Item 4

30th January 2024

Glasgow City Council

Environment & Liveable Neighbourhoods City Policy Committee

Report by Executive Director of Neighbourhoods, Regeneration and Sustainability

Contact: Gavin Slater Ext: 78347

ELECTRIC VEHICLE CHARGING TARIFF REVIEW

Purpose of Report:

To provide Committee with an update on the review of Tariff for council's public Electric Vehicle charging infrastructure

Recommendations:

The Committee is asked to:

1) Note the contents of this report.

Ward No(s):	Citywide: ✓
Local member(s) advised: Yes ☐ No ☐	consulted: Yes ☐ No ☐

1 Introduction

1.1 Since 2011 the Council has developed a network of EV Chargers to support the transition away from fossil fuelled vehicles. Since its inception, the council subsidised the operation of the charging network.

1.2 Following the Council's declaration of a Climate Emergency in 2019, the council committed to installing 300 charge points to act as a catalyst and "kickstart" the transition away from internal combustion vehicles in a paper to the Environment, Sustainability and Carbon Reduction City Policy Committee in February 2020 and to the City Administration Committee in the same month.

1.3 Continued growth of the EV network was included in Glasgow's Climate Plan (Action 51) to support decarbonisation of transport and the ambition for the city to be net zero carbon by 2030.

1.4 Demand has grown substantially since the inception of the network, and with rising costs, in particular for energy, it became financially challenging for the council to operate. In April 2021 the City Administration Committee (CAC) approved the Council's introduction of a tariff on the public electric vehicle charge point network to include a rate for consumption of electricity and an overstay fee. This intention was to mitigate costs and support the goal of making the network self-sustaining financially and meet the budgetary demands of the Council.

1.5 Papers on Electric Vehicle Charging Infrastructure (EVCI) were also previously taken to the Environment, Sustainability and Carbon Reduction City Policy Committee in March 2022 and the Environment and Liveable Neighbourhoods City Policy Committee in January 2023 and April 2023.

1.6 An Equality Impact Assessment (EQIA) screening for the introduction of tariff was undertaken in February 2021 and an EQIA screening was conducted in January 2024 for revision to the tariff with no further activity required.

1.7 This paper provides an update on the introduction of a tariff at the public charging network.

2. Council Public EV Charging Infrastructure

2.1 As of 1 January 2024, the Council has installed and commissioned 335 charge points across 175 units for public use in Glasgow, including off-street hubs and 16 Rapid[1] units that will charge most vehicles to 80% in approximately 30 minutes.

2.2 Details of all Glasgow City Council owned chargers are available on the National Chargepoint Registry at https://www.gov.uk/guidance/find-and-use-data-on-public-electric-vehicle-chargepoints.

[1] An EV Charger that provides power of 50kW or greater.

2.3 All Council owned chargers are connected to the Charge Place Scotland (CPS) network and those for public use can be found at https://chargeplacescotland.org/.

2.4 6 units are available exclusively for taxis and private hire vehicles and 6 units for goods vehicles[2] at Newton Street and 20 units are for exclusive or shared use by Car Club vehicles.

2.5 A further 67 charge points across 37 units for public use are currently in the process of being installed subject to technical assessment and supply chain availability.

2.6 Grant funding from several sources including Transport Scotland, Energy Savings Trust (EST) and the former Department for Business, Energy and Industrial Strategy (BEIS), now Department for Energy Strategy & Net Zero, has been awarded to support installation. All funding is now allocated and no further installations are currently planned.

2.7 Future development of the EV Charging network was presented to this Committee in November 2023 under the EV Strategy.

3 Prior to Tariff

3.1 In the 12 months from January to December 2022, 15,800 unique public driver accounts had used the council's public network in Glasgow for approximately 160,000 charging sessions, consuming 3.05 million kWh. This is the equivalent of approximately 10.4 million emission free miles[3] (about 354 round-the-world trips) and a diversion of approximately 2,000 tonnes of CO_2[4].

3.2 Prior to the introduction of a tariff, the expected annual consumption in 2023/24 by the public on the council network, assuming all units in the pipeline had been installed, was around 5 million kWh. The report to Committee in April stressed however that this figure could be impacted by changes in energy costs and consumer behaviour.

3.3 Table 1 shows the network utilisation for the first 3 months of 2023:

Month	Consumption (kWh)	Number of Sessions *
January	**451,072**	**19,134**
February	**428,957**	**18,469**
March	**498,859**	**20,942**

* Only Sessions where Consumption was greater than 1kWh are shown.

