

North Lanarkshire Council Report

Environment and Climate Change Committee

Does this report require to be approved? Yes No

Ref AMcP/ JA Date 09/11/22

Electric Vehicle (EV) Infrastructure Proposed Tariffs

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Executive Summary

The purpose of this report is to provide an update on the status of the Electric Vehicle Charging Infrastructure Network, propose the introduction of tariffs, and set out potential future opportunities for a more commercial approach.

Recommendations

It is recommended that committee:

- (1) Agree the information in this report relating to the current and future costs, assumptions and plans associated with operating public electric vehicle (EV) charge points, including future commercial opportunities.
- (2) Agree the introduction of tariffs for the use of Council EV charging points from the 1st January 2023.
- (3) Agree that this tariff will be set in accordance with the principles outlined in this report by the Head of Regulatory Services and Waste Solutions and will be regularly reviewed thereafter to ensure that the tariff is in line with market fluctuations and realistically tracks costs being incurred.
- (4) Agree with the introduction of a restricted time period for the use of charging points and this is enforced through the relevant Traffic Regulation Order.

The Plan for North Lanarkshire

Priority Improve North Lanarkshire's resource base

Ambition statement (17) Ensure we keep our environment clean, safe, and attractive

1. Background

- 1.1 The Scottish Government has pledged to phase out the need for new petrol and diesel cars and vans across Scotland by 2032. The National Transport Strategy 2 Delivery Plan and Climate Change Update as published in December 2020 contains several specific proposals to deliver these commitments and the UK Government has pledged to end the sale of new petrol and diesel cars (excluding some hybrids) from 2030. Whilst, to date, free electric charging has been offered to incentivise car owners to move to electric vehicles, the ban on fossil fuel car sales means a free fuel subsidy incentive will no longer be necessary.
- 1.2 There are several different funding programmes available to help increase the adoption of electric vehicles and the development of an appropriate EV charging infrastructure network to support this growth. None of these programmes preclude the introduction of tariffs.
- 1.3 The Electric Vehicle Infrastructure Fund (EVIF) has replaced the Local Authority Installation Programme (LAIP) and is an annual funding programme which further develops EV charging networks so that EV drivers can confidently travel throughout Scotland, across both urban and rural locations. The programme is funded by the Scottish Government and administered by Transport Scotland.
- 1.4 In 2022/23, £60,000 has been made available from this fund to support planning for future delivery of public EV charging infrastructure. The necessary strategy / development work associated with this is progressing and part of this funding has been pooled together with City Region partners to continue progress on a wider regional strategy.
- 1.5 The public charge points across North Lanarkshire are included within the Charge Place Scotland network. Charge Place Scotland is Scotland's national Electric Vehicle (EV) charging network and is a well-known and established brand owned and developed by the Scottish Government / Transport Scotland.

2. Report

Current Public EV Infrastructure

- 2.1 Current public EV infrastructure numbers across North Lanarkshire are summarised in the below table.

Dual Outlet Standard (7kW) Charge Points	Dual Outlet Fast (22kW) Charge Points	Dual Outlet Rapid (50kW) Charge Points	Total
58	38	26	122

- 2.2 The existing EV Network has been funded through Scottish Government grants, which also included funding for an initial 5-year maintenance period. The last few years saw the network grow significantly with the delivery of the PACE partner project with Transport Scotland, Scottish Power Energy Network (SPEN) and South Lanarkshire Council.
- 2.3 During the early phases of implementation of EV charge points there was an expectation by Transport Scotland that there would be no tariff for users of the EV chargers. This would help support a wider uptake of electric vehicles. At present, the

Council (through the various service budgets) pays for energy consumed by all users although there is no defined budget allocation. This includes private sector businesses, Council fleet and any other public sector partners, however, it is not presently possible to provide a split of this information.

2.4 Electricity costs associated with the public EV charge points for the last 3 years are demonstrated below and point to an ever-increasing growth even with increased energy costs of 23% taken into account:

- 2020/21 - £57,672
- 2021/22 - £274,131
- 2022/23 - £852,000 (forecast)

2.5 The table below shows information from the Charge Place Scotland system and the energy billing from EDF. This shows the number of charging sessions, energy use and the number of unique drivers using chargers within North Lanarkshire.

