it is more familiar and requires less involvement from legal, procurement and property teams.	Requirement for the local authority to cover costs for ongoing operation, maintenance and upgrade. Revenues are likely to be low in the short to medium term, especially for fast AC chargepoints 7-22kW).
Procurement is likely to be a simpler, quicker process, leading to faster network growth.	Local authorities may become the owners of low value or redundant equipment as the charging infrastructure market and technology is developing rapidly.
Procurement frameworks are available to streamline the process and ensure confidence in suppliers.	The local authority carries the risks of unexpected costs and the reputational risk if the network is unreliable.
Full flexibility over back office and tariffs, including setting preferential rates for different user groups.	Although a service level agreement (SLA) should be in place, the chargepoint operator is less incentivized to repair faults. Missed KPIs or SLAs may be more difficult to enforce.

03

Securing private sector investment

As demand for public chargepoints grows year-on-year, the commercial attractiveness of charging infrastructure provision has increased. This has provided local authorities with an increasing range of options when procuring chargepoints, with different degrees of private sector involvement and contractual terms. This approach can help local authorities overcome capital constraints, transfer some cost and risk liabilities to the private sector, as well as harness suppliers' expertise in chargepoint deployment.

Certain projects are more commercially attractive than others. Where a local authority requests funding from the chargepoint operator, the operator will need to see a return on their investment. The contract terms, such as the level of profit share and contract length, should reflect the balance of risk and reward for the project.

Public fast chargepoint (7-22kW) installations, especially on-street, present a high level of commercial risk for chargepoint operators due the significant upfront costs and relatively low utilisation rates resulting in long payback periods.

Securing grant funding, including a mix of fast and rapid chargepoints in the tender, offering flexibility on installation sites and longer contract lengths are some of the ways that a local authority can make these installations more commercially viable. For destination and rapid chargepoints, chargepoint operators will favour locations that do not require expensive grid upgrades and have good footfall and facilities nearby.

3.1 Overview of concession models

The Concession Contracts Regulations 2016 defines a concession contract as when the award of the contract involves the transfer to the concessionaire of an operating risk in exploiting the works or services encompassing demand or supply risk, or both. The transferred risk should involve exposure to the vagaries of the market, such that any potential estimated loss incurred by the concessionaire shall not be merely nominal or negligible. Source: The Concession Contracts Regulations 2016.

Through a concession agreement, the operational costs and risks are shared with a chargepoint operator (the concessionaire). The operator may fully-fund or match-fund the capital costs and take on the operating costs of the project. Table 2 summarises the advantages and disadvantages.

Councils such as Nottingham City Council, Coventry City Council, Go Ultra Low Oxford, West Sussex County Council and Devon County Council have adopted this approach among others. For more information, see Section 5.

3.2 Match funding concession model

Chargepoint operators are increasingly offering to partially fund chargepoint installations through match-funding or 'topping-up' grant funding, for public fast chargepoint projects. For example, local authorities can apply to the UK Government's On-street Residential Chargepoint Scheme for funding to cover up to 75% of eligible capital costs of installations, and chargepoint operators may contribute the remaining 25%.

Match-funding can be combined with a concession agreement, in which the chargepoint operator takes ownership of the chargepoints and covers the ongoing costs and liability, presenting a 'no cost' solution to local authorities.