Table 1 – Network Utilisation Q1 2023

[2] Goods Vehicles are defined as vehicles designed for the carriage of goods including Light Goods Vehicles (LGV) and Heavy Gods Vehicles (HGV).
[3] Conversion factor of 3.4 miles/kWh
[4] Conversion factor of 120 g/km.

4 Tariff Introduction

4.1 The following tariff was introduced on 11 April 2023:

- A £1.00 connection fee applied for every session at all charging units
- A rate of £0.40 per kWh electricity consumption at all "Standard Charging Units" of 7kw or 22kW
- A rate of £0.70 per kWh electricity consumption at all "Rapid Charging Units" of 50kW or above
- A fixed overstay fee of £40.00 for connecting to a Charging Unit beyond the maximum allowed duration. These are aligned to Parking restrictions and are:
  - 1hr at any Rapid Charger
  - 2 hrs at a Standard Charger onstreet in the City Centre
  - 3 hrs at a Standard Charger onstreet in the rest of the city
  - 4 hrs at a Standard Charger in a Council Family car park

Table 2 also shows the Tariff broken out by different rates:

Charging Unit	Rate per kWh	Connection Fee	Overstay Fee	Location	Max Stay
Rapid Charging Unit	£0.70	£1.00	£40	All locations	1 hour
Standard Charging Unit	£0.40	£1.00	£40	On-Street City Centre	2 hours
				On-Street Rest of City	3 hours
				Off-Street Car Parks	4 hours

Table 2: GCC EV Charging Tariff April 2023

4.2 The tariff was announced on 28 March 2023 on the Council website www.glasgow.gov.uk/EVCharging and via social media channels. Following the same procedure used on tariff introduction and updates for other charge point owners including local authorities, the network provider, ChargePlace Scotland (CPS) provided information on their website at http://chargeplacescotland.org and social channels on 28 March and a reminder via its social channels on 11 April. The CPS live maps on their website and user Apps was also updated prior to the introduction. A small number of charging units have digital screens and these were also updated to include tariff information. The introduction was also picked up by the Press.

4.3 CPS account holders can check the CPS maps or App to verify tariffs in place at individual units and information is available on the council's own website. Each charging unit in the Council estate also displays tariff notices. Following advice from Charge Place Scotland, three weatherproof adhesive labels are applied to each of our units providing the following information:

- Tariff notice detailing the applicable consumption rate, connection fee, maximum charging duration and overstay fee. The notice also advises that parking fees may also be applicable.
- Advice notice advising a tariff is in place at the unit and providing contact information for Charge Place Scotland.
- QR code that points drivers to the CPS website where further tariff information is available.

It should be noted that vandalism has been identified at some units with removal and damage to these notices which can affect public understanding of the tariff. In these cases, the tariff still applies however, where known, damaged notices are replaced as soon as possible. Charge Place Scotland have also advised that that their terms and conditions require account holders to ensure they check tariff conditions prior to consuming electricity at charge points.

4.4 The EV chargers installed by the Council for public use have relied on grants to fund most of the capital outlay, however this funding has now all been received and does not cover ongoing costs, such as maintenance and repair of chargers.

4.5 The existing tariff was set in relation to increased external costs. These include significantly increased electricity costs, maintenance, repair and network management costs with the connection fee covering the per-session fee imposed by the network operator as well as contributing to maintenance costs. This was modelled to ensure the network is self-sufficient with any additional revenue being used to ensure the stability of the network. It was anticipated that the introduction of a tariff would also encourage expansion of the network through increased intervention of the private sector and several commercial hubs have been developed in the city.

4.6 In setting its tariff, the Council also reviewed the EV charging tariffs of other Local Authorities. Several, including those in Glasgow City Region, have tariffs in line with Glasgow's rates. Further details are in Section 5.6. Based on the experience of other local authorities, a reduction in consumption of 50% was assumed.

4.7 It should be noted that separate parking fees and restrictions may be in operation at bays and drivers should also ensure they are aware of parking restrictions to avoid any enforcement action.

5. Tariff Review

5.1 The Council committed to undertake a review of the tariff after 6 months. The review has concluded and considered ongoing costs associated with the network, network demand, feedback from interested parties such as individual network users and EV user groups, and arrangements for residents with no access to private parking and for commercial vehicle operators in the city. The main issues considered are provided below:

5.2 Costs

5.2.1 The Council procures its electricity via the National Framework and the unit cost remains static through 2023/24 although is expected to rise in 2024/25.

