Chichester District Council

CABINET **1 December 2015**

Electric vehicle charging in the Council's car parks

1. Contacts

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2. Recommendation

2.1. That up to two bids be made to The Office for Low Emission Vehicles (OLEV) to enable the installation of electric vehicle charging points (EVCPs) in selected District Council owned car parks.

2.2. That a 25% match fund budget for the bid(s) to OLEV to a maximum of £45,000 be approved, funded from the car parks budget.

2.3 That the Head of Commercial Services be authorised to give appropriate notice of any revised charges pursuant to the Off-street Parking Places (Consolidation) Order 2015 (or to the relevant Parking Places Order at the time) and the Road Traffic Act 1984.

2.4 Should for any reason the grant bid not be successful, or if only a partial award is made, then the Head of Housing and Environment Services is authorised, following consultation with the Cabinet Member for Environment, to utilise the approved funding in appropriate locations to deliver a reduced scheme.

3. Background

3.1. CDC installed two electric vehicle charging points (EVCPs) in East Pallant car park in 2011. Since that time there have been in excess of 2500 charging events. Anecdotal evidence suggests that demand now frequently outstrips supply for these posts. Electric vehicle sales are rising steadily and the government aspires that by 2040 every new car and van in the UK will be an Ultra Low Emission Vehicle (ULEV). ULEVs now represent greater than 1% of all new car sales. The Office for Low Emission Vehicles intends to offer grant funding for the implementation of public facing EVCPs. It is important that the car parks service offers EVCPs in response to the needs associated with the increasing penetration of EVs into the UK vehicle fleet. This paper seeks the match funding finance required in order to facilitate a bid(s) for an OLEV grant.

4. Outcomes to be achieved

4.1. To enable the installation of nine new EVCPs (18 charging bays) in selected CDC car parks and the updating of the existing points at EPH (the current two EVCPs replaced with one to service two charging bays). Users of the service will be charged for parking, electricity and related transactional fees. Five of the EVCPs will be of the 'fast' type that provides a full charge in approximately three hours and five will be of the 'rapid' type providing a full charge in one hour (see Appendix for a list of the sites and proposed charging facilities). There will be a time restriction on the bays so as to maximise turn-over and the Civil Enforcement Officers will monitor compliance with the revised Parking Order.

4.2. This will support the growing demand for EVCPs associated with the increasing numbers of EVs on the UKs roads and is congruent with the Corporate Plan objectives to 'support sustainable living' and 'maintain clean pleasant and safe public places'.

4.3. To annually assess the usage statistics for the EVCPs and the revenue generated by charging for the service. The minimum success criteria are that the EVCPs are revenue neutral. The local nitrogen dioxide (NO_2) emissions avoided from diesel vehicles through the power provided at the posts will also be calculated.

5. Proposal

5.1. There are currently in excess of 35,000 electric vans and cars in the UK of which 6,000 are in the South East. Electric vehicle sales continue to grow and the government is supporting the market through a variety of schemes. CDC's car parks need to respond to the related need for such vehicles to be able to access points where they can recharge their batteries.

5.2. There are a variety of factors that will influence demand for public facing EVCPs and it is not yet clear how these factors will play out and so the scale of the future demand is difficult to estimate. As such, a modest number of EVCPs is proposed accompanied by a watching brief to assess demand and respond accordingly.

5.3. The implementation of EVCPs will support existing owners of EVs and encourage the purchase of EVs. There will be a small one-for-one loss of conventional parking spaces. However, this is considered so minimal as not to disadvantage drivers of conventionally fuelled vehicles.

5.4. OLEV indicate that their grant(s) will be open for bids late in 2015. There may be two grant streams, one for fast EVCPs and one for rapid EVCPs. Subject to successfully being awarded grant monies, it is expected that the EVCPs will be rolled out within 12 months.

5.5. The next step is to submit a bid(s) to OLEV when the bid windows open. Subsequently a procurement exercise will be undertaken prior to appointing a provider and implementing the EVCPs.

6. Alternatives that have been considered

6.1. A do nothing approach has been considered. This would not be responsive to the changing composition of the UK car and van fleet and the related increasing demand for EVCPs. A do nothing approach would disadvantage local EV market growth and not be supportive of existing EV drivers' needs or the Council's approved Corporate Plan objectives.

6.2. Installing a larger number of EVCPs has also been considered. However, with demand uncertain this would pose a higher risk of the project not being revenue neutral.

6.3. Installing 50kW 'rapid' chargers, which give an 80% charge in twenty minutes has also been considered. This option is currently discounted as there is no CDC car park location where the power supply is adequate to allow this option without upgrading the three phase power supply. 50kW 'rapid' chargers are also most suited to locations on, or close to, the strategic road network. For these reasons 50kW 'rapid' chargers are not thought to be the right option nor to offer good value for money in the locations proposed by this paper.

