PERTH AND KINROSS COUNCIL

Climate Change and Sustainability Committee

24 August 2022

Introduction of Charging for Electric Vehicles

Head of Planning & Development (Report No. 22/191)

PURPOSE

1.1 This report invites members to consider the issues associated with the Council's current and future Electric vehicle (EV) charging infrastructure, and to approve the introduction of tariffs to recover the energy and support costs of providing this service.

2.	RECOMMENDATIONS
2.1	It is recommended that the Committee:- • notes the work undertaken to review potential options for charging. • approves Option 3 and the recommended tariffs set out below with an introduction date of 1 January 2023. • requests that the Executive Director (Communities) keep tariff rates under review during the year, with delegation to amend the tariff to ensure that future costs continue to be recovered, alongside an annual review to be undertaken as part of the budget process.

3. STRUCTURE OF REPORT

3.1 This report is structured over the following sections:

- Section 4: Background/Main Issues
- Section 5: Proposals
- Section 6: Conclusion
- Appendices

4. BACKGROUND / MAIN ISSUES

Strategic context & Background

Why is EV important:

4.1 Wider strategic emission targets are set both nationally through the Scottish Government's Climate Change Plan, and locally through the Council's Climate Change Action Plan to decarbonise the transport network. The increased transition to electric vehicles and the necessary increase in charging points

will play a key role in achieving these targets. However, the costs associated with operating, and maintaining, this infrastructure are anticipated to continue to increase. Until relatively recently, electric vehicles were seen as a niche part of the overall transport network with a very limited choice in vehicles. However, that is not now the case, with most major mainstream vehicle producers planning for the growth of the EV market. Preliminary work as part of the Climate Change Action Plan has identified the growth in Electric Vehicles as crucial in achieving wider targets for transport emissions.

Existing Revenue Costs:

4.2 While initially the provision of free charging was encouraged by the Scottish Government to incentivise the early adoption of electric vehicles, continuing to cover the costs of the electricity consumed, along with ongoing maintenance costs, will create an unsustainable pressure on the Council budget. The standalone costs solely for facilitating EV charging infrastructure for the financial year 2021/22 was approximately £120k with estimated electricity supply costs for 2022/23 currently projected to be in the region of £230k. It is likely, given the issues with energy costs in all sectors of the market and with additional electric vehicles on the network, these costs will only increase.

Capital Funding for charging facilities:

4.3 To date, the Council's publicly available EV facilities have been funded through the Scottish Government's Local Authority Installation Capital Grant Programme which is now no longer available. In January 2022, the Scottish Government published its Draft Vision for Scotland's Public Electric Vehicle Network and launched a new fund for local authorities to bid into. From this fund, the Council has been awarded an initial £60k to develop a public electric vehicle charging Strategy and Infrastructure Expansion Plan. This will form the basis of future funding bids to the Scottish Futures Trust's Electric Vehicle Infrastructure Fund.

4.4 The availability, accessibility and reliability of EV charging facilities must progress in line with increasing customer demand. Given the very varied geography across the Council area, careful planning and consideration will be given to serve the residents of all our communities. This is to ensure that no community or area is disadvantaged, especially where there is no private operator provision. This is an area of work that will be taken forward over the coming months.

Collaborative Working:

4.5 In recognition of the cross-boundary issues of EV charging, Perth & Kinross Council is working with regional partners through the development of a Regional EV Strategy published in November 2019 by TACTRAN (the Regional Transport Partnership for Angus, Dundee City, Perth & Kinross and Stirling Council areas). This is to deliver EV charging infrastructure in a coordinated and collaborative way.

4.6 The Regional EV Strategy, Regional EV Delivery Plan, Baseline Report and Demand Forecast are available to download from the TACTRAN website.

4.7 Discussions have taken place with partner organisations at the Regional EV Steering Group, which included Transport Scotland. These have confirmed that a move towards charging would be welcomed at a strategic level.

4.8 It should be noted that under the Local Government (Scotland) Act 1973, Scottish Local Authorities are not permitted to make profit. Therefore, any potential revenue generated over the direct costs associated with the provision of the EV chargers and energy will need to be reinvested in the network. A stable funding stream to support asset investment & maintenance is crucial to ensure network reliability and to build users' confidence to allow the switch to low carbon travel.

Private network operators:

4.9 There are now several national charge points operators (CPOs) with locations within Perth & Kinross and the wider region. All operate on a single cost per kWh, ranging from around 28p – 70p per kWh, with some offering discounts as part of a subscription model and some offering free charging at certain sites on lower powered chargers (e.g. supermarkets).