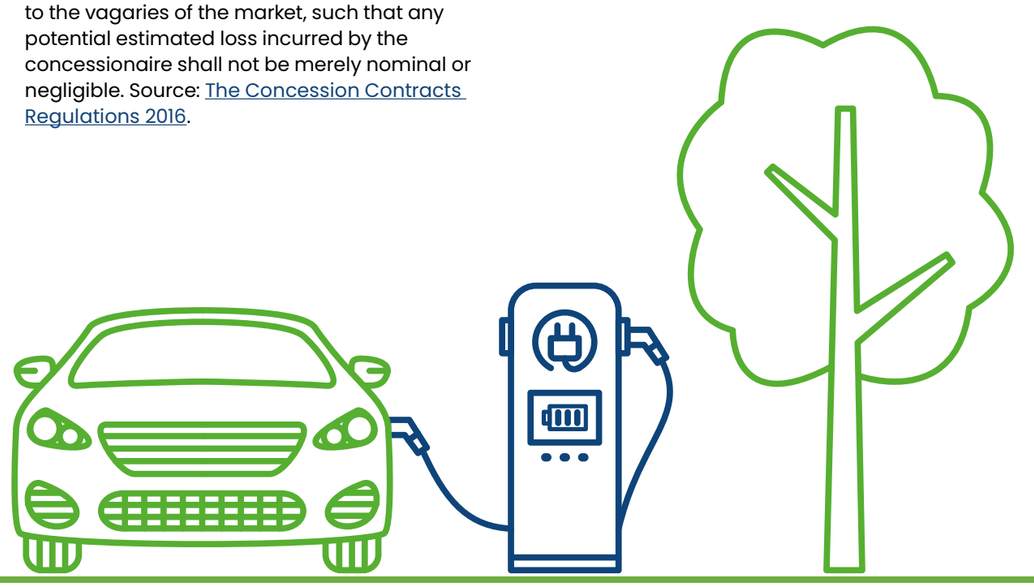


Table 2 - Evaluation of concession frameworks from the perspective of local authorities. Adapted with permission from a Go Ultra Low Nottingham presentation.

Advantages	Disadvantages
Some income is shared by the concessionaire with the local authority.	Reduced income share for local authorities in comparison to full ownership.
The chargepoint operator is incentivised and responsible for the maintenance of the network, resulting in better end-user service.	As a relatively new procurement model, it is likely to require more dialogue within a local authority and time spent developing tender requirements/specifications.
Reduced risk for the local authority in terms of maintenance and ensuring that income generated covers ongoing costs.	Not all chargepoint companies are willing or able to accept the terms of a concession framework, reducing the choice of suppliers.
Depending on the agreement, the local authority may retain ownership of the equipment or underground electrical connections which are valuable as the basis of any future network.	More likely to result in a successful tender exercise where chargepoints are likely to be profitable, or on a sufficient regional scale to allow for some cross-subsidisation and risk balancing.
Depending on the terms of the contract renewal, the concessionaire may be responsible for updating and refreshing the equipment and software, therefore, future-proofing the network.	Expansion of the charging network may be dependent on the utilisation of chargepoints in earlier phases, potentially slowing deploying.

Compared to a fully funded concession model, grant funding will enable greater flexibility when deciding where to locate chargepoints. This may allow installations at locations where demand for charging is expected to be lower but are important to create a socially equitable charging network. Contract lengths will also be shorter and the local authority may retain ownership of the below ground infrastructure (see Section 3.5).

3.3 Fully funded concession model

For some projects, chargepoint operators may offer a fully funded concession contract, covering all the capital and operating costs of the project and taking on the operating risks. The chargepoint operator (CPO) will have ownership of the assets.

These projects present a high level of commercial risk for operators. Where suppliers offer this approach, they typically seek to retain value by investing in and owning the below-ground infrastructure, as well as larger scale projects with long contracts.

A long contract duration allows for the recovery of upfront costs and the renewal of chargepoints during the contract. Within a concession approach, the chargepoint operator is incentivised to maintain the chargepoints and respond to technological changes to ensure the profitability of the network.

Chargepoint operators can be expected to have a high degree of control over where the chargepoints are placed, tariffs and the proportion of rapid to fast chargepoints. They may also seek an exclusivity agreement or high density delivery (i.e. high numbers of chargepoints per car park).

3.4 Profit share arrangements

A profit share arrangement is typical with a concession agreement. Revenue will be shared with the local authority once chargepoint utilisation reaches a certain threshold. The amount varies between suppliers depending on their commercial model. Expectations of chargepoints providing a significant income stream for local authorities in the short to medium term should be managed proactively.