6.4. Installing in all CDC car parks 22kW 'rapid' EVCPs that give an 80% charge in one hour has also been considered. This option is only deliverable in five car parks (Midhurst, Market Avenue, Avenue de Chartres, East Pallant and Bosham) as in all other locations the power supply is inadequate and would involve significant additional expense. In these locations 7kW 'fast' chargers are proposed.

6.5. A quote from one provider indicates that a typical price for delivery and installation of a 22kW 'rapid' EVCP costs approximately £18K and for a 7kW 'fast' EVCP approximately £9K. These figures include various civil engineering and electrical engineering works.

6.6. No other options are identified.

7. Resource and legal implications

7.1. The bulk of the capital budget for the project will be sought from the OLEV grant. Nevertheless, it is anticipated that the grant(s) will require a 25% funding match of approximately £45,000 from car parks budget for which this paper seeks approval.

7.2. It is proposed that users of the EVCP's will pay parking charges in the usual way. Users will also be charged for the electricity that they use and the related transactional fees. These monies will be billed through their account with the EVCP service provider and returned to the CDC revenue account.

7.3. EVCPs attract revenue costs for service, maintenance and data-management. For the total proposed ten EVCPs these are estimated at £4,675/year. The tariff charged to users through the EVCP can be adjusted to off-set this revenue loss though if all posts have zero usage then CDC remains exposed to this annual loss. In any case CDC will seek to capitalise the first three years' worth of this revenue in the bid to OLEV such that, subject to any grant including this sum,

CDC would only be exposed to this revenue loss from year four of EVCP operation onwards.

7.4. The Chichester District Parking Order will require amendment to reflect the changes.

7.5. Procurement will be undertaken once the award for the grant has been made and will be implemented by existing staff in the Environmental Protection, Car Parks Services and Building Services teams. No IT requirements are identified beyond existing resources.

7.6. The installation works to implement the EVCPs require the digging of trenches (to lay cables) across various car parks and in some locations the upgrade of related electricity supplies. These costs are included in the monies sought here.

7.7. The total EVCP installation costs of £143,845 (capital) have been uplifted by 20% as a contingency to give the suggested match contribution of £45,000.

8. Consultation

8.1. The following consultations were carried out:

(a) A paper was taken to SLT on 8 June 2015. It was agreed that CDC should apply for the OLEV grant subject to consideration of demand and that the EVCPs should be cost neutral for parking income. Demand for the EVCPs is difficult to predict and as such so is revenue modelling. This has led to the suggested number of EVCPs with a watching brief.
(b) The proposal was considered by the Parking Forum meeting on 10 September 2015. The Forum recommended a phased approach to the introduction of the EVCPs. This has also supported the approach of a minimal number of EVCPs with a watching brief.
(c) Further consultation will be undertaken as part of the amendment to the Parking Order.

9. Community impact and corporate risks

9.1. The project is considered to have a positive impact on the community, supporting users of EVs and encouraging others to buy low emission vehicles with ancillary benefits in relation to local air quality.

9.2. There remains the risk that the EVCPs will suffer from low usage and therefore CDC will suffer a loss of parking income. The maximum exposure is £4,675/year (see 7.2) based on zero usage of all ten posts (twenty bays). This revenue loss can be entirely off-set by charging events and their associated parking charge. The EVCPs will appear on the provider's website such that potential users are aware of their location so as to maximise their use. Usage of these bays will be closely monitored.

9.3. If it is decided at a future date that EVCPs should be installed in further rural CDC car parks then it is possible that installation of such infrastructure would not be supported by government grant.

9.4. Whilst conversations with OLEV indicate that there will be a grant scheme such a scheme is not yet announced and bids to the scheme might not be awarded grant monies. As such it remains possible that CDC does not receive grant monies for this work and an alternative implementation plan will need to be delivered.

9.5. Life cycle analysis energy consumption calculations suggest that electric vehicles have a lower climate change impact than conventionally fuelled vehicles.

9.6. The suggested locations for rapid 22kW chargers are based on locations where an adequate three-phase electricity supply is available to power the units. The final suitability of these locations will depend on site inspections and advice from SSE.

10. Other Implications

	Yes	No
Crime & Disorder:		✓
Climate Change:	✓	
Human Rights and Equality Impact:		✓
Safeguarding:		✓

11. Appendix

11.1 Appendix: **Table of proposed installation locations and charger type:**

	Type and number of EVCPs[a]:	
CDC car park name:	**Rapid 1 hour** (22kW)	**Fast 3 hour** (7kW)
Avenue de Chartres, Chichester	1	2
Market Avenue (Cattle Market), Chichester	1	
Northgate, Chichester		1
Midhurst	1	
Bosham	1	
Petworth		1
Selsey		1
East Pallant House	1	
TOTAL NUMBER of EVCPs:	5	5

[a] Note: Each EVCP is double-headed and so services two parking bays with simultaneous car charging facilities.

12. Background papers

12.1 None.