

COMMITTEE	Communities, Housing and Infrastructure
DATE	29 th August 2017
REPORT TITLE	Public electric vehicle charging infrastructure development in Aberdeen City
REPORT NUMBER	CHI/17/059
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1. PURPOSE OF REPORT:-

The purpose of this report is to make the Committee aware of ongoing developments of the publicly-available Electric Vehicle (EV) charging infrastructure network which the Council provides in Aberdeen City as well as updating Members on the costs associated with the project to date.

2. RECOMMENDATION(S)

It is recommended that the Committee:

- a) Note the contents of this report and
- b) Instruct officers to continue to offer the EV charging service at no charge for the remainder of this financial year (until end of March 2018) or, should Transport Scotland propose a National model for monetary charging prior to this, review this proposal and report back to committee with further recommendations.

3. BACKGROUND/MAIN ISSUES / OTHER HEADINGS AS APPROPRIATE

- 3.1 Aberdeen City Council currently has 37 electric vehicle charge points under its control. Of these, 12 are for fleet purposes only with the rest being available to the public, the car club or a mixture of both. At the meeting of the Communities, Housing and Infrastructure Committee in March 2016, Members agreed to instruct officers to continue to offer the EV charging service at no charge for a further 12 months and future decisions on levels of charging would be made within the budget setting process. Users were still expected to pay for the cost of parking in car parks (with the exception of 2 locations) where charges applied, whether charging their vehicle or parked up in a standard parking bay. In line with this, officers have undertaken a review and this report contains the findings and recommendations.
- 3.2 The reasoning behind these incentives was to encourage an uptake of EVs and PHEVs (Plug-in Hybrid Vehicles) in Aberdeen since they will help Aberdeen meet the Scottish Government Target that *“By 2050, Scottish towns, cities and communities will be free from the damaging emissions of petrol and diesel fuelled vehicles. A significant reduction in greenhouse gas emissions will be accompanied by marked improvements in local air quality, noise pollution and public health. Scotland will also enjoy increased energy security and new economic opportunities through leadership in sustainable transport and energy technologies. A key ambition is that by*

2040 almost all new car sales will be near zero emission at the tailpipe and that by 2030 half of all fossil-fuelled vehicles will be phased-out of urban environments across Scotland.” The recent announcement by the UK government regarding the banning of sales of conventional petrol and diesel vehicles by 2040 also has the potential to generate much greater interest in EVs.

- 3.3 Transport Scotland, the Scottish Government Transport Agency, believe that EVs and PHEVs will make a substantial contribution to this ambition and are establishing a National network of electric vehicle charge points to allow long-distance travel across Scotland by electric vehicle. They are relying on the Community Planning Partnerships (CPPs) in each local authority area to help make this a reality by providing the necessary grant funding to Local Authority Areas. Aberdeen City Council has been working with Transport Scotland since 2011 to help develop this and enjoys a positive working relationship both with funders and with the EV drivers it has engaged through local engagement activities and through the Council’s membership of the Electric Vehicle Association Scotland (EVAS),.
- 3.4 In terms of local policy, the Aberdeen Local Transport Strategy (2016-2021) contains the objective “To facilitate the uptake of ultra-low and low emission vehicles as a contribution towards improving air quality in the City”. In keeping with this, the Aberdeen Local Development Plan policies will require new developments with parking to provide EV charging points while new residential developments will require to be EV ready. At a time when this technology is still new for a lot of people it is important that the Council is able to lead by example to help stimulate uptake, encourage the technology to become widespread and demonstrate the benefits to the wider populous.
- 3.5 In Aberdeen, Scottish Government data for 2016 shows that two streets are exceeding agreed Nitrogen Dioxide (NO2) levels – Wellington Road and Union Street – while for Particulate Matter (PM10), King Street is exceeding. Transport emissions are contributing factors to all of these readings. Given that EVs and PHEVs are zero and low emission vehicles respectively, encouraging people to switch to them could be part of the solution to these air quality problems.
- 3.6 Although the CPPs, which received the Government funding to buy and install charging units, were encouraged by Transport Scotland to make the charging service free until the end of 2014, Transport Scotland have, to date, given no clear guidance on a national policy of monetary charging for the service. Instead, it is being left up to the partners of each CPP to decide how to proceed. In most cases, it comes down to Councils, who control the majority of the car parks where EV charge points have been installed. In Aberdeen, officers have looked at the models being followed by other Councils and have discovered the following.