For larger, county-scale projects, it may be possible to negotiate a revenue share option, depending on the funding arrangements/ requirements of the local authority.

In some cases, a guaranteed rent may be offered to compensate the local authority as the chargepoint host (i.e. landowner), rather than a profit share.

3.5 Below ground infrastructure

The largest and most variable cost for any chargepoint installation requiring a new grid connection is typically the below ground infrastructure. Where lampposts are retrofitted with chargepoint sockets, these do not require a new grid connection. This includes the connection between the chargepoint and the electricity network, cabling, feeder pillar and any grid reinforcement required. These are often informally referred to as 'Distribution Network Operator (DNO) costs'. To find out which DNO(s) covers your area, visit National Grid's website.

Chargepoint suppliers have different approaches regarding ownership of the below ground infrastructure. Therefore, local authorities should seek clarity (either during soft market testing or tender responses) on what will happen at the end of the contract and any costs which may be incurred, especially if the contract is not renewed.

Some commercial models allow local authorities to invest grant funding or their own capital contributions in the below ground infrastructure and ultimately retain ownership of the connection. Rather than a single comprehensive tender, if they wish, local authorities can procure civil works separately and appoint a chargepoint operator who will only be responsible for the installation and maintenance of the above ground hardware. For chargepoint operators, local authority funding and ownership of the connection removes a high-risk element of the project, enabling a shorter contract and more flexibility on locations. At the end of the contract, another operator could replace the hardware and utilise the same connection point. This gives the local authority greater flexibility and control over the future of the network.

When a chargepoint operator funds and owns the below ground infrastructure (for example, through a fully funded concession model), they will seek to renegotiate with the local authority at the end of the contract. If the local authority decides to appoint a new operator, there is likely to be a charge for the use of the connection and enabling infrastructure.

3.6 Tariffs

Tariffs, or the price paid by drivers to charge their vehicle, vary between chargepoint networks, with various subscription and pay-as-you-go options available.

If a local authority decides to set a tariff or tariff band, it should be simple and transparent. The rate should reflect the capital and operating costs of the chargepoints, including ongoing electricity (standing and capacity) charges, maintenance, and customer service.

Area-wide benchmarking in tenders can be challenging for chargepoint operators to respond to, especially if some chargepoints have been installed in the past with significant grant funding. It is difficult to reach price parity with private home charging. Payment system costs and merchant fees currently limit the widespread use of contactless on fast chargepoints as these costs would be passed on to the driver.

When public chargepoints were first delivered by local authorities, such as through the OZEV Plugged-in Places Scheme, many were free to use. Free recharging can incentivise EV adoption and supported the EV market in its early stages. Due to the nature of the funding, many chargepoints in Scotland remain free to use, at least for a limited period.

However, local authorities (in England and other devolved nations) should be cautious about installing new free chargepoints unless there is a plan in place to ensure their financial sustainability or it is a commercial choice, for example, as a loss-leader to attract footfall to a visitor destination or retail centre. After offering free charging, introducing charges can attract negative feedback if residents or business drivers feel they were misled about the financial benefits of EVs. Setting a nominal tariff from the start or establishing a clear 'sunset clause' on free charging can help overcome this.

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Preparing for procurement

Once a decision is made on the contractual approach or delivery model to be taken, local authorities need to consider the frameworks available and develop the tender documentation. Where possible, the requirements should stem from an EV strategy or delivery plan adopted by the council, and any initial feasibility studies or consultancy analysis.

Local authorities in England can access free support on developing an EV strategy through the Local Government Support Programme, funded by the Department for Transport.

As well as the details of the chargepoints, consider whether any additional services are required from chargepoint suppliers or other contractors, such as consultancy, network planning, drawing, and public engagement.

