

Subject:	Electric Vehicle Charging Points		
Date of Meeting:	26 June 2018		
Report of:	Executive Director Economy Environment & Culture		
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Ward(s) affected:	All		

FOR GENERAL RELEASE**1. PURPOSE OF REPORT AND POLICY CONTEXT**

- 1.1 In July 2015, the Environment, Transport and Sustainability Committee authorised officers to work with partners and stakeholders to identify and pursue opportunities to install equipment and bid for external funding to support the upgrade and expansion of Ultra-Low Emission Vehicle technology and infrastructure within the city.
- 1.2 The Government's Office for Low Emission Vehicles (OLEV) announced on 18 April 2018 that a bid made by the city council, for £300,000 worth of funding to be match-funded by £100,000 investment from the private sector to install over 200 electric vehicle charging points in lamp posts in areas of the city without off-street parking, had been successful.

2. RECOMMENDATIONS:

- 2.1 That the committee notes the award of £300,000 OLEV (75% funding) to the council for new electric vehicle charging points and delegates authority to the Executive Director to procure a concession contract the terms of which will require the private sector partner to invest £100,000 (25% funding) and to supply, operate and maintain the council's charging point infrastructure in return for a proportion of the fees received from the driver for charging.
- 2.2 That the committee notes that the transfer of the existing free electric vehicle charging point infrastructure and any awards from subsequent successful funding bids for charging or related infrastructure during the term of the concession will be included within the scope of this concession contract.
- 2.3 That the committee approves the submission of further bids to OLEV and other Central Government departments or bodies for on-street charging infrastructure, in areas with no off-street parking, as well as for charging points for buses, coaches, car clubs and taxis, and bicycles at other locations in the city.
- 2.4 That the committee notes that officers have delegated authority to advertise Traffic Regulation Orders to allow for the designation of mandatory bays for the use of electric vehicles in those cases where an advisory bay has proved to be

ineffective and further notes that any objections to mandatory bays will be brought back to committee.

- 2.5 That the committee notes that officers will be working to facilitate the expansion of the rapid charging infrastructure with private sector partners and UK Power Networks.

3. CONTEXT/ BACKGROUND INFORMATION

- 3.1 In 2009, following a successful bid for EU CIVITAS funding, the council installed some of the first public, electric vehicle charging points outside London. These 18 public charging points (10 off-street and 8 on-street) are designated for electric vehicles only, charging is free for drivers up to a maximum 3 hour stay, with the exception of charging points in car parks where there is no time limit but parking must be paid. Non-electric vehicles or electric vehicles staying longer than 3 hours in on-street bays risk receiving a Penalty Charge Notice.
- 3.2 Demand for public charging points has increased every year with the growth in electric vehicle ownership, and the current charging infrastructure is almost at capacity. The vast majority of electric vehicle drivers charge their vehicles at home and the government provides a grant of 75% up to a maximum of £500 towards the cost of a home charger.
- 3.3 Worries about running out of battery and vehicle range are consistently top of people's views about buying an electric vehicle. This is particularly the case for drivers without access to off-street parking. The provision of at least 200 new on-street charging points should help to remove this barrier for drivers in the city.
- 3.4 The last four years have seen a surge in demand for electric vehicles in the UK – new registrations of plug-in cars increased from 3,500 in 2013 to more than 145,000 by April 2018. With even more new models becoming available and the market for second hand vehicles growing, making electric vehicles more affordable, this figure is set to increase significantly.
- 3.5 Currently Government figures show that 0.5% of all cars on the road are plug-in. The city currently has approximately 36,000 on street parking bays and therefore applying the above Government figure, the current requirement for electric charging bays in Brighton & Hove is an estimated 180 bays.
- 3.6 Government figures estimate the take up of electric vehicles over the next 5 years will increase with predictions that more than 20% of all new cars being sold will be electric by 2022. This would result in 1.5% of all vehicles on the road being electric, and therefore the city could require up to 540 on- street charging points
- 3.7 One of the challenges in finding a scalable solution to the growth in electric vehicle ownership is the move away from the current system of providing free parking and electricity, to a different model whereby drivers are charged for electricity and electric vehicles require a resident's permit to park and charge in a bay in the zone where the permit is valid. The new parking bays will be demarcated with road markings to help prevent trailing wires and signed so that they will continue to be for the use of permit holders in that zone.