Council	Plan for EV charging
Fife Council	No charge for using the charge points and no parking charge whilst using them.
Glasgow City Council	No charge for using the charge points but users are expected to pay parking charges where they apply, even whilst charging.
Edinburgh City Council	No charge for using the charge points and, as all are in free car parks, no parking charges either.
Dundee City Council	No charge for using the charge points and free of charge parking for electric

	vehicles in Council car parks. Max stay of 3 hours in fast charge bays and 30 minutes in rapid bays (no return in 4 hours). Does not apply to PHEVs which still have to pay for parking
Aberdeenshire Council	No charge for using the charge points but users are expected to pay parking charges where they apply, even whilst charging
Moray Council	Currently charge users £3.80 to use the rapid charger and to park for an hour. This is regardless of how much energy is used.

- 3.7 The above demonstrates that Aberdeen’s approach appears consistent with other authorities. Although some are offering free parking as well, Aberdeen has never adopted this model. Evidence from Glasgow suggests that, if it is free to park whilst charging, this can lead to chargers being blocked purely so that users get free parking to the detriment of others. With regards to allowing EVs to park for free in the city, investigation of this falls within the scope of the Strategic Car Parking Review which is currently underway.
- 3.8 Outwith Council control, Union Square Shopping Centre offers electric vehicle charge points in its public car park. Although they are free to plug into, Union Square, like the Council, still charge users for the cost of parking. With this model being in line with the Council’s approach, it helps to bring a sense of predictability for the user.
- 3.9 At present, Transport Scotland are investigating a National Charging Policy which it is envisaged that Councils, as bill payers, can opt into or out of. So far Edinburgh City Council has expressed an interest in this. Officers in the Transport Strategy and Programmes Team at Aberdeen City Council are members of the E-Cosse forum, a National working group made up of public, private and voluntary bodies who work together to improve the uptake of EVs, and through this will continue to input and keep up to date with this development.
- 3.10 In order to establish the current level of EVs and PHEVs in the North East, Department for Transport figures for Plug-in cars, vans and quadricycles licensed at the end of quarter, UK, by local authority of registered keeper have been used. This suggests that, by the end of 2016, there were 456 across Aberdeen City and Aberdeenshire, an increase of 56% on the previous year. However, this does not take into account vehicles which are not resident in these areas but are used here (lease vehicles for example) which it is estimated could add another hundred. Given that there are 209,952 households in Aberdeen City and Aberdeenshire, this means that only around 0.26% of households in the North East have an EV or PHEV.
- 3.11 Figures for usage of Aberdeen’s publicly available EV charging points, collected from the management company “Charge Your Car” show that usage of the charge points increased by 80% for 2016 compared with 2015.

4. FINANCIAL IMPLICATIONS

- 4.1 At present, the cost associated with running the charge points are being absorbed within existing budgetary resources within the Council.

