Item 2

22nd August 2023

Glasgow City Council

Environment and Liveable Neighbourhoods City Policy Committee

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FLEET STRATEGY 2020 – 2030 UPDATE

Purpose of Report:

The purpose of this report is to provide committee with an update on the progress of the Fleet Strategy 2020 – 2030 and present some amendments to our approach in fleet procurement.

Recommendations: It is recommended that the committee:

a) Notes the progress made in delivering the Fleet Strategy 2020 – 2030
b) Notes the change in fleet strategy to focus fleet replacement on electric and EURO 6 compliant vehicles to improve the fleet until such time as the hydrogen market is more mature
c) To note that any future hydrogen fleet purchases will be based on a fully green hydrogen solution, and
d) Otherwise, notes the contents of the report.

Ward No(s): Citywide: ✓

Local member(s) advised: Yes ☐ No ☐ consulted: Yes ☐ No ☐

1 Introduction

1.1 The Council's Fleet Strategy 2020 to 2030 was presented at the Environment, Sustainability and Carbon Reduction (ESCR) City Policy Committee on 27 August 2019, and later approved by the City Administration Committee on 12 September 2019.

https://www.glasgow.gov.uk/councillorsandcommittees/viewDoc.asp?c=P62AFQDN0GZL81T1DN

1.2 The purpose of that strategy was to set out the Council's ambitions to modernise the fleet in support of our workforce and communities, while also setting out the intentions for the transition to a zero emissions fleet by 2030.

1.3 The Fleet Strategy 2020 – 2030 continues to set the strategic direction for the Council's fleet and the Council remains committed to the overall aims. This report provides an update on progress achieved to date and sets out some considered changes in procurement approach based on fleet requirements and lessons learned.

2 Progress Achieved

2.1 Of the key milestones and measures set out in the Fleet Strategy 2020 – 2030 the following actions have been completed:

No.	Action/ Milestone	Outcome
1	Delivery and Implementation of 20 Diesel/ Hydrogen dual-fuelled vehicles	Complete. Vehicles can operate using a mixture of diesel and hydrogen, or only diesel. Emissions testing remains ongoing with initial tests showing positive reductions in NOx emissions.
2	Increase in the use of electric vehicles (EVs)	180 Nissan Leaf cars were added to the fleet, along with a mixture of other cars and vans, in addition to the Council's first electric refuse collection vehicle (RCV) bringing the total number of EVs in use to 328.
3	Institute of Road Transport Engineers Certification (IRTEC)	Certification was achieved and has been retained since. This is both for the quality standards of our technical staff and for the processes of our vehicle maintenance workshop.
4	Annual driver certificate of professional competency training	This is in place and delivered from our training centre at Daldowie, ensuring that drivers of all vehicles greater than 3.5tonnes have professional driver certification.
5	Training of staff to meet new technical requirements of zero emission fleet	Training of technical staff on electric vehicle safety and maintenance has taken place and will be an ongoing

		process to meet the changing requirements of fleet maintenance.
6	Delivery of a turnkey managed service	Complete.

3 Fleet Replacement

3.1 In 2019, the Scottish Government's Programme for Government set out that from 2025 all new vehicles under 3.5tonnes (mainly cars and vans) would require to be zero emissions and from 2030 all new vehicles would require to be zero emissions.

3.2 To meet this requirement and improve the fleet, the following procurement activities were approved.

Phase	Vehicle Type	Scope	Status
1	Gritting vehicle	1. Retrofit of 9 existing vehicles as dual fuel (diesel/hydrogen mix) 2. 11 new vehicles with dual fuel (diesel/hydrogen mix)	Complete Complete
1	RCV	3. Purchase 1 electric RCV 4. Develop 1 hydrogen fuel cell RCV	Complete Cancelled
1	Light cars/vans	5. Replace up to 300 diesel cars/vans with electric	Complete
2	RCV	6. Purchase 19 new hydrogen fuel cell RCVs supported by grant funding	Cancelled
3	Various	7. Replacement and refurbishment of a range of fleet including RCVs, articulated trucks and trailers, loading shovels, graffiti cleaning vehicles, cars etc. 8. Procurement of whole fleet telematics 9. Expansion of fleet EV charging infrastructure	Ongoing Complete Ongoing

3.3 The introduction of dual fuel diesel/hydrogen has been successful with vehicles able to operate using the mixed fuel system, lowering emissions. Vehicles can also be run solely on diesel if required.

3.4 The ongoing transition to electric fleet has largely been successful with cars, vans, and the Councils first electric RCV working well. In certain areas such as HSCP there is a need for vehicles with a greater range. Due to this, introduction of EVs into HSCP has been limited. A new procurement exercise will be undertaken later in the year to procure a new and larger fleet of more than 300 new electric cars that will replace some of our existing EVs along with the majority of HSCPs internal combustion engine (ICE) vehicles.

3.5 In contrast with the introduction of EVs, the work undertaken to introduce hydrogen fuel cell RCVs has been problematic and difficult with contracts

eventually cancelled as they could not be delivered. This reflects the current lack of maturity in the hydrogen fleet sector.

3.6 In tandem with this, the energy sector is still in the process of developing a route to market for a commercial green hydrogen supply with the necessary scale required for wider fleet use expected from 2026/27 onwards.

3.7 Due to the current position of the hydrogen fleet sector, the risks and costs outweigh any benefits that are to be gained at this time requiring a change in the fleet procurement strategy.

4 Revisions to the Fleet Strategy

4.1 The primary focus of the Fleet Strategy 2020 – 2030 is the delivery of a green fleet to reduce emissions in line with the Scottish Government's targets and contributing towards the Council's climate change objectives. While this objective remains a key focus, the cost of transitioning from ICE vehicles remains a significant challenge. An example of the average approximate cost differences is shown in the table below.

