



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

A Network Fit For The Future: Vision for Scotland's Public Electric Vehicle Charging Network

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Ministerial Foreword

Last year saw the publication of the Scottish Government's draft Vision for Scotland's Public Electric Vehicle Charging Network. Since then, despite the difficult economic headwinds and challenges in both the energy and car manufacturing sectors, the electric vehicle market in Scotland has continued to develop on an impressive upwards trajectory. We can look forward to uptake accelerating over the coming years, and, we need to ensure that Scotland's network of public electric vehicle charge points continues to keep step with demand.

I am grateful for the input of the many individuals and organisations who have contributed to the shaping and development of the Vision. Aligned with national transport, planning and energy policy, the Vision is enduring. It sets out the key elements of a truly exemplar and sustainable public charging network, for cars and vans, which delivers optimal outcomes for people and businesses across all of Scotland. In doing so, it provides a high level strategic framework to help guide the planning and future investment in the public charging network; so that we can all realise the benefits of growing a prosperous, cohesive, fairer, healthier and greener society.

People should feel confident, regardless of their needs, that the public charging network will be reliable and easy to use and that they will be able to access a charge point with minimal trouble. It is absolutely critical that charge points are located in areas where people feel safe and that they cater for everybody's requirements and abilities. These factors need to be front and centre of any approach and vision.

The public charging network will not be able to grow at the scale and pace required with public funding alone. Significant private investment will be required across all of Scotland where public charge points are needed and I am encouraged to see this happening, but we need much more. This is central to the Vision and will require partnership working between our local authorities, private Charge Point Operators and our electricity network companies. Our communities also need to be actively engaged in this.

To grow the Network, we need to ensure that the costs of using charge points align with the principles of being fair, sustainable and enabling; to avoid subsidising drivers who can afford to pay, as well as ensuring that charge points are maintained and that conditions are created to make the case for private investment viable. Whilst the universal provision of free or subsidised charging for the use of the publicly-funded ChargePlace Scotland Network acted as an early incentive for electric vehicle uptake, it is clear that going forward this will not help to grow a competitive public charging network at the scale and pace required and which delivers best value. I am pleased with the support that COSLA has provided on this through its engagement with the Scottish Government over the past 12 months.

Last year the Scottish Government launched its Electric Vehicle Infrastructure Fund, designed to leverage £60m of public and private investment to double the size of Scotland's public charging network to 6,000 charge points by 2026. Importantly, this

fund will focus on areas of the public charging market where private investment on its own is not feasible, so that no part of Scotland is left behind. As part of this, I am encouraged to see the progress and the collaborative approach that Scotland's local authorities are taking to develop their plans for expanding provision of public charge points, both locally and regionally and in ways aligned to the Vision. It is by this approach that we will get a better understanding of the optimal amount and mix of public charging infrastructure required to support and connect our local communities and regions. Over the course of this year, I anticipate seeing a pipeline of projects of scale emerging that will provide opportunities for local authorities to work in partnership with private Charge Point Operators.

It's not only the Electric Vehicle Infrastructure Fund that will help increase charging opportunities for people across Scotland. New legislation introduced by the Scottish Government will see requirements for charge points to be installed in car parks of new buildings as well as those undergoing major renovation. Furthermore, recent changes to Permitted Development Rights will further simplify the process of installing electric vehicle charge points, and combining these with renewable energy technologies.

Ultimately, though, we need to move away from our reliance on cars for everyday journeys, regardless of their mode of propulsion. That's central to our 20% car km reduction route map and equally so to our public electric vehicle charging Vision. The location of charge points provides opportunities to influence behaviour and help people to make more sustainable transport choices, whether that's onward journeys by public or shared transport, by a car club vehicle or by cycling, wheeling or walking.

It is my intention that we will publish an implementation plan in the coming year setting out the key actions and priorities to take the Vision forward, consulting along the way. In doing so, together we can deliver a truly world-leading, clean, green public charging network. A network that is fit for the future and a vital part of Scotland's transport and energy infrastructure; supporting economic growth and a just transition towards net zero.



