

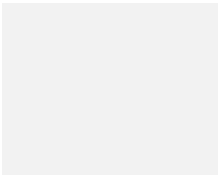
ABERDEEN ELECTRIC VEHICLE FRAMEWORK 2020 TO 2030

Draft Executive Summary

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EXECUTIVE SUMMARY 1

Executive Summary

This document establishes an EV framework for Aberdeen from 2020 to 2030 which will encourage and actively cater for a greater uptake of electric vehicles in the city and will support relevant national, regional and local strategies. It should be used to guide the strategy development and investment decisions of the Council and other organisations in the city.

The objectives are to identify how the city's charging infrastructure should be increased and managed, ensure that the Council's policies and strategies facilitate a greater uptake of EVs, outline what supporting measures are required, identify the key groups that should be involved in delivering the framework and set out the costs involved in delivering the framework.

Consultation with key stakeholders and members of the public was essential to inform the development of the EV Framework. Feedback has been used to inform the content of the framework.

The framework primarily concentrates on passenger cars and vans licenced by fleets and individuals within the Aberdeen City Council area. Some sections include more vehicle types and also refer to the Aberdeenshire Council area, reflecting the fact that Aberdeen is the regional centre for the north east of Scotland and many residents will travel into the city for business and leisure.

The fuels and technologies covered by the framework are plug-in electric vehicles (pure battery electric, plug-in hybrid and extended range electric vehicles). Hydrogen fuel cell vehicles are referenced in the framework, however, there is separate consideration of hydrogen fuel cell vehicles in the Aberdeen City Region Hydrogen Strategy and Action Plan (2015 –2025). Non plug-in hybrids (such as mild hybrid and self-charging hybrid) are not covered in this Framework as they have no plug-in component.

The framework should be read in conjunction with the Evidence Base and Baseline Report which provides more detailed information and is the basis for the framework.

Available vehicle and charging technology are discussed and the vehicles registered in Aberdeen and Aberdeenshire and their associated emissions outlined. The Aberdeenshire area has been analysed for current and future vehicle registrations, emissions and current infrastructure in order to provide context and account for the fact that traffic travelling into Aberdeen from outside the city is primarily from Aberdeenshire.

Consideration is given to commuters, visitors, in-transit vehicle, taxis and delivery vehicles.

Relevant UK, Scottish, Regional and Aberdeen City policies, strategies and legislation have informed this framework and a few gaps in the policy and strategy around EV infrastructure in car parks, taxis and business support have been identified. Suggestions to tackle these gaps have been recommended.

EV uptake and infrastructure requirements were modelled to inform future provision and three scenarios were developed:

- Scenario 1: Business-as-usual (BAU). This assumes no change to policy; forecasts were extrapolated from current registration trends
- Scenario 2: Good practice. In line with the DfT's Road to Zero medium scenario which aims for 50% of new registrations to be plug-in vehicles by 2030
- Scenario 3: Exemplar. In line with the Scottish Government's aim to phase out petrol and diesel cars and vans by 2032

It is proposed that Aberdeen works towards achieving the Exemplar Scenario. This scenario is estimated to result in 17.6% of the total vehicles in Aberdeen City being an EV by 2030 and reducing emissions by 13%

for CO2, 56% NOx and 71% PM. This estimated reduction in pollutants will have a direct effect on the health of people in Aberdeen with estimated annual mitigated health costs of £11.3 million in 2020. Consideration was given to where the required infrastructure should be located. A longlist of sites was identified and reduced to a shortlist of sites by scoring each site against set criteria. The next step was to determine whether standard (7kW), fast (22kW) or rapid (50kW+) chargers should be installed at each site.

Site recommendations have been mapped together with the number and type of chargepoints it is suggested that should be installed at each site. The framework focuses on the provision of charging at rapid charging hubs and other off-street locations because the evidence suggests that it will be more feasible and cost-effective to provide this infrastructure in the short to medium term. However, some on-street charging will be required to support EV adoption by households without off-street parking and to ensure equitable access.

Consideration has been given to chargepoint procurement & management. The evidence shows that the best option for an individual local authority must reflect its own attitude to risk, willingness to invest, and access to capital. A growing number of cities are opting for the concession model as a way of balancing risk and reward while growing private sector investment.

Tariff types have been considered and it is proposed that ACC considers using either a pay per kilowatt-hour tariff (when coupled with an overstay penalty for slow and fast chargers) or a pay per hour/minute tariff. This would help prevent undesirable behaviour (e.g. chargepoint blocking) and would make revenue more predictable, removing some uncertainty from investment plans.

Evidence from other cities shows that only providing additional charging infrastructure will not be sufficient to increase EV uptake. Complementary measures will also be required to support the transition to EVs, and a broad package of measures and incentives will be required to achieve the exemplar uptake scenario. A high-level assessment of a long list of potential measures and incentives has been carried out to determine their suitability in Aberdeen.

A review was undertaken to compare the recommendations for additional chargepoint infrastructure and other measures with other activity underway or planned in Aberdeen. This was to ensure that measures to increase EV uptake would fit well with other strategic activity in the city.

Consideration has been given as to how the delivery of the framework could be funded. Delivery of the framework is not the sole responsibility of Aberdeen City Council and other organisations, including private sector organisations and individuals, can play a role in increasing the number of EVs and the availability of EV chargepoints in Aberdeen.

Delivery of this EV Framework will be monitored through an annual monitoring report which will report on progress to deliver the proposed actions included in the framework as well as the key indicators. Monitoring may also inform future updates to the framework.