4.1 Procurement frameworks

Various frameworks are available to simplify chargepoint procurement for public sector bodies and ensure that the procurement process is compliant with legislation.

Examples include the Crown Commercial Service Vehicle Charging Infrastructure Solutions (VCIS) Dynamic Purchasing System (DPS) and a refreshed framework will be available from ESPO from October 2021. To better suit their requirements, some local authorities have developed their own frameworks. Some of these are accessible to other councils, including one managed by Kent Commercial Services, the Central Southern Regional Framework, managed by Hampshire County Council and Oxford City Council's DPS. For more information, please email DPS@oxford.gov.uk or search for DN519227 Dynamic Purchasing System for the Supply of Electric Vehicle Charging Infrastructure and Associated Services at https://procontract.due-north.com (requires a Proactis account).

4.2 Identifying sites for chargepoint installations

As part of the tender documentation, local authorities should identify a list of potential chargepoint locations, ideally where local authority land ownership has been established and other internal approvals have been secured. For example, a district council may include a list of council-owned car parks as well as an indication of the number of bays that could be allocated for EV charging.

Installation costs are very site-specific, especially on-street, and investment decisions will be made on a site-by-site basis. The criteria used differ depending on the supplier and the contract type, but they are likely to include investigating the power supply available and confirming the electricity network connection costs.

Chargepoint operators need sufficient time to obtain quotes from the relevant Distribution Network Operator (DNO) and develop a business case. DNO budget estimates are too inaccurate for suppliers to base their responses on. At least an eight-week window for submissions should be allowed.

Many local authorities are concerned about providing an equitable distribution of chargepoints across urban and rural areas, as well as affluent and low- income areas. Some chargepoint operators take a portfolio approach to balance lucrative sites with less profitable ones and securing grant funding will assist with this. In multi-year contracts, suppliers will look for flexibility in terms of when sites are delivered. In the short term, authorities and suppliers may wish to agree on how installations at the most commercially viable sites will be balanced with others (e.g. a ratio each year). Where high DNO costs discourage investment, authorities or suppliers could seek to share electrical connections with community buildings or enter partnerships with car club or fleet operators.

Above all, it is recommended that local authorities remain flexible in their choice of locations and work closely with chargepoint operators to finalise the list once costs have been accurately established (this might be post contract award).

4.3 Specifications

In a specification, a local authority should set out its requirements for the hardware, back office, maintenance and any private capital investment required. Procurement frameworks can provide template specifications and council officers are often willing to share their documentation with other authorities as a starting point.

If preferred, chargepoint operators can often make recommendations on which type of hardware (for example, chargepoint power output or unit type) is most appropriate for a particular site or user group. Unless a detailed feasibility study has already been completed, most chargepoint operators appreciate some flexibility in tender specifications (for example, the number and location of chargepoints) in order to design an appropriate solution that reflects drivers' needs and site constraints.

Some chargepoint operators are technology agnostic and will select from a range of hardware and software providers depending on the requirements. Others are 'vertically integrated', meaning they have their own hardware and back-office systems.

4.4 Future proofing

As there is a degree of uncertainty over how chargepoint technology will develop, local authorities often seek to 'future proof' installations. Within a concession agreement, the chargepoint operator is taking on the operating risk and they are incentivised to upgrade the equipment to maintain the performance of the network. Using retention sockets can make it easier to exchange hardware without further civil work or excavations. Retention sockets can also be used with cable channels or ducting to allow more chargepoints to be installed in the location at a later date without additional groundworks. This is known as passive provision. Some chargepoints have a modular design to enable easier repair and upgrades. For more information on retention sockets, see NAL's case study with Transport for Greater Manchester.

Specifying technology that is Open Charge Point Protocol (OCPP) compliant is important, as this will allow the chargepoint hardware to be operated by a different changepoint network in the future if necessary. Most major chargepoint operators have adopted this standard, but authorities should check the details of what they are procuring, for example, asking about which version of the OCPP (1.6 or higher is recommended), back office and roaming capabilities.