Vehicle	Diesel (£)	Electric (£)	Hydrogen (£)
Mid-sized car	25,000	40,000	50,000
Transit Style Van	35,000	60,000	-
Minibus	85,000	180,000	-
RCV	200,000	450,000	850,000

4.2 These costs differences are compounded by the scale of change required, with approximately 1,300 vehicles still to transition to zero emission alternatives.

4.3 Included within the fleet are many older vehicles that are expensive to maintain and operate. Consequently, there is a pressing need to modernise the fleet to deliver services more effectively and lower the costs of transport, while improving the environmental footprint of the fleet. Due to the costs involved of transitioning to zero emission vehicles the fleet procurement strategy will be amended to deliver the maximum benefits possible from the funding available.

4.4 The revised procurement strategy will focus on the following stages:

- Short term: a combination of electric and euro 6 fleet
- Medium term: electric fleet
- Long term: a combination of electric and hydrogen fleet

The short-term strategy of delivering a mix of electric and Euro 6 vehicles provides the best short term outcome for reducing fleet emissions while also maximizing the number of vehicles that can be replaced. All Euro 6 vehicles are LEZ compliant and are considerably cleaner than the existing Euro 5 vehicles that are part of the current fleet. The improved Euro 6 standard in HGVs requires manufacturers to ensure that the levels of harmful Nitrogen Oxide gases is significantly reduced from 180mg/km to 80g/km; these vehicles are also more fuel-efficient lowering CO2 output.

4.5 The hydrogen market is still developing with a lot of issues still to be resolved before wider commercial uptake can begin. As highlighted in the table at para 4.1 the indicative costs of hydrogen vehicles are prohibitively expensive in being able to make any meaningful difference to the fleet's green ambitions. It is therefore intended that the medium-term strategy will be to focus on electric vehicles, rather than hydrogen, as we transition to a green transport solution, while continuing to monitor developments in the hydrogen sector and undertake trials as appropriate.

4.6 The longer-term strategy will focus on the delivery of both electric and fully green hydrogen fleet as sustainable and clean transport solutions as it is expected that hydrogen will be a proven technology by this time.

5 Investment

5.1 A 3-year capital budget of £10m was made available in 2022 for fleet replacement, which is anticipated to be fully spent by 2024 due to the volume of new fleet and supporting infrastructure that is required. This is expected to deliver over 50 new cleaner and more productive HGVs into the fleet.

5.2 It is expected that financial benefit will be obtained from the fleet replacement programme, which will be achieved from reducing the like for like fleet size due to increased availability from new vehicles and from reduced maintenance and fuel costs. Despite volatility in electrical prices there are also operating cost benefits to be realised from electric vehicles. Any efficiencies achieved will be utilised for future reinvestment in fleet and will contribute towards a balanced budget position.

5.3 On 25 March 2021, the City Administration Committee approved the allocation of £7m from the Council's Climate Change Emergency Fund towards the purchase of 19 hydrogen fuel cell RCVs. With this contract now cancelled, approval will be sought for the reallocation of funding from hydrogen RCVs to a range of new electric vehicles, including electric RCVs to continue to meet the Council's net-zero climate objectives. This funding will be profiled and allocated on a phased basis to deliver best value.

5.4 Beyond this, significant investment is needed to transition the remaining 1,300 vehicles to a zero-emission fleet based on current market prices; an investment plan is required to ensure that the Council can deliver the scale of change required. To support this, a revised fleet replacement strategy is being prepared that will highlight the ongoing annual fleet replacement funding requirements and will be presented at a future committee.

6 Policy and Resource Implications

Resource Implications:

Financial:	Phases 1 and 2 were partly funded through use of grant funding. Transport Scotland have advised that no grant funding requires to be repaid for the cancellation of the proof-of-concept hydrogen fuel cell RCV. The Office of Zero Emission Vehicles has now rescinded the grant award for £6.5m that was to be contribute towards to hydrogen fuel supply and 19 new hydrogen RCVs. Phase 3 will be funded through capital and departmental budgets.
Legal:	Legal support will continue to be sought on all new procurement activity and have been involved in the cancellation of the hydrogen contracts.
Personnel:	All functions of the Fleet Strategy will continue to be managed by the Fleet Services team.
Procurement:	Engagement with the CPU will remain ongoing throughout any new procurement activity.

Council Strategic Plan: Supports the Council's Grand Challenge to Fight the climate emergency in a just transition to a net zero Glasgow.

More specifically, the fleet strategy is aligned to Grand Challenge 3, Mission 1 - Deliver sustainable travel and transport aligned with the city region to transition to zero emission vehicles by 2030.

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2021-25? Please specify.	Not applicable.
What are the potential equality impacts as a result of this report?	Not applicable.

Please highlight if the policy/proposal will help address socio-economic disadvantage.	There is no direct link to socio-economic disadvantage however, as vehicles reduce and remove emissions this will benefit health outcomes for all citizens and visitors to Glasgow.

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify:	By helping to reduce the number of vehicles in Glasgow and encouraging the uptake of low carbon vehicles, this work will have positive impacts on both carbon emissions and air quality related emissions.
What are the potential climate impacts as a result of this proposal?	As newer vehicles and more zero emission fleet are introduced to the fleet air quality and vehicle emissions will reduce contributing to the Council's action on climate.
Will the proposal contribute to Glasgow's net zero carbon target?	Yes, with more zero emissions vehicles in place this strategy contributes directly to Glasgow's net zero carbon target.

Privacy and Data Protection Impacts:

Are there any potential data protection impacts as a result of this report Y/N	No

7 Recommendations

It is recommended that the committee:

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