The following actions have been identified:

Actions	Report Section
<ul style="list-style-type: none"> ACC to keep a watching brief on the development of new technologies and investigate opportunities for trial where appropriate and to look to take account of technological changes in future updates to the framework. 	3
<ul style="list-style-type: none"> ACC to continue to monitor changes to transport movements and mode splits as part of its annual monitoring. 	3
<ul style="list-style-type: none"> Consider introducing further EV and Car Club parking in ACC operating car parks, where possible. 	5
<ul style="list-style-type: none"> There is no current policy, legislation or strategy for encouraging uptake of EV taxis and Aberdeen lags behind other cities in EV taxi uptake. ACC should consider how to address this with the taxi fleet. 	5

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<ul style="list-style-type: none"> Other major cities in Scotland have already started to heavily decarbonise their Council fleet vehicles and pledged for all vehicles to be zero emission before the national target of 2030. Building upon the work already being undertaken to decarbonise its own fleet, ACC could also consider accelerating this target. 	5
<ul style="list-style-type: none"> ACC should consider how to engage more with local businesses. 	5
<ul style="list-style-type: none"> ACC should continue to provide EV charging standards for new developments in its LDP in order to encourage EV uptake and chargepoint installation. 	5
<ul style="list-style-type: none"> ACC should ensure that their future policies, plans and strategies incorporate those projects in the Net Zero Vision and Infrastructure Plan in relation to energy supply, charge points and its own fleet. 	5
<ul style="list-style-type: none"> Carry out research in partnership with Visit Scotland to determine the extent to which transit charging (e.g. at current petrol stations) is sufficient to meet demand from tourists travelling in an EV, as well as the likely impact that provision of EV charging infrastructure may potentially have on Aberdeen's tourist economy. 	7
<ul style="list-style-type: none"> ACC should follow the exemplar scenario in order to help meet Scottish Government targets 	7
<ul style="list-style-type: none"> When following the exemplar model, ACC considers the demand from the Aberdeenshire area for charging in the city 	7
<ul style="list-style-type: none"> ACC to continue to facilitate access to EV car club vehicles and to a range of charging infrastructure types across the city. 	7
<ul style="list-style-type: none"> ACC to encourage EV charging at Park & Ride sites to reduce vehicle movements into the city. 	7
<ul style="list-style-type: none"> ACC to continue to promote the benefits of EVs to air quality and carbon emissions 	7
<ul style="list-style-type: none"> ACC to work with partners to promote the benefits of providing workplace charging to the business community. 	7
<ul style="list-style-type: none"> ACC to continue to monitor usage of existing charging infrastructure and identify gaps. 	7
<ul style="list-style-type: none"> ACC to work with Tourist bodies to better understand origins and duration of stay of visitors. 	7
<ul style="list-style-type: none"> ACC to continue to promote EVs as part of a wider transport mix but not at the expense of more sustainable modes. 	7
<ul style="list-style-type: none"> Undertake a study to understand the travel needs and journey patterns of households in regeneration areas to consider the impact of provision of EV Car Club vehicles on active travel and public transport trips. 	8
<ul style="list-style-type: none"> ACC to encourage awareness of the charging requirements and methodology for the benefit of partners 	8
<ul style="list-style-type: none"> ACC to work with partners to facilitate the creation of additional charging locations, in line with the selection criteria results. 	9
<ul style="list-style-type: none"> ACC to work with partners to identify additional charging locations, in line with the selection criteria results. 	9
<ul style="list-style-type: none"> ACC to promote the required number of chargers in order to ensure that other organisations are aware and are incentivised to install. 	9

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<ul style="list-style-type: none"> • ACC to encourage the future proofing of sites to allow for additional infrastructure to be installed more easily. 	9
<ul style="list-style-type: none"> • ACC to investigate ways to mitigate the shortfall including working with workplaces, ensuring charging provision is built into new developments and exploring identified sites on the long list. 	9
<ul style="list-style-type: none"> • ACC to investigate on-street charging pilot area(s) in the city. 	9
<ul style="list-style-type: none"> • ACC should engage with operators and communicate any increases in chargepoint and refuelling network coverage to increase EV uptake. 	9
<ul style="list-style-type: none"> • ACC to ensure revised Licensing Conditions are encouraging of EV taxis. 	9
<ul style="list-style-type: none"> • ACC to work with partners to take forward complementary measures to encourage EV taxis. 	9
<ul style="list-style-type: none"> • ACC should engage with partners in the Freight Forum to continue structured engagement and collaboration between stakeholders 	9
<ul style="list-style-type: none"> • ACC should carry out trials and demonstrations of EVs to increase suppliers' trust and confidence in EV technology to encourage more investment in EVs. 	9
<ul style="list-style-type: none"> • In addition to the existing guidance for new developments, ACC should produce a separate guidance document for developers wishing to install chargepoints. This should build on the OLEV guidance and include details regarding charging hub best practice and layout of equipment. 	10
<ul style="list-style-type: none"> • ACC to review evidence and decide which EV charging operating model(s) would be most beneficial to implement for any infrastructure it implements and in which sites, appreciating that site and funding availability will affect this 	10
<ul style="list-style-type: none"> • ACC to monitor the effectiveness of the current tariff and review if necessary. 	10
<ul style="list-style-type: none"> • ACC to investigate the introduction of maximum stay time for units and overstay penalties. 	10
<ul style="list-style-type: none"> • ACC to promote the management models to potential hosts. 	10
<ul style="list-style-type: none"> • ACC to explore the feasibility of taking forward the identified complementary measures 	11
<ul style="list-style-type: none"> • ACC to work with partners to ensure that EVs continue to be considered as part of other projects in the city and other relevant projects that emerge. 	12
<ul style="list-style-type: none"> • ACC to promote the range of grants and loans available through its website. 	13
<ul style="list-style-type: none"> • ACC to continue to work with Transport Scotland to access funding to develop the charging network. 	13
<ul style="list-style-type: none"> • ACC to further explore the different operating models. 	13

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