For more information, see BEAMA's best practice guide on future proofing EV infrastructure.

4.5 Evaluation criteria

As with any tender, chargepoint suppliers should be evaluated against a range of cost and quality criteria. In terms of quality criteria, chargepoint operators may seek to differentiate themselves based on performance metrics (such as network uptime) or the added value they can offer through partnering with the authority on network planning, consultancy or public engagement and local marketing, for example. If including social value criteria, the National TOMs framework can be used to standardise requirements and robustly evaluate criteria.

05

Examples of local authority projects

In recent years, local authorities have taken a range of approaches to chargepoint ownership, reflecting their area's charging requirements, resources available and political support. Concession agreements are increasingly being used by local authorities, reflecting the strengthening business case for private sector investment and local authority risk appetite. However, some authorities have decided to invest in order to retain full ownership and greater control over the network's development, especially where significant grant funding has been available.

Table 3 summarises a selection of projects of varying scales. For more information on these projects, please contact the Local Government Support Programme team.

Table 3 - Examples of chargepoint installation projects led by local authorities taking different approaches to procurement and network development

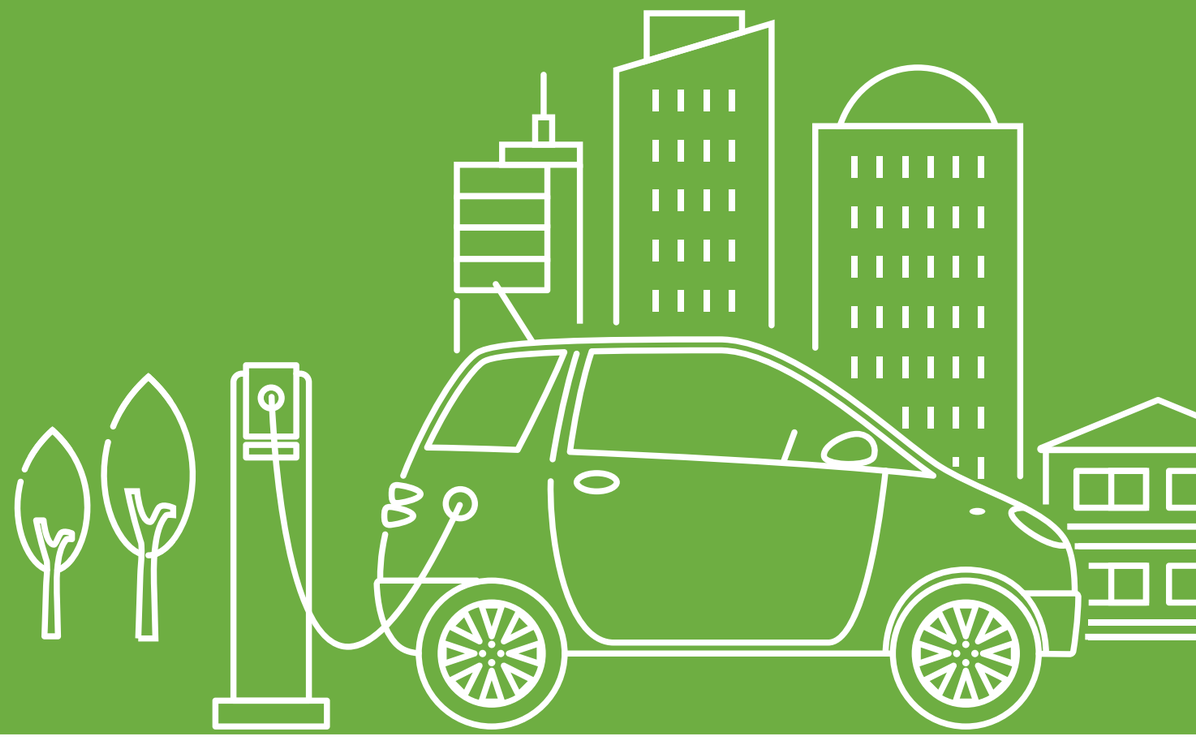
Example	Type of charging infrastructure	Type of contract	Funding source	Responsibility for maintenance, repair and risk liabilities (for example, unexpected costs)	Revenue arrangements	Contract length	Additional notes
Chargeplace Scotland	Fast and rapid chargepoints	Own and operate model	Up to 100% government grant from Transport Scotland	Transport Scotland, on an ad hoc basis	Most chargepoints are free to use for a certain period. The host pays for electricity.	2 years	
Central Southern Regional Framework (Hampshire County Council)	All types, including for fleets	Several options, including third-party financing	Grant funded or private sector finance option, brokered by supplier	Site dependent, shared between parties	10% rebate to council on energy costs. 1% revenue to Hampshire County Council when other organisations use the framework	Up to 15 years	Initial investment by Hampshire County Council to set up framework, now streamlined call-off process, which other public bodies in region can access.