Month	Charging Sessions	Energy (KwH)	Unique Drivers
Jan-21		38,621	
Feb-21		38,275	
Mar-21		50,408	
Apr-21		59,830	
May-21		72,072	
Jun-21		87,273	
Jul-21	1,259	120,596	253
Aug-21	8,282	136,978	854
Sep-21	6,977	149,328	915
Oct-21	8,211	182,447	1,897
Nov-21	8,520	200,344	1,954
Dec-21	8,998	208,721	2,208
Jan-22	9,720	217,824	2,373
Feb-22	9,541	233,871	2,398
Mar-22	12,255	254,762	2,908
Apr-22	11,685	267,845	3,087
May-22	13,505	301,298	3,419
Jun-22	14,190	298,669	3,547
Jul-22	14,858	299,123	3,542
Aug-22	18,075	351,347	4,071
Sep-22	18,040		4,099

2.6 From the information above, the completion of project PACE has led to a significant increase in the number of charging sessions from 1,259 in July 2021 to 18,075 in August 2022. The installation of new charging infrastructure across North Lanarkshire has made charging more accessible and encouraged more electric vehicles on the roads.

2.7 The increase in electricity costs incurred by the service since 2018/19 is due to increased demand as EV ownership has increased. The significant increase in electricity costs between 2020/21 and 2021/22 is due to the overall increase in the cost

of electricity and significant increased usage which has also been influenced by the introduction of an additional 101 dual outlet charge points installed as part of project PACE.

- 2.8 Given the wider strategic commitments to decarbonise the transport network in line with climate change targets and the Council's aspiration to achieve net zero by 2030, there will have to be a rapid acceleration of the public EV charging network. The costs associated with operating and maintaining these charge points will continue to increase and whilst the initial provision of this electricity at no cost will have aided the initial transition to EV use, continuing to cover the costs of the electricity consumed along with ongoing maintenance costs will create an unsustainable pressure on Council budgets. Projected electricity costs for 2022/23 could be in the region of £852,000 based on an average monthly usage over April to August 2022 of £71,000 per month and should the rise in electric vehicle usage continue as expected, then these costs will very quickly run into tens of millions of pounds.

Tariff Models / Commercialisation

- 2.9 The aim of a tariff model is to move towards a point where the growing EV network and infrastructure is financially sustainable and, as a minimum, covers the costs of the charging opportunity provided to the users of EVs. This would include electricity, maintenance, and where necessary expansion and replacement costs.
- 2.10 Discussions have taken place with partner organisations including Transport Scotland regarding implementing a cost recovery model. A move towards charging is being encouraged with Transport Scotland confirming that future funding support is likely to be conditional on a tariff regime / strategy.
- 2.11 Transport Scotland have also confirmed that Councils have a key role in continuing to create the conditions to attract private sector investment and that the introduction of tariffs for the use of public charge points should be set at an appropriate level. Tariffs will need to recover whole life cost of owning, operating, and replacing charge points and to enable business models that will be supported through the EVIF. The approach to tariffs should be identified as part of any Strategy and Expansion Plans.
- 2.12 Transport Scotland has been working with the Scottish Futures Trust (SFT) to review financing and delivery models in which future investment in Scotland's public EV charging network can be provided. This work has shown that it is necessary to ensure the availability of public EV charging infrastructure continues to grow ahead of demand, and there is a need to transition away from the current model of free charging to accelerate greater private investment models in Scotland.
- 2.13 Transport Scotland are encouraging 'mixed-economy' approaches to enable the private sector to assume greater responsibility for installation, operation and maintenance of public EV charge points as well as accepting revenue risk. This could be achieved, for example, through five-to-ten-year concession-type agreements with Councils and other public sector partners.
- 2.14 To facilitate this new approach, it is recommended that a tariff be set at such a level that it does not undercut the private sector which would discourage future investment and allows the Council to compete with and remain competitive with the private sector, potentially leveraging in further investment or partnership arrangements. In addition, tariffs should be consistent with neighbouring authorities to prevent additional road journeys to benefit from lower tariffs.