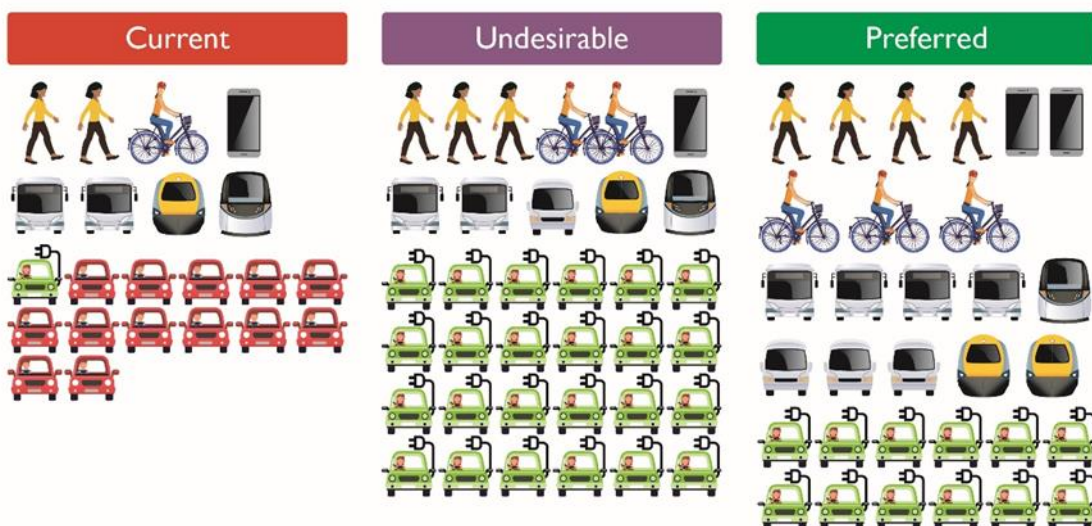
Fiona Hyslop
Minister for Transport

I. Introduction

Since the publication of the draft Vision in January 2022, Scotland has entered into an exciting new chapter in the development of its public electric vehicle charging network. This is focused on building upon the progress made over the past decade with the ChargePlace Scotland network, and moving beyond, to an approach centred on accelerating private investment in the public charging network, at scale and pace, across the length and breadth of Scotland.

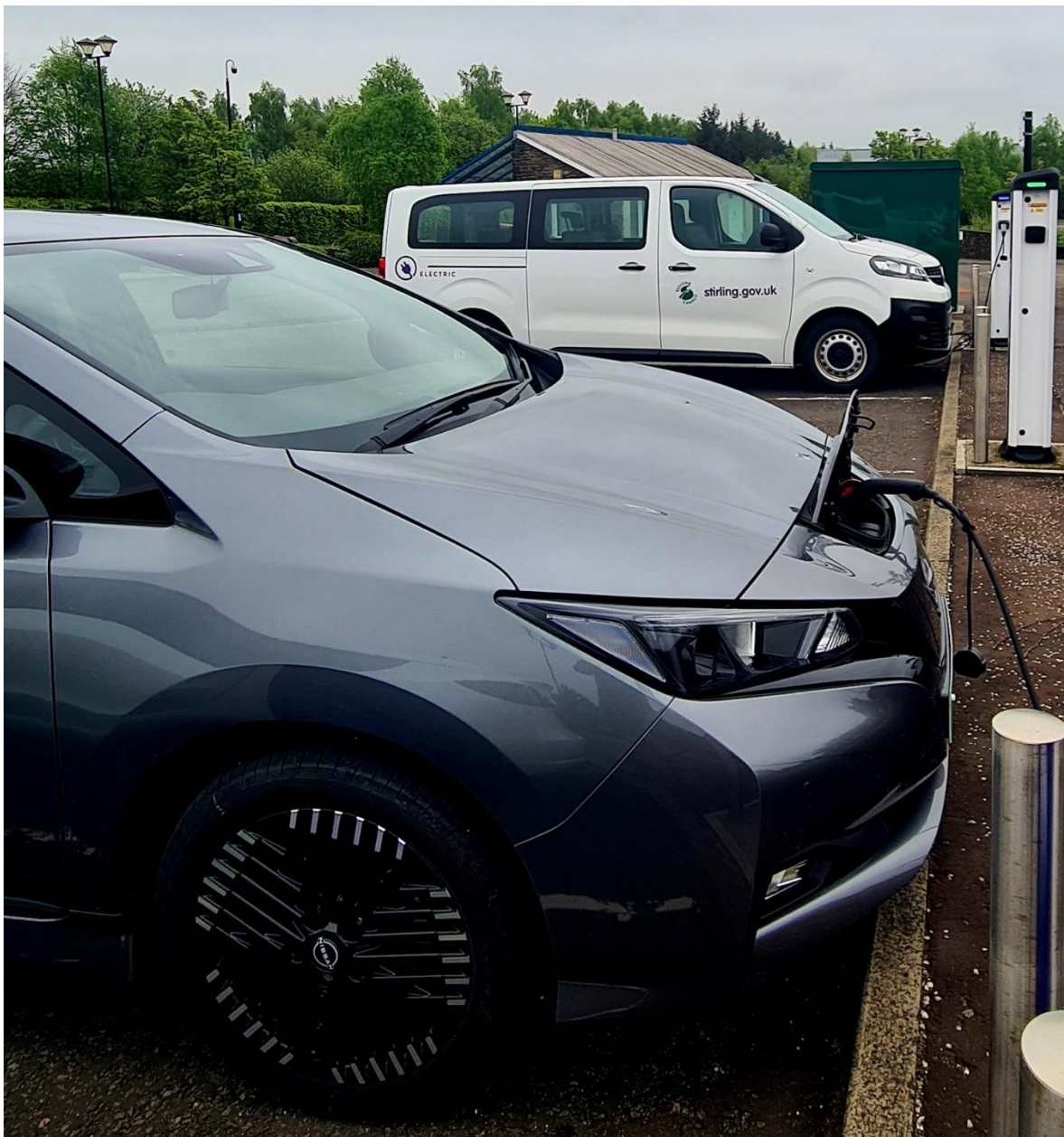
The Vision is purposely strategic. It is not an action plan but is intended to be an enduring reflection of the attributes of an exemplar Scottish public electric vehicle charging network. It will help guide action by public, private and third sector partners in the future development of the network.