Be.EV network in Greater Manchester	Fast and rapid chargepoints	Own and operate model	Government grant-funded including Early Measures Clean Air Zone funding and OZEV ULEV taxi infrastructure funding	Determined on a case-by-case basis	When tariffs are introduced, all revenue will go to Transport for Greater Manchester.	Framework: 7+3+3 years	New framework included taking over existing Greater Manchester EV network and installing new chargepoints. The lot for new chargepoints involved significant investments in development time and contract negotiations.
Go Ultra Low Cities Scheme London	On-street chargepoints up to 7 kW, mainly lamppost chargepoints	Concession agreement	75% central government grant, 25% London Borough's funding	Chargepoint supplier	Most to supplier with a share to the London borough.	10 years	Invested resources to set up framework and will reduce costs and assist many boroughs to install chargepoints.
Go Ultra Low Oxford	On-street chargepoints for residents	Concession agreement	Central government grant (Go Ultra Low Cities Scheme)	Chargepoint supplier	Most to supplier with a revenue share to the council once chargepoints are profitable.	Sites leased to operators for 4 + 4 years	Significant officer time invested in drawing on lessons learned from other local authorities. Framework will lay the groundwork for city wide infrastructure roll-out chargepoints.
Go Ultra Low Nottingham (D2N2 network)	Fast and rapid chargepoints	Concession agreement	Supplier claims against central government grant (Go Ultra Low City Scheme). Supplier to provide any additional funds required and additional rapid chargepoints.	Chargepoint supplier	Minimum guaranteed payment and a revenue share paid by supplier to local authority.	5 + 5 years	Resource intensive to establish as innovative but lead to a successful low risk infrastructure delivery model. Nottingham City Council owns the underground network, the supplier owns the chargepoint.
Devon County Council Deletti project	Fast chargepoints	Concession agreement	60% ERDF funding, 40% landowner funding (for example, district council)	Chargepoint supplier		Minimum 10-year agreement	Evaluation criteria cost: quality ratio was unusually set at 80:20.

Table 3 - Examples of chargepoint installation projects led by local authorities taking different approaches to procurement and network development