Current Public Sector Tariffs

- 2.15 A review of tariffs applied across other Councils and the private sector has been undertaken and this demonstrates a complex and varied picture. It is understood that Glasgow City Council will be proposing tariffs during 2022/23 and South Lanarkshire Council have recently approved the introduction of tariffs. Locations and tariffs can be viewed at [ChargePlace Scotland | Scotland's Public EV Charging Network](#)
- 2.16 There are three main options for tariffs for EV charge points:
- Option A - Fixed Rate: A single rate is applied regardless of amount of electricity consumed
 - Option B - Costs Only: Customers are charged a rate based on the number of units of electricity consumed, which could have a minimum charge and encompass all costs.
 - Option C - Fixed Rate Plus Costs: A fixed rate is applied to use the charge point and customers are also charged per unit of electricity consumed
- 2.17 After considering the available cost recovery options, it is recommended that Option B offers the most equitable and flexible charging model for the user and the Council. Incorporating all costs to the Council (energy, maintenance, administrative and management) into the cost per unit of electricity consumed allows for full cost recovery to be borne equally by all customers based on actual usage. Transport Scotland also support this tariff model.
- 2.18 Under Option B, the per energy unit cost to the customer will consider the following elements:
- Cost of energy
 - Cost of maintenance
 - Cost of transaction (Charge Place Scotland administrative and management cost)
 - Employee Costs
 - Cost of capital (where not fully funded by external grant).
- 2.19 The majority of capital investment costs to date have been provided by Transport Scotland including the upgrading of previous EV chargers. In the short term, the expansion of the network will continue to be funded through continuing government grants but that will not continue indefinitely and in the future, such upgrades and associated costs will fall to the Council. The Council has not included any such capital investment in its current capital delivery programme and in short will not have the capacity to deliver such funding.
- 2.20 Annual maintenance costs are presently covered by agreements and warranties for a period of five years from the date of installation for the majority of the council's chargers. This effectively reduces the maintenance costs to zero, (except for vandalism and misuse costs) until the five-year periods run out.

- 2.21 Thirteen of the existing charge points no longer have current warranties and the maintenance costs are now met by the service. The remaining 101 have warranties in place until 2025/2026. As we develop our commercial approach and, as existing warranties expire, there could be scope to deliver this type of annual maintenance either as part of a commercial agreement to manage, maintain and operate chargers or by delivery through the proposed Enterprise contract.
- 2.22 Implementing a cost recovery model introduces additional transactional costs for administration and management. Option B proposes that when a tariff is applied to charge points, Charge Place Scotland (the 'back office') will collect the revenue generated and forward this to the host (in this case the Council) on a quarterly basis, minus fees. This 'back office' may be a further area where the Council could consider an alternative delivery model in the future.
- 2.23 The City Region consideration of EV tariffs has discussed the potential of a benchmark cost to use 7/22kW charge points being comparable to the costs of charging at home. The intent is to ensure that those without off-street parking and the ability to install a home charge point are not disadvantaged. However, to keep this cost low, the costs to use the 50kW charge points would need to subsidise the use of the 7/22kW units which has the potential to compromise the commercial setting of tariffs.
- 2.24 The tariff for the use of 50kW charge points will therefore be set at a level to compete with and remain competitive with the private sector, potentially leveraging in further investment. It also acknowledges the increasing use of rapid chargers by the private sector (e.g. delivery / courier firms, taxi operators).
- 2.25 If the introduction of tariffs are approved by Committee it would be the intention to bring in a charging facility on the 1st January 2023 and tariffs will be set at the time of implementation by the Head of Regulatory Services and Waste Solutions. The initial tariff for the use of 7/22kW charge points will consider the comparable cost to charge at home and the tariff for the use of 50kW charge points will be comparable to existing private sector charge points.
- 2.26 The tariffs will initially be devised to ensure the recovery of costs associated with the operation and management of the EV charger network in North Lanarkshire and to assist in managing wider cost pressures being experienced across Council services and to contribute to a new EV Infrastructure fund.
- 2.27 The tariffs will be set initially and reviewed / tracked regularly throughout the year in line with market changes, as the wider cost of electricity fluctuates and to ensure that the tariffs realistically track costs being incurred.

Regulation of Bays

- 2.29 Bay blocking, which is the behaviour of drivers of electric vehicles using charging bays when not charging or remaining in the bay once charging is complete, is becoming an increasing problem.
- 2.30 To ensure that charge points are available to all those that need them, it is therefore proposed that a restriction of a 1-hour maximum stay be applied to rapid charging facilities. The maximum stay for 7/22kW charging points requires to be greater as the time to charge a vehicle can vary greatly using these charge points.