5.2.2 The unit cost of session fees from the network provider are expected to remain static through 2023/24.

5.3 Network Demand

5.3.1 As predicted, usage of the network has reduced since the introduction of the tariff. This can be attributed to drivers transferring to alternative charging options such as home charging, public charging in other Local Authorities, private commercial infrastructure or at site of business. This has enabled the public network to be available to members of the public who may not have off-street parking and charging options.

5.3.2 ChargePlace Scotland administer the use of our charging units and tariff collection on behalf of Glasgow City Council. 6 months data from April to September 2023 was available for analysis and Table 3 and Charts 1a and 1b show details provided by CPS on consumption and session data for public use of the council's public network in 2023.

5.3.3 Consumption fell and continued to drop in the first 3 months following the tariff introduction and started to plateau in July and then stabilised. For purposes of the review, average data from August and September was therefore used. Current average monthly consumption across August and September is **111.5 thousand kWh** over an average of **6,128 sessions**. This represents a reduction from the average of the 3 months prior to tariff introduction of 75% consumption and 69% sessions.

5.3.4 Analysis of the number of sessions where vehicles have remained connected to the network beyond the publicised maximum charging duration shows an average of 522 sessions across August/September (8.5% of total sessions). Prior to the introduction of tariff, 33% "overstayed".

5.3.5 This shift in network demand created capacity in the network allowing access for those that did not have alternative options such as residents in flatted properties with no access to off-street parking and charging.

Month	Consumption (kWh)	No. of Sessions consuming over 1kWh	No. of Sessions exceeding Maximum Duration
January	451,072	19,134	6,325
February	428,957	18,469	6,062
March	498,859	20,942	6,822
April	108,574	5,577	952
May	135,132	7,246	880
June	124,556	6,663	580
July	110,967	6,084	522
August	111,304	6,127	524
September	111,802	6,128	520

Table 3 – Use of the Public Network (Public Vehicles only)