It is focused on the charging needs of cars and vans, and, is intended to help guide the development of Scotland's network over the coming years. People, including local communities, businesses and visitors across all of Scotland – whether urban or rural - are at its heart. It is clear that the network needs to be financed, grown and operated by the private sector as well as being integrated within a clean, green electricity system, harnessing Scotland's abundant renewable energy resources. Importantly, the Vision is aligned with the Scottish Government's wider ambition of reducing the reliance on cars for everyday journeys and promoting greater use of public and shared transport as well as active travel.



Feedback on the Vision has been gathered from a range of stakeholders. This has validated its original focus and has been used to update text, bringing further clarity where appropriate. The Vision will be the framework to guide collaborative action by both the public and private sectors to achieve the public charging network that's right for Scotland and in line with a just transition to net zero. Some of the steps needed to implement the Vision have already begun, including the launch of the new EV Infrastructure Fund, designed to leverage £60m of public and private investment to double the size of the public charging network to 6,000 charge points between now and 2026.

The following sections of this document firstly summarise the Vision, and then provide a brief contextual overview of each element.



THE VISION

Local communities, businesses and visitors have access to a well-designed, comprehensive and convenient network of public charge points, where these are needed.

The public electric vehicle charging network works for everyone regardless of age, health, income or other needs.

Scotland has attracted private sector investment to grow and sustain the public electric vehicle charging network.

The public charging network is powered by clean, renewable energy and drivers benefit from advancements in energy storage, smart tariffs and network design.

People's first choice wherever possible is active travel, shared or public transport with the location of electric vehicle charge points supporting those choices.



2. The Vision – in context

Local communities, businesses and visitors have access to a well-designed, comprehensive and convenient network of public charge points, where these are needed.

Scotland's public charging network comprises almost 4,000 public charge points¹, and provides the greatest coverage of charge points per head of population than any other region of the UK outside of London. Over the coming years the network will need to continue to scale-up and grow at pace to meet the needs of a mass electric car and van fleet. It will be important that the right type of charging infrastructure is available in the right number and at the right locations across all areas of Scotland where it is required – making charging as convenient and reliable as possible to meet the needs of local communities, businesses and visitors.



¹ Zap Map data 31 May 2023

The public electric vehicle charging network works for everyone regardless of age, health, income or other needs.

Using charge points needs to be simple, safe and affordable for everyone. This covers a broad number of themes, ranging from the physical location and design of areas for charging vehicles as well as the characteristics of the charge points themselves so that they are easy to use. It also includes providing simple, intuitive methods of access and payment across different charge point providers, catering for the needs of different users; whether cars or vans, businesses or members of the public.