- 2.31 The introduction of a Traffic Regulation Order (TRO) to limit the time permitted to stay in a charging bay and to include an overstay fee in the tariff, will be progressed in the usual TRO manner and enforcement of this TRO will be undertaken by the existing parking enforcement team.

3. Measures of success

- 3.1 Costs to operate, manage and replace the existing public EV charging network are recovered through the introduction of tariffs.
- 3.2 Increase in the number of commercially provided public EV charging points.



Andrew McPherson
Head of Regulatory Services and Waste Solutions

5. Impacts (<http://connect/report-template-guidance>)

5.1	Public Sector Equality Duty and Fairer Scotland Duty Does the report contain information that has an impact as a result of the Public Sector Equality Duty and/or Fairer Scotland Duty? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact? If Yes, has an assessment been carried out and published on the council's website? https://www.northlanarkshire.gov.uk/your-community/equalities/equality-and-fairer-scotland-duty-impact-assessments Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
5.2	Financial impact Does the report contain any financial impacts? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, have all relevant financial impacts have been discussed and agreed with Financial Solutions? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact? Based on similar demands over the last six months the total annual income projection based on the tariff range detailed above is expected to provide a sustainable financial model going forward and would cover the costs of the charging opportunity provided to the users of EVs. This would include electricity, maintenance, staffing costs and where necessary expansion and replacement costs. It should also be noted that demand per charge point remains uncertain, as does costs associated with electricity. The introduction of tariffs is also likely to discourage use of our network to an extent and this may affect the level of income expected in the short term at least. A large-scale replacement / refurbishment programme will be required in the future. Such costs will continue to be considered as part of the tariff setting and ongoing review exercise. The creation of an electric vehicle fund to allow a replacement investment programme to be funded is also proposed. Once demand is clearer and tariffs are established there could also be scope to expand the network using tariff generated income, complementing, in the short term, any continuing external funding sources.
5.3	HR policy impact Does the report contain any HR policy or procedure impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant HR impacts have been discussed and agreed with People and Organisational Development? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?
5.4	Legal impact Does the report contain any legal impacts (such as general legal matters, statutory considerations (including employment law considerations), or new legislation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant legal impacts have been discussed and agreed with Legal and Democratic Solutions?

	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If Yes, please provide a brief summary of the impact?</p>
5.5	<p>Data protection impact</p> <p>Does the report / project / practice contain or involve the processing of personal data?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If Yes, is the processing of this personal data likely to result in a high risk to the data subject?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If Yes, has a Data Protection Impact Assessment (DPIA) been carried out and e-mailed to dataprotection@northlan.gov.uk</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
5.6	<p>Technology / Digital impact</p> <p>Does the report contain information that has an impact on either technology, digital transformation, service redesign / business change processes, data management, or connectivity / broadband / Wi-Fi?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If Yes, please provide a brief summary of the impact?</p>
	<p>Where the impact identifies a requirement for technology, has an assessment been carried out (or scheduled) by the Enterprise Architecture Governance Group (EAGG)?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
5.7	<p>Environmental / Carbon impact</p> <p>Does the report / project / practice contain information that has an impact on any environmental or carbon matters?</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>If Yes, please provide a brief summary of the impact?</p> <p>The delivery of a sustainable financial model for the provision of EV charging infrastructure will encourage greater uptake in terms of low carbon vehicles and contribute to the Council's climate change and wider sustainability ambitions.</p>
5.8	<p>Communications impact</p> <p>Does the report contain any information that has an impact on the council's communications activities?</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>If Yes, please provide a brief summary of the impact?</p> <p>Given that EV charging has been free to date a communications strategy will require to be developed to ensure that users are informed well in advance of the implementation.</p>
5.9	<p>Risk impact</p> <p>Is there a risk impact?</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>If Yes, please provide a brief summary of the key risks and potential impacts, highlighting where the risk(s) are assessed and recorded (e.g. Corporate or Service or Project Risk Registers), and how they are managed?</p>

The current costs relating to EV charging remain unfunded and to date the costs are being managed within existing budgets by reducing other works or improving energy efficiency as part of the street lighting LED replacement programme. However, this is not sustainable and the failure to introduce tariffs combined with the increase in EV ownership will place a significant financial burden on the council and act as a barrier to commercialisation and private investment.