4.10 Most commercial networks offer differential rates depending on charge point output rates, with lower costs for low powered (7-22kW) and higher costs associated with rapid/ultra-rapid chargers (50-350kW).

4.11 Perth has already benefited from significant investment from ultra-rapid private charge point network operators, with Ionity (4x350kW), Tesla (12 x 150kW), BP Pulse (3x150kW) all already offering 150kW-350kW charging. Gridserve has recently announced its intention to construct a hub at Perth Dobbies.

4.12 Transport Scotland have also confirmed that approaches have been made to the private sector to assume greater responsibility for installation, operation and maintenance of public EV charge points as well as accepting any potential revenue risk.

4.13 This could be achieved, for example, through 5-to-10-year concession-type agreements with local authorities and other public sector partners. This is clearly an avenue of interest to the Council in future discussions.

4.14 However, to ensure continued investment from the private sector, it is important that realistic costs are charged for public charging, to ensure that a business case can be made for future private sector investment. In reality, it is likely, there will be very limited private sector interest in investing in EV facilities if the public sector continue to offer low or discounted tariff levels.

Other Local Authorities:

4.15 There are currently a wide range of tariffs and associated charges across Scotland's local authority areas for EV charging and full details of all Scottish Local Authority tariffs are shown in Appendix 2. Dundee City Council also offer a discounted rate for their residents of 15p/kWh on non-rapid chargers (7-22kW), although this is a subsidised arrangement.

PKC operational arrangements:

4.16 The Council owned assets (as detailed in Appendix 1) are all administered by Charge Place Scotland (CPS). This was set up by Transport Scotland who provide this service for all local authorities in Scotland as well as private sector businesses which have installed charge points through Transport Scotland funding streams.

4.17 This provides the administrative back office, including tariff setting and invoicing of users who receive an invoice monthly for all usage across the CPS network. Administrative costs associated with the CPS network will continue to be paid by Transport Scotland up until 2025. The arrangements beyond this period are unknown. However, if future costs have to be met by the Council, this will need to be incorporated within an amended tariff level.

4.18 The historical usage data of the Council's charge points is shown in Table 1 below and it highlights the significant growth in use since the first charge points were installed in 2013.The data for the first six months of 2022 show that this trend of significant growth is likely to continue.

Table 1 - PKC Charge Point Usage

Year	Total Charging Sessions	Total kWh Consumption	Average Consumption per Charging Session (kWh)
2013 (Jan - Dec)	252	2,027	8.04
2014 (Jan - Dec)	1,862	16,431	8.82
2015 (Jan - Dec)	3,962	34,318	8.66
2016 (Jan - Dec)	9,525	92,314	9.69
2017 (Jan - Dec)	16,097	169,907	10.56
2018 (Jan - Dec)	24,240	264,219	10.90
2019 (Jan - Dec)	37,385	414,292	11.08
2020 (Jan - Dec)	32,798	437,642	13.34
2021 (Jan - Dec)	50,307	818,524	16.27
2022 (Jan - Jun)	42,971	806,312	18.76

5. PROPOSALS

5.1 A comprehensive review of charging options as part of this report has been undertaken, looking at both the existing tariffs and associated charges levied by both the public and private sector CPOs. The Electric Vehicle Association

for Scotland (EVAS), a community interest company set up to represent the views of EV users, have published guidance on setting of tariffs which has been referred to during the review.

5.2 To continue to support the uptake of EVs, it is important that a simple and fair system is adopted if the public are to have the confidence to make the move to EVs. The range of vehicles and charge points available and the variety of access methods means the transition to EVs can be confusing. It is likely an overly complex tariff structure will exacerbate this, potentially alienating users and increasing administration for the Council.

5.3 While it is likely that charging electric vehicles at home will play an increasingly important part as the market develops (which the Council will encourage), it is important to note that many residents will not have off street parking available or stay in flatted developments which are not conducive to home charging. This is an area of work that will need to be taken forward to ensure that potential electric vehicle owners are not penalised. Charge Place Scotland have indicated that the back office system will soon be able to offer differential tariffs which will have the potential to allow residents to take advantage of cheaper off peak energy usage and also allow more targeted overstay fees that would allow residents to charge overnight without incurring penalty fees.

Options for Charging:

5.4 From the review undertaken as part of this paper, there are three main options for charging for the use of EV charge points:

- **Option 1 - Fixed rate:** A single rate is charged regardless of amount of electricity consumed
- **Option 2 - Fixed rate plus energy charge**: A fixed rate/connection fee is charged to use the charge point and customers are also charged per unit of electricity consumed
- **Option 3 – Charge based on energy use only**: Customers are charged per unit of electricity consumed, which could have a minimum charge.