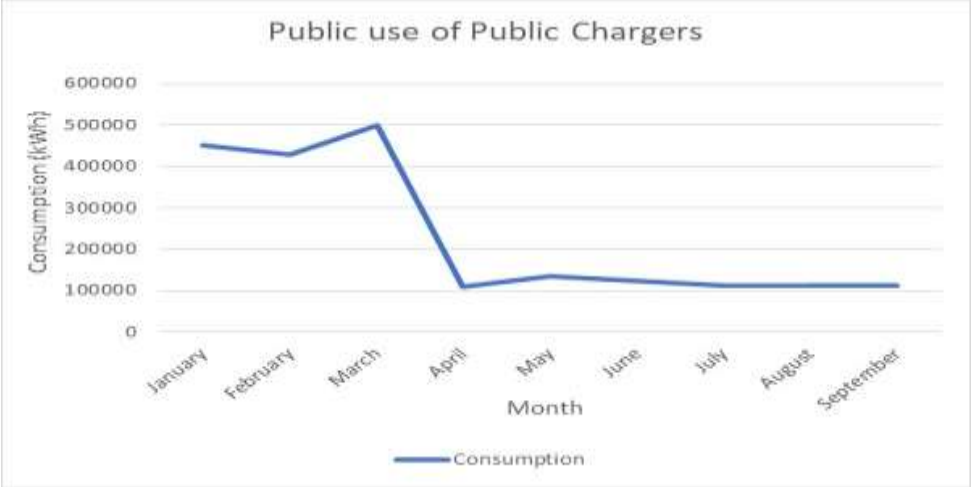


Chart 1a – Use of the Public Network (Public Vehicles only) - Consumption

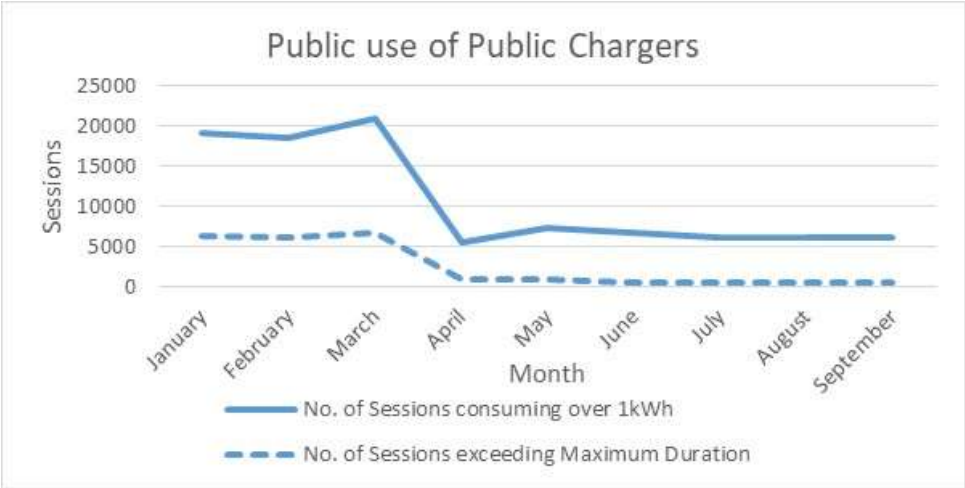


Chart 1b – Use of the Public Network (Public Vehicles only) - Sessions

5.3.6 Average August/September Rapid charger consumption across the Council's 16 rapid units has accounted for consumption of 20,180 kWh (18% of total) over 954 sessions (15.5% of total) with 35 overstaying (3.6% of rapid sessions and 6.6% of total overstay sessions). Table 4 and Charts 2a and 2b show a breakdown of usage by charger type.

	Rapid			Standard		
MONTH	Consumption (kWh)	No. of Sessions over 1kWh	No. of Sessions over Max Duration	Consumption (kWh)	No. of Sessions over 1kWh	No. of Sessions over Max Duration
1	200,878.76	7,490	1,465	250,193.75	11,644	4,860
2	180,229.03	6,802	1,233	248,728.55	11,667	4,829
3	219,854.58	8,013	1,473	279,004.49	12,929	5,349
4	27,782.46	1,172	95	80,791.89	4,405	857
5	28,285.60	1,253	57	106,847.08	5,993	823
6	24,944.42	1,057	57	99,611.74	5,606	523
7	21,245.05	979	47	89,722.28	5,105	475
8	21,296.92	1,015	39	90,008.04	5,112	485
9	19,062.38	892	30	92,739.77	5236	490
Total	743,579.20	28,673	30	133,7647.59	67,697	18,691