- 3.8 The selection of the locations for the new, OLEV-funded, lamp column charging points took into account the areas where requests have been received from existing electric vehicle car owners and drivers considering the purchase of an electric vehicle. These form the priority sites. The rationale was then to make sure all controlled parking zones had electric vehicle charging points with units distributed across the zone allowing residents to be able to locate a charging point close to their home. The map of locations can be found in Appendix 1 to this report and includes at least one charging point in each zone. Only 5 requests for charging points were received from outside the controlled parking zone, as many households in these areas have access to off-street parking. These have been included in phase one of the installation proposals.
- 3.9 The proposed system will be open to all electric vehicle users and only requires a standard cable (usually supplied with the vehicle) to recharge. Payment would be via an App or contactless Bank card.
- 3.10 Officers understand that OLEV will make grant funding available soon for the supply & installation of charging points for taxis. After reviewing the grant conditions, the council could then apply for funding for the installation of charging points to aid the taxi fleet in converting to electric vehicles.
- 3.11 We will be exploring ways to further develop charging infrastructure to support the take up of electric bikes.
- 3.12 There are 3 main types of charging for electric vehicles, slow, fast and rapid. The 'slow' lamppost chargers typically take 4 to 8 hours and are generally used overnight. Alternatively, Rapid or fast chargers typically provide an 80% charge in under an hour allowing drivers to extend the range of their vehicle and complete their journey. To install rapid chargers the location needs to have sufficient power grid capacity to avoid the considerable expense of building new substations. Alongside the proposals outlined in this report, officers will also be working to facilitate the expansion of the rapid charging infrastructure with private sector partners and UK Power Networks.
- 3.13 In line with a commitment set out in the council's response to last year's government consultation on its National Air Quality Strategy, the Chair of this committee has personally written to major retail outlets and petrol stations in the city with car parks requesting views and support for current and future drivers of electric vehicles by installing new, or increasing the existing number of, electric charging points available in their car parks. A number have responded very positively to the letter.
- 3.14 In terms of Planning guidance, the council's new Supplementary Planning Document (SPD14), Parking Standards for new developments generally requires proposals to provide:-
- 10% of car parking provision to have electric vehicle charging provision;
 - 10% of car parking provision to have passive provision to allow conversion at a later date.

4. ANALYSIS & CONSIDERATION OF ANY ALTERNATIVE OPTIONS

- 4.1 The option of doing nothing was considered but the existing charging infrastructure is already struggling to meet increasing demand and requests from residents have been increasing year on year. Some forward-looking retail companies and other local businesses have provided a small number of charging points in their car parks. However, the rate of expansion of this privately operated network is slow and the difficulty in finding a charging point could be hampering electric vehicle take up in the city
- 4.2 The option of the council funding the remaining 25% (£100,000) not covered by OLEV to purchase the charging points and then managing the operation in house was considered. However, there are companies with greater expertise in the technical field of maintaining and developing the network, and a procurement exercise was considered to be the preferred option to achieve best value for the council. In addition, the council is only able to sell electricity from renewable sources for the reasons set out in the legal implications below
- 4.3 The option of keeping the existing model of providing free electricity at public charging points was considered. The cost to the council for this electricity has increased as follows;
- | | |
|---------|--------|
| 2017-18 | £8,522 |
| 2016-17 | £4,367 |
| 2015-16 | £5,178 |
| 2014-15 | £747 |
- 4.4 Usage is currently 40,000 kw/h per year. The introduction of charging at lampposts is an opportunity to introduce a sustainable and uniform charging system throughout the city.