Example	Type of charging infrastructure	Type of contract	Funding source	Responsibility for maintenance, repair and risk liabilities (for example, unexpected costs)	Revenue arrangements	Contract length	Additional notes
Mid Devon and Instavolt	Rapid chargers	Supplier fully funded and owned installation	Private investment	Chargepoint supplier	Local authority receives small rental income as landowner.	20-year lease agreement	
Kent County Council (Parish councils project)	Fast chargepoints	Own and operate model	County and parish council capital, ORCS government grant funding	Annual fee paid by local authority to supplier for maintenance	Revenue shared, 30% surplus back to landowner, for example, parish council.		Procured through Kent Commercial Services framework, which includes direct award and further competition. Used further competition.
West of England Revive network	Fast and rapid chargepoints	Own and operate model	Central government funding (Go Ultra Low Cities)	Local authorities through maintenance contract with chargepoint supplier. All risk and liabilities with the local authority.	All revenue goes to the local authorities. Consortium of 7 partners to upgrade and replace the old Source West network borough.	5 years	Upgraded standard ESPO specification and in future would specify the back-office functionality in greater detail. Undertook market research in advance.
Gwent regional local authority EV project	Fast chargepoints	Concession agreement	Central government funding (ORCS)	Chargepoint supplier	25% profit share for local authority.	5 +3-year contract	One off procurement combined between the five local authorities in the region. Added in ability to include additional sites to network.
Tees Valley regional network	Fast and rapid chargepoints	Own and operate model	Council and government grant	Risk liabilities with the combined authority. Contract with supplier to maintain and operate the network.	Combined authority retains revenue	Developed own single supplier framework for use by any public sector organisations in the region. 5-year contract length	Found developing own framework allowed a more flexible approach. Undertook in-depth market testing to inform approach and specification.
West Sussex County Council network	Fast chargepoints primarily but a small number of rapid chargepoints included	Concession contract across county with six of the district councils. Local authority owns the underground infrastructure and supplier owns chargepoint.	Zero cost to authorities. Tender requires commercially viable sites to fund less suitable locations. Planning to apply for ORCS funding.	Chargepoint Supplier	Revenue share to local authority (linked to electricity sold)	15 + 5-year contract length	First tender process was unsuccessful. Local authority owns the underground infrastructure and supplier owns chargepoint.

Table 3 - Examples of chargepoint installation projects led by local authorities taking different approaches to procurement and network development

Example	Type of charging infrastructure	Type of contract	Funding source	Responsibility for maintenance, repair and risk liabilities (for example, unexpected costs)	Revenue arrangements	Contract length	Additional notes
Coventry City Council	Slow and fast chargepoints	Concession agreement	ORCS funding and 25% match-funding from supplier	Chargepoint supplier	Revenue share to council from year 3	10 years, with option to extend to 15 years	Approximately 200 units being procured in 2021, builds on a previous concession contract.
Liverpool City Council	Lamppost chargepoints	Own and operate model	75% ORCS grant and 25% from Liverpool City Council	Supplier responsible for maintenance and repair. Risk and liabilities are shared between Liverpool City Council and the supplier.	All revenue to supplier	Ongoing	
Durham County Council	SOSCI Project: Fast chargepoints	Concession agreement	Innovate UK and chargepoint operator		10% revenue share to the council.	Up to 12 years (7 + 5 years)	
	Durham Other Chargepoints (DOCs) project: fast chargepoints	Own and operate model	75% ORCS grant, 25% from Durham County Council and community funding (parishes and Area Action partnerships)		Revenue goes to authority.		



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Support from Energy Saving Trust

Energy Saving Trust manages the Local Government Support Programme to help local authorities decarbonise transport, improve air quality and increase electric vehicle adoption. The programme is fully funded by the Department for Transport and is free of charge to all local authorities in England.

Local authorities can access impartial guidance on EV strategy development, chargepoint procurement, business engagement and more, as well as benefit from tailored workshops and an independent review of any draft strategy or related documents.

Visit Energy Saving Trust's website for more information and to contact the team.

Energy Saving Trust also manages the On-street Residential Chargepoint Scheme on behalf of The Office for Zero Emission Vehicles (OZEV).

energy saving trust

Energy Saving Trust is an independent organisation dedicated to promoting energy efficiency, low carbon transport and sustainable energy use. We aim to address the climate emergency and deliver the wider benefits of clean energy as we transition to net zero.

We empower householders to make better choices, deliver transformative programmes for governments and support businesses with strategy, research and assurance – enabling everyone to play their part in building a sustainable future.

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