Table 4 - Use of the Public Network (Public Vehicles only) by Charger type

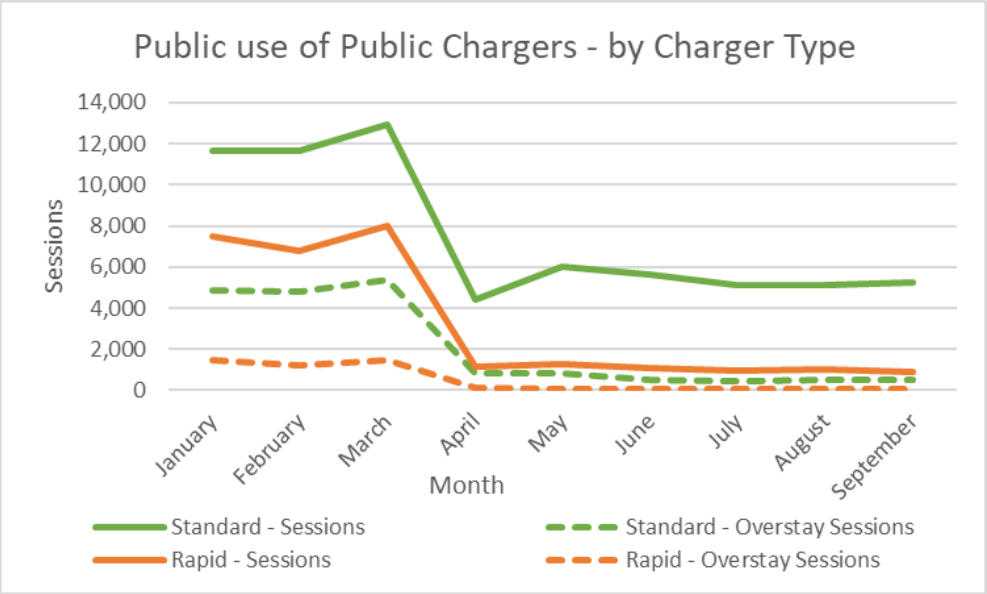


Chart 2a – Sessions on Public Network (Public Vehicles only) by Charger type

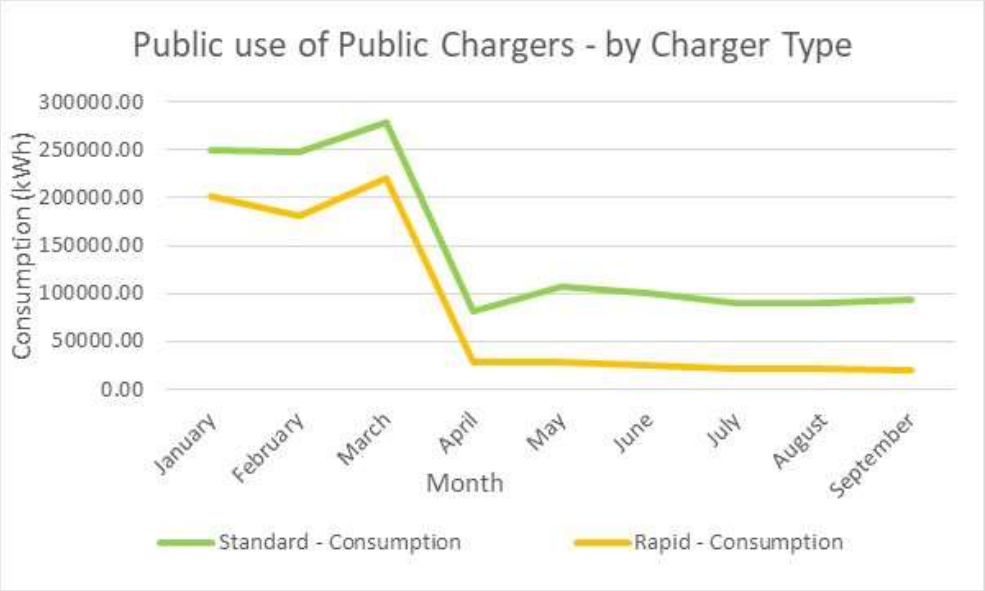


Chart 2b – Consumption on Public Network (Public Vehicles only) by Charger type

5.4 The associated Income is as follows:

5.4.1 Average monthly income expected for August / September was **£59,217.03 excl VAT**.

5.4.2 ChargePlace Scotland are responsible for managing payments from network users and remitting monthly to charge point owners. Table 5 and Chart 3 show the payments received from CPS as well as the income not yet collected by CPS. CPS have a number of ways to encourage network user payment including suspension of accounts / limited access to the national CPS network and will provide further collected income twice a year.

	Remittance received (excl VAT)	To be Collected excl VAT	Total potential remittance (excl VAT)
April	**£59,793.20**	£ 14,413.60	£ 74,206.80
May	**£61,203.92**	£ 20,920.93	£ 82,124.85
June	**£55,294.21**	£ 12,605.94	£ 67,900.15
July	**£49,442.03**	£ 11,650.23	£ 61,092.27
August	**£46,844.67**	£ 11,207.85	£ 58,052.52
September	**£53,650.23**	£ 6,731.29	£ 60,381.53