5.5 Option 1, while offering a simple option, is not considered appropriate as this would unduly penalise vehicles with smaller batteries and unduly influence driver behaviour. This option was initially introduced by several local authorities but has subsequently been dropped in favour of a metered tariff.

5.6 A considerable number of local authorities have opted for Option 2 and introduced “connection charges” that apply in addition to the energy costs. However, this is not the approach adopted by the private sector who have adopted a single per kWh charge.

5.7 A connection, or standing charge, is also not something that is recommended by the Electric Vehicle Association of Scotland, who advocate a minimum charge with costs based on energy used. A connection charge can unduly influence behaviour whereby users stay on charge longer than they would

otherwise to minimise the impact of the standing charge on the overall cost. It also can unfairly penalise users with more affordable vehicles which typically have smaller batteries which require more frequent but shorter charging sessions.

5.8 However, an alternative is to adopt a minimum charge to ensure that administrative and other costs associated with a charging session are covered. This is similar to traditional liquid fuel sales where a minimum amount is always charged

Preferred Option:

5.9 Having considered the available cost recovery options, it is recommended that Option 3 offers the most equitable and flexible charging model for both the user and the Council, while being simple and transparent for drivers.

5.10 Incorporating all cost elements (energy, maintenance and administrative) into the cost per unit of electricity consumed allows for full cost recovery to be borne equally by all customers based on actual usage. However, there are significant additional costs, including network capacity charges, associated with the provision of rapid (50kW) charging which should be reflected in the tariff for these units. This price differential will also encourage drivers to use the slower chargers, wherever possible, to retain rapid charging availability for users that require it.

5.11 The Council benefits from significant purchasing power for energy with the actual rate paid dependant on time of day and other factors. The current rate paid ranges from around 10p/kWh to 20p/kWh. This compares with the April 2022 price cap rate for domestic customers of approx. 28p/kWh.

5.12 It is also recognised that there is a requirement for overstay fees to manage demand for chargers. This is to avoid the situation where a user remains plugged into a unit beyond the time required to charge the vehicle, thereby blocking the charger for other users. This approach to demand management is supported by the Electric Vehicle Association Scotland and has been adopted across other authorities.

5.13 Firstly, if the Charger is located in a Council controlled car park where charging for parking is required, then any length of stay is related to the parking fee and associated time limit. However, if an EV user enters the car park, to ensure a faster turnaround, it is proposed for a rapid charger (50Kw) to limit the stay to 1hour with an overstay fee of £10. If the user would like to stay in the car park, they will need to move to another space. Similarly for less powerful 22kw chargers, it is proposed to limit the stay to 3 hours with a similar overstay fee of £10.

5.14 Secondly, if the charger is located in a Council car park with no parking charges, then currently a single EV user could in effect use the facility for most of the day without penalty. In that event, we would impose a time charge on any EV charging use as set out above. As with the Council car parks, where parking charges are in place an overstay fee of £10 would be

applied. The overstay fees in all charging locations will be administered as part of the back-office system.

5.15 Using Option 3 as the basis for charging, it is proposed that the tariffs and overstay fees initially be set as follows. The tariffs have been done in cognisance of other local authority charge rates and in consultation with the Council's Property and Energy colleagues.

Table 2 – proposed tariff

Charger Type	Energy Cost	Overstay Fee
AC charging (7-22kW)	30p per kWh – minimum £1	£10 after 3 hours
Rapid charging (43kW+)	35p per kWh – minimum £1	£10 after 1 hour

5.16 It is proposed that these tariffs be introduced from 1 January 2023. This will allow time for the back-office administration systems to be set up, appropriate signage to be installed and information provided to drivers and users through our communication channels.

5.17 It is recognised that introducing tariffs may have an impact on the usage of the Council's charge points. As a result, it is, therefore, recommended that regular reviews and monitoring are undertaken to ensure that the rates remain appropriate to recover costs. Members are therefore asked to delegate this authority to the Executive Director of Communities. This will allow the Council to maintain and improve the existing network but importantly make it more accessible and financially sustainable as the growth in the number of electric vehicles on the network continues. There will also be the annual review as part of the Council's budget setting process.

6. CONCLUSION

6.1 The increased transition to electric vehicles and the necessary increase in charging points will play a key role in achieving these targets. However, the costs associated with operating and maintaining this infrastructure are anticipated to continue to increase. As a result, and in line with other local authorities, the introduction of charging is being recommended. Considerable work has been undertaken on three options, looking at practice elsewhere and taking into account the expertise offered by the Electric Vehicle Association of Scotland. It would be intended, if approved, to introduce charges on 1 January 2023 to allow for signage installation and a communications campaign.