- 4.2 When Officers reported the costs for 2015 to this committee in March 2016, it was predicted that, based on usage at the time, it was likely to cost the Council around £17,000 to run the charge points. Bill information for 2016 from EDF, the Council's Energy Supplier, reveals that it cost the Council £10,523.14 plus vat to run its charge points based on 77,346kWh of energy being used. This also attracted the council a Carbon Reduction Commitment (CRC) cost of £594. However, some of these figures are based on estimated readings and information is not complete for all sites. Based on meter readings and records of energy dispensed by the units, it is estimated that the consumption figure is likely to be around 148000kWh which suggests it has cost the Council around £20,135.81 plus vat which would be liable for a CRC cost of around £1100, meaning a total cost of £21,235.81 plus vat.. This increased figure, over the predicted £17,000 was due to the charge points being used 80% more in 2016 than 2015, slightly more than anticipated and a really positive step.
- 4.3 In 2017, a further eleven electric vehicle charge points will become operational. The procurement and installation of five of these have been funded by Transport Scotland with the remaining six already funded as part of wider Council projects (Craibstone Park and Ride and Aberdeen City Hydrogen Energy Storage (ACHES)). It is hard to estimate how much the usage will increase. However the number of electric vehicles increased by 60% in Scotland last year so if the same increase is assumed for this year and the same for usage of chargepoints (a corresponding 60%) then it is likely that running the charge points could cost the Council around £34,000 in 2017. This, as above, is set to be absorbed within existing budgetary resources within the Council.
- 4.4 As part of the grant funding conditions, the five units funded by Transport Scotland must offer free electricity for users for one year from the date they become operational. It is envisaged that these units will be operational by the end of August.
- 4.5 Aberdeen City council has been offered a further £82,000 from Transport Scotland to deliver a further two rapid charging sites and to upgrade an existing unit to make it more user friendly. As these units are unlikely to be operational until the end of January 2018, they have not been factored into the report. However, as above, part of their grant funding conditions will require them to offer free electricity to users for 12 months. Permission to spend this money is being sought from this committee as part of report CHI/17/189 External Funding for Transport Projects 2017/18.
- 4.6 In addition to the sites quoted above, Aberdeen City Council operates an additional five publicly-available charge points at Frederick Street (2), West North Street (2) and Marischal College (1) (Marischal is available to the public Thursday nights and weekends). However, these are wired straight into the building's own supply and are not able to be separately billed. Therefore the cost of running these is difficult to calculate. Notwithstanding the above, it is intended that the cost of providing the units (annual electricity and on-going maintenance) will be considered as part of the 2018/19 budget setting process.
- 4.7 Units were covered either by a two or three year warranty and maintenance agreement from new. At the time, Transport Scotland did not stipulate how the units would be managed long-term and who would do this. Therefore, this saved the council paying upfront for a longer agreement that it might not need should other arrangements come into place beyond this. However, twenty-one of the units are now outwith their warranty and maintenance agreements. Costs for extending these have been sought from the manufacturer and an application for funding has been made to the Bus Lane Enforcement (BLE) fund for 2017/18 where they have been successful in making it to the list, pending funding. The rest of the units remain under warranty and service agreement at least until April 2018. If there is not sufficient funding in the BLE programme, the Council will have to seek alternative ways to maintain the units.

- 4.8 Although a free charging service brings benefit to Co-wheels car club, themselves a Social Enterprise, this in turn brings many benefits to the city. The setting up of a car club in Aberdeen is one of the actions of the Aberdeen Local Transport Strategy. Co-wheels were the successful bidder following the two tendering exercises set up by the council in 2011 and 2016 to select an operator. As well as encouraging private members – residents and businesses, the car club currently acts as a pool car fleet for the Council, with around 670 members of staff using this service. Furthermore, being a social enterprise company, all profits made by the Aberdeen car club are invested back into it. Co-wheels Aberdeen has the largest EV fleet of any car club in the UK.

5. LEGAL IMPLICATIONS

As part of the grant funding conditions, the five units funded by Transport Scotland must offer free electricity for users for one year from the date they become operational. It is envisaged that these units will be operational by June 2017.

6. MANAGEMENT OF RISK

Financial

- 6.1 The risk of offering the charging service for free is that lots of drivers will take advantage of this, leading to financial implications for the Council who are picking up the bill. This risk is identified as medium. However, this risk can be minimised by continuing to review the situation, in this case prior to the end of the financial year while officers will continue to liaise with Transport Scotland and other authorities to try and establish a consistent approach across Scotland.