Table 5 - Income

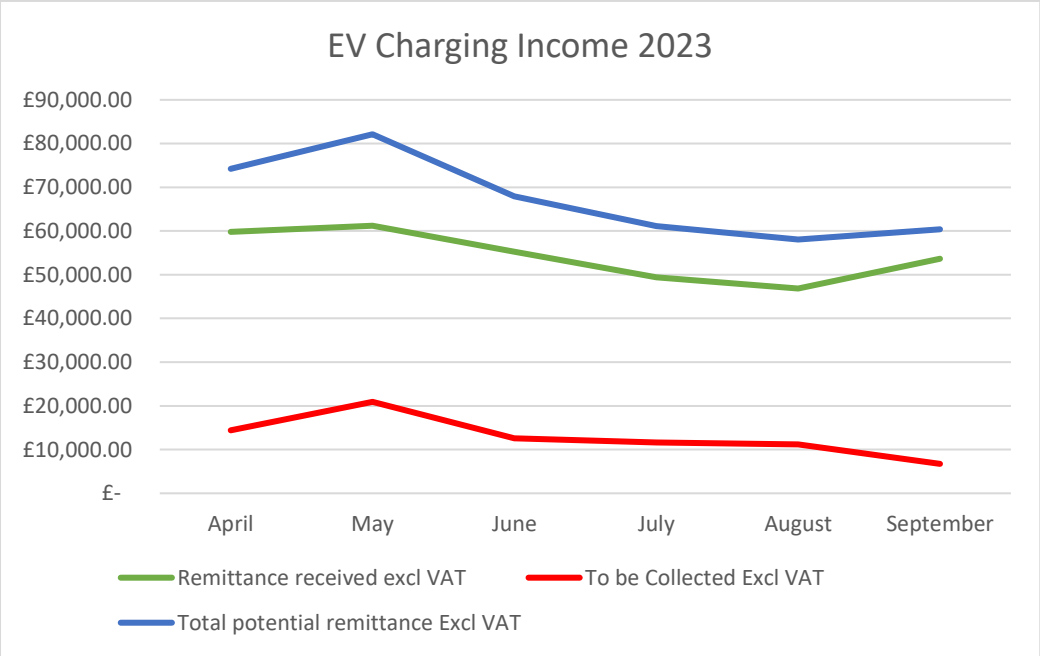


Chart 3 – Income received and expected from ChargePlace Scotland

5.5 Network user feedback

5.5.1 Feedback on the tariff introduction has been mixed. While some comments received directly from the public and via Elected Members have been supportive of a fee structure to ensure that public assets can be suitably maintained, the following general points have been raised:

- Consumption rates are too high for both Standard and Rapid units.
- Connection fee is disadvantageous to smaller vehicles and those in financial constraint.
- Maximum durations are too short, not allowing a full vehicle charge and causing disruption to activity (such as requiring vehicles to be moved during the night). Residents with no access to off-street charging options at home have particularly commented on this.
- Overstay fee is too high.
- Signage and communication could be improved.

5.5.2 Emerging findings from the Glasgow Transport Strategy Spatial Delivery Framework consultation provide further feedback on the tariff and a full report on this will be presented to Committee in early 2024:

- Concerns that less affluent people can't afford EVs.

- Requirement to provide for or help support taxi industry
- Challenges of serving residents who live in tenements.
- Concerns about pricing structures

5.6 Other Available Rates

5.6.1 The Tariff has been set to align with those of other Local Authorities within Glasgow City Region and the consumption rates also align to others across Scotland. All are connected to the ChargePlace Scotland network.

5.6.2 Other organisations also utilise the CPS network in Glasgow (examples are Wheatley Group and other Housing Associations, some retail centres, NHS).

5.6.3 Other EV Charging networks also operate within the Glasgow area. These are utilised by commercial organisations such as hotels or retail outlets exclusively for customers or are available to the wider public e.g. on service station forecourts.

5.6.4 Feedback following discussions with Scottish Futures Trust confirm that the tariff is commensurate with market rates and enables continued additional infrastructure investment by the private sector. The increased number of commercial EV offerings in the city are evidence of this.

6. Revised Tariff

6.1 The Council has considered the feedback received and the current economic conditions and the Tariff arrangements revised as follows:

Consumption Rate

- Rapid Chargers - no change
- Standard Chargers - no change

The consumption rate covers the cost to the Council of the electricity consumed. The higher rate is still necessary for Rapid chargers due to their additional installation and repair costs and also differentiates the premium nature of these faster chargers.

Connection Fee

- All Chargers - no change however this is now incorporated into the rate for the first kWh

This fee covers the fee imposed by the network provider for each session and other administrative costs.

Maximum Durations and Overstay Fees

- On-Street chargers - EXTEND max charging session to 12 hours between 8pm – 8am

The extension of the maximum charging duration overnight should allow network users additional time to charge their vehicles. This will especially benefit residents in flatted properties with no access to private driveways. The revised and lengthened charging

periods also reduces the need to go out and move cars late at night, thus protecting individuals from placing themselves in potentially vulnerable situations.
The maximum durations will be retained for daytime to ensure as many drivers as possible can make use of the network, and to remain in line with general parking restrictions.

- Off-Street Rapid chargers - EXTENSION of max charging session to 1½ hours
- Off-Street Standard chargers - EXTENSION of max charging session to 12 hours.

Following feedback from network users, the maximum duration on Standard chargers in carparks has been extended to 12 hours at anytime. It is envisaged that this will provide additional time for a full charge and for drivers to return to move their vehicles.
The maximum duration on Rapid chargers has been extended to 1 ½ hours which should provide sufficient time for a full charge.