5. COMMUNITY ENGAGEMENT & CONSULTATION

- 5.1 Since 2014, over 50 requests have been received from electric vehicle drivers and drivers considering purchasing an electric vehicle but without access to off-street public charging points (see appendix B). These streets and areas have been logged and mapped and this information was provided to OLEV in support of the funding bid and to help select locations for charging points with proposals for at least one in every parking zone. The full list of proposed streets is attached as Appendix C.
- 5.2 Meetings were held with the Brighton & Hove Hackney Carriage and Private Hire Consultation [Taxi] Forum in December 2017 and May 2018 to discuss electric vehicles, where taxi drivers raised the issue of insufficient charging points for electric vehicles, amongst other issues. This report aims to improve the public charging infrastructure and remove some of the barriers to driving an electric vehicle. A questionnaire has been issued to taxi drivers through the forum to estimate upcoming demand for electric vehicles locally and the most suitable locations for charging points for hackney carriages and private hire vehicles. as This information will also help support further funding bids.

6. CONCLUSION

- 6.1 The expansion of the city's electric vehicle charging infrastructure will remove some of the barriers to the take-up of electric vehicles, particularly for households with no access to off-street parking. The locations selected cover all parking zones in the city and the parking and charging arrangements outlined in the report should provide a scalable solution to the predicted fast growth in electric vehicle ownership.
- 6.2 Therefore it is recommended that Committee agrees to all the recommendations outlined in this report.

7 FINANCIAL & OTHER IMPLICATIONS:

- 7.1 Based on soft market testing of the cost of each charging point, it is estimated that the £0.300m grant from OLEV, together with match funding of £0.100m, will be sufficient for the supply and installation of 200 charging points in addition to signing, lining and Traffic Regulation Order costs. Any ongoing repairs and maintenance costs will be met by the operator, after it has been procured.
- 7.2 The majority of charging points will be in controlled parking zones. In order to avoid a loss of parking income within 'shared' and 'pay and display' bays, it is proposed that payment should be received from electric vehicle users for permits or parking within the charging point bays. The current model of free parking and electricity for electric vehicles would not be sustainable with an increased number of charging points and anticipated increase in electric vehicle purchases and usage.

Finance Officer Consulted: Gemma Jackson

Date: 15/05/18

Legal Implications:

- 7.3 The council is permitted to sell electricity by virtue of Section 11(3) of the Local Government (Miscellaneous Provisions) Act 1976 but this power is limited by Regulation 3 of the Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 so that councils can only sell electricity produced from a list of renewable sources. The proposal contained in this report is that the private sector partner procured by the council sells electricity to the drivers so this legislation does not present any difficulties for these proposals.
- 7.4 Undertaking a procurement exercise will ensure that the council complies with the legal requirements of the public procurement regime and state aid legislation.

Lawyer Consulted: Alice Rowland

Date: 17/05/18

Equalities Implications:

- 7.5 Due to the comparatively high purchase cost of electric vehicles, the direct benefits of electric vehicle driving in terms of cheaper fuel and running costs may tend to favour more affluent residents and visitors. The purchase cost of electric vehicles is however falling, particularly as the second hand electric vehicle market grows, spreading the direct benefits more evenly.

- 7.6 Air pollution disproportionately impacts less well-off residents, children and, for short-term pollution peaks, older people and some disabled people, so electric vehicle charging indirectly benefits these groups to a greater extent.

Sustainability Implications:

- 7.7 All electric vehicles, when operating in electric mode generate no emissions of toxic, airborne pollution such as particulate matter and oxides of nitrogen, which are serious health concerns, particularly in the city's Air Quality Management Areas. Electric vehicles do still generate some particulate matter from tyre and brake wear but are, overall, much less polluting than conventional vehicles.
- 7.8 Electric vehicles also generate less carbon per kilometre than internal combustion engine vehicles and so should help achieve carbon reduction goals. They can also help reduce noise pollution along busy transport routes.

SUPPORTING DOCUMENTATION

Appendices:

1. Map Showing Lamp Column Charging Point Locations
2. Electric Vehicles and Charging - Frequently Asked Questions

Documents in Members' Rooms

None

Background Documents

1. Report to Environment Transport and Sustainability Committee – July 2015