Employee

- 6.2 There are no employee risks

Customer / Citizen

- 6.3 There are no customer/ citizen risks

Environmental Risks

- 6.4 The risk of increased car journeys could result from offering a free charging service. This could lead to increased congestion and people choosing cars over more sustainable modes. However, given that parking charges have not been waived, this is unlikely to occur so the risk is low. The Strategic Car Parking review will also examine this issue while the free charging service will be reviewed before the end of the financial year.

Technological

- 6.5 There is no technological risk arising from the recommendations of this report.

Legal

- 6.6. There is no legal risk arising from the recommendations of this report.

Reputational

- 6.7 The risk of charging for the use of charge points, above and beyond parking charges where they apply, is that it discourages EV uptake in Aberdeen and makes Aberdeen's approach appear harsh in comparison with other cities. This could lead to less people switching away from petrol and diesel vehicles and stop Aberdeen from meeting the targets which Transport Scotland are working towards. This risk is identified as medium. It can, however, be mitigated by continuing to liaise with Transport Scotland and other authorities to try and establish a consistent approach across Scotland

7. IMPACT SECTION

Economy

- 7.1 Although the Council is picking up the electrical bill for the EV charge points, this offer can help stimulate other economic benefits. Not only does it encourage Aberdeen residents to purchase EVs and PHEVs from Aberdeen dealerships but, given that it takes between 30 minutes and 6 hours to charge a vehicle, depending on what type of unit is being used, the user is therefore likely to undertake an activity which leads to money being spent in the local area whilst waiting for their vehicle to be charged.
- 7.2 With more people choosing to travel longer distances by EVs and PHEVs, due to the reduced running costs and increasing availability of charge points, a city which is welcoming to EV drivers encourages them to visit.

People

- 7.3 Members of the public will be able to use the chargepoints and will benefit from being able to charge their vehicles for free, making EV and PHEV ownership even more attractive to them.
- 7.4 It has also helped to make the electric car club vehicles less expensive to use, which encourages more people to try and them, including Council staff who use the car club for business.
- 7.5 An Equality and Human Rights Impact Assessment (EHRIA) has not been undertaken as the projects listed in this report flow from the Regional Transport Strategy and the existing and emerging Local Transport Strategies, all of which have been, or will be, subject to their own EHRIsAs.
- 7.6 A Privacy Impact Assessment (PIA) has not been undertaken as implementation of the projects outlined in this report should not impact on the privacy of any individual.

Place

- 7.7 The provision of free EV charging demonstrates the Council's commitment to tackling air quality issues, given the zero and reduced tailpipe emissions of EVs and PHEVs respectively, and a willingness to engage with new technologies. It also helps to achieve Aberdeen's goal of being an energy city rather than just oil and gas by promoting alternatively fuelled vehicles.

Technology

- 7.8 Continuing to offer the charging service for free demonstrates that the Council is encouraging new low carbon vehicle technologies and committed to ensuring that Aberdeen is an EV friendly city.

8. BACKGROUND PAPERS

Switched on Scotland: A Roadmap to the Widespread Adoption of plug-in vehicles
<http://urbanforesight.org/wp-content/uploads/2015/08/Switched-On-Scotland.pdf>

Plug-in cars, vans and quadricycles licensed at the end of quarter, UK, by local authority of registered keeper from 2011 Q4 1,2 Department for Transport Statistics
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/619161/veh0131.ods

Aberdeen Local Transport Strategy 2016-2021
<http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?IID=68616&sID=2866>

Aberdeen Local Development Plan (2017) Supplementary Guidance: Transport and Accessibility
<http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?IID=74577&sID=14394>

Scotland's Most Polluted Streets Revealed - 5 New Pollution Zones Declared
<http://www.foe-scotland.org.uk/most-polluted-streets>

9. APPENDICES (if applicable)

None

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