It should be noted that parking fees and restrictions as well as access restrictions may still apply to bays located at charging units and drivers should make themselves aware of restrictions to avoid enforcement action.

6.2 Note The Public Charge Point Regulations 2023, requires the consumption rate to incorporate any connection or minimum rates and be advertised in pence per kWh. The proposed Tariff is shown in Table 6:

Charging Unit	Rate per kWh	Overstay Fee	Location	Max Stay
Rapid Charging Unit	170p/kWh for the first kWh and 70p/kWh thereafter	£40	All locations	1 hour 30 minutes
Standard Charging Unit	140p/kWh for the first kWh and 40p/kWh thereafter	£40	On-Street City Centre	2 hours between 8am–8pm 12hrs between 8pm–8am
			On-Street Rest of City	3 hours between 8am–8pm 12hrs between 8pm–8am
			Off-Street Car Parks	12 hours

Table 6 – proposed Tariff arrangements

6.3 Changes will be applied as soon as new tariff notices can be printed and distributed with a lead-time of around 4 weeks. Consideration will be given to the dimensions of tariff notices. Updates will also be communicated via ChargePlace Scotland usual channels and on the Council website at www.glasgow.gov.uk/EVCharging.

6.4 There will be further review later this year of the impact of the changes to tariff arrangements described in this paper, as well anticipated increases in electricity costs, on the model and charging structure of the network.

6.5 The extension of maximum durations overnight may increase demand for units at this time. Network utilisation will be reviewed and tariff arrangements will be revised more frequently should external market conditions or city demand change sufficiently. We would encourage drivers to consider “EV etiquette” and move their vehicle once it is charged to allow other vehicles the opportunity to use the limited infrastructure.

6.6 Following a review of utilisation of the Commercial EV Hub at Newton Street Carpark, consideration will be given to revising the allocation of bays to commercial goods vehicles to instead be available to the general public thus increasing the available number of chargepoints extending the use of commercial goods vehicles bays at Newton Street for general use.

7 Policy and Resource Implications

Resource Implications:

Financial:	Implementation of a tariff is expected to generate revenue to support the ongoing operational management and growth of the network.
Legal:	There are no legal impediments to introduction of tariff and overstay fees.
Personnel:	Resource to support potential increase in enquiries and financial reconciliation will be required with costs covered by projected income.
Procurement:	No procurement implications at this time. The back-office is an existing service currently offered by the nationally procured provider. Future arrangements may necessitate further procurement

Council Strategic Plan: Specify which Grand Challenge (s) and Mission (s) the proposal supports. Where appropriate the relevant Commitment can also be listed.

The actions in this report support the Strategic Plan as follows:

Grand Challenge 3. Fight the climate emergency in a just transition to a net zero Glasgow

- **Mission 1**: Deliver sustainable transport and travel aligned with the city region
- **Mission 2:** Become a net zero carbon city by 2030

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2021-25? Please specify.	Not directly. However, the network, as part of a wider city provision, is critical to supporting the transition to EVs, particularly for users without a dedicated driveway.
What are the potential equality impacts as a result of this report?	An EQIA screening was undertaken in February 2021 and introduction of a tariff approved in April 2021. The tariff was based on an equitable model that will ultimately improve the network for all. A new EQIA screening was conducted in January 2024. The extension of maximum durations overnight may increase demand for units at this time. Network utilisation will be reviewed and tariff arrangements will be revised more frequently should external market conditions or city demand change sufficiently.
Please highlight if the policy/proposal will help address socio-economic disadvantage.	Not directly

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify:	Yes – Ongoing EV network is Action 52 of the Climate Plan. Maintaining an EV network also supports Theme 3 – Health and Wellbeing via lower emissions
What are the potential climate impacts as a result of this proposal?	Maintaining an EV network in the city will assist in the transition from fossil fuelled vehicles and support the reduction of carbon use.
Will the proposal contribute to Glasgow's net zero carbon target?	Yes – the introduction and ongoing review of a tariff will support the route to net carbon by providing ongoing management of the council's existing EV network, further supporting the transition from fossil-fuelled vehicles.

Privacy and Data Protection Impacts:

Are there any potential data protection impacts as a result of this report Y/N	No
If Yes, please confirm that	

a Data Protection Impact Assessment (DPIA) has been carried out

8 Recommendations

8.1 The Committee is asked to:

1) Note the contents of this report.