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APPENDICES

- Appendix 1 – PKC EV Charge Point Assets
- Appendix 2 – Scottish Local Authority Tariffs

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You can also send us a text message on 07824 498145.

All Council Services can offer a telephone translation facility.

ANNEX

1. IMPLICATIONS, ASSESSMENTS, CONSULTATION AND COMMUNICATION

Strategic Implications	**Yes / None**
Community Plan / Single Outcome Agreement	**No**
Corporate Plan	**No**
Resource Implications	
Financial	**Yes**
Workforce	**Yes**
Asset Management (land, property, IST)	**Yes**
Assessments	
Equality Impact Assessment	**No**
Strategic Environmental Assessment	**No**
Sustainability (community, economic, environmental)	**Yes**
Legal and Governance	**Yes**
Risk	**Yes**
Consultation	
Internal	**Yes**
External	**Yes**
Communication	
Communications Plan	**Yes**

1. Strategic Implications

Community Plan/Single Outcome Agreement

1.1 N/A.

Corporate Plan

1.2 N/A.

2. Resource Implications

Financial

2.1 The development and growth of the number of Electric Vehicles on local roads has been relatively recent. While all installations in Perth and Kinross were funded via the Scottish Government, there was a request in order to incentivise EV ownership to make charging costs free. However, we are now at a point where the number of vehicles and the number of charging stations is putting considerable pressure on the Council's budget. This clearly is not sustainable in the long term. The Council are seeking, through the charges, cost recovery which includes the costs of charging while addressing the need to maintain and develop new infrastructure.

Workforce

2.2 The growth in this area has meant existing staff having to take on additional duties. However, as part of the Council's Budget setting for 2022/23, a new Post of EV Infrastructure Project Officer has been created.

Asset Management (land, property, IT)

2.3 The Council will ultimately operate, own and maintain both existing and any new EV related infrastructure. The cost recovery element of the new charging regime will allow costs which are currently borne by the Council to be removed.

3. Equality Impact Assessment

3.1 Under the Equality Act 2010, the Council must eliminate discrimination, advance equality of opportunity, and foster good relations between equality groups. Carrying out Equality Impact Assessments (EqIA) for plans and policies allows the Council to show that it is meeting these duties.

3.2 The EV Tariffs proposals have been considered under the Council's Integrated Appraisal Toolkit. No impacts on equality were identified and the document was assessed as not relevant for the purposes of EqIA. A full EqIA was not needed.

3.3 The Environmental Assessment (Scotland) Act 2005 places a duty on the Council to identify and assess the environmental consequences of its proposals. However, no action is required as the Act does not apply to the matters presented in this report. This is because the Committee are requested to note the contents of the report only and the Committee are not being requested to approve, adopt or agree to an action or to set the framework for future decisions.

Sustainability

3.4 Under the provisions of the Local Government in Scotland Act 2003 the Council has to discharge its duties in a way which contributes to the achievement of sustainable development. Under the Climate Change (Scotland) Act 2009 the Council also has a duty relating to climate change and, in exercising its functions must act:

- in the way best calculated to delivery of the Act's emissions reduction targets;
- in the way best calculated to deliver any statutory adaptation programmes; and
- in a way that it considers most sustainable.

3.5 The proposals introduce a more financially sustainable way of making sure infrastructure which is required for the development and growth of Electric Vehicles is in place. As set out in national and local climate strategies the growth of EV is crucial in achieving in our wider transport emission targets.

Legal and Governance

3.6 The necessary signage which will need to be in place as part of the required statutory orders in the car parks or on any public road will be in place prior to the introduction of charges. This will include any new or amended orders to current signs.

3.7 There is no impediment to charging for the use of the EV infrastructure. The Scottish Government have actively encouraged charging as the market has begun to develop to a point of maturity. It is analogous to traditional methods of fuel sales.

Risk

3.8 The Council has been providing electricity for EV users free of charge up to this point. This has obviously been a benefit for most current EV users. We will as part of our wider Communications strategy explain the reasoning and the financial requirements for the reasons behind the introduction of charging.

4. Consultation

Internal

4.1 A full Communication Strategy will be undertaken prior to the implementation of charges. Colleagues from Property and Finance have been involved in the preparation of this report.

External

4.2 As above.

5. Communication

5.1 This will be developed subject to the approval of charges by the Elected Members in association with our Communications team.

2. BACKGROUND PAPERS

2.1 None.