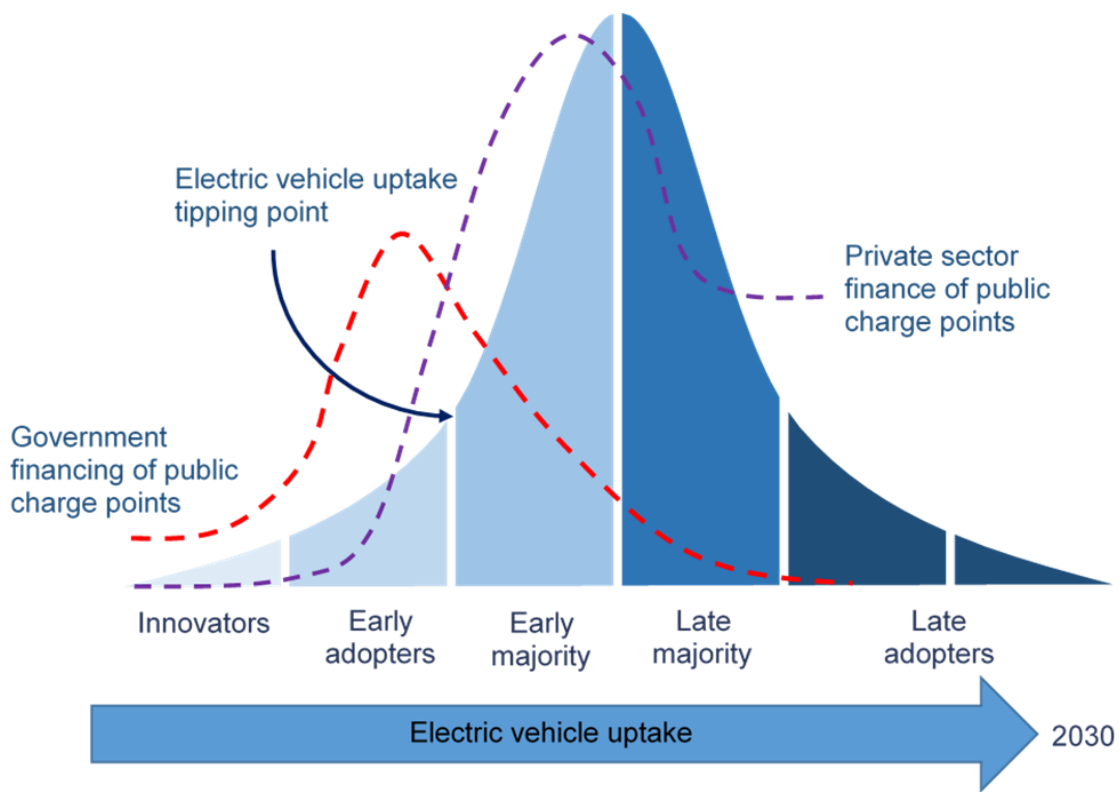
Photo courtesy of Designability

As the network continues to grow, so too will opportunities for deployment of innovative solutions, tailored to the needs of different groups. Equally, for the charging network to grow and deliver a high quality user experience, owners of charge points, including public sector organisations, will have policies to recover costs to enable competition and investment. This will help to support a well maintained and sustainable network that is delivering best value for all consumers.



Scotland has attracted private investment to grow and sustain the public electric vehicle charging network.

Growing Scotland's public charging network at scale and pace to meet the needs of an ever-growing number of electric vehicles will require significant levels of private investment. This investment must happen across all segments of the public charging market and in all parts of Scotland where public charging is needed – whether that is for slower powered destination or on-street chargers, or for higher powered journey charging. In the short- to medium-term there will be a need for continued public funding to enable this transition to happen, with intervention focused on areas of the public charging network where private investment on its own is unviable.



Scotland is already seeing increasing investment from private Charge Point Operators. It will be important that conditions are optimal to attract further investment and local authorities will have a key role to play in this through partnership working to identify local and regional charging needs as well as delivering efficiencies and economies of scale.



The public charging network is powered by clean, renewable energy and drivers benefit from advancements in energy storage, smart tariffs and network design.

The Scottish Government's draft Energy Strategy and Just Transition Plan sets out the vision that, by 2045, Scotland will have a flourishing, climate friendly energy system that delivers affordable, resilient and clean energy supplies for Scotland's households, communities and businesses. It highlights that renewable electricity (as well as hydrogen) will meet the vast majority of future transport energy needs, and the transport sector will also have a significant role to play in providing energy storage and flexibility through vehicle to grid and reuse of batteries. It recognises that greater integration of the transport and energy systems can help create a fairer, wealthier and greener Scotland: a Scotland where low and zero emission transport is affordable and reliable.



With Scotland's significant renewable energy potential, we want the public charging network to deliver clean, green electricity to the many thousands of vehicles it will need to support in the future. Equally, to enable timely and cost-effective planning and delivery of public charge points, there are opportunities to harness the expertise of Scotland's electricity network companies to make best use of electricity infrastructure, avoid unnecessary cost and embrace innovative solutions. Aligned to the principles of a just transition, this could also provide the opportunity to make the costs of charging vehicles on the public network fairer through accessing cheaper off-peak electricity tariffs. In doing so, contributing towards a smart and flexible electricity network of the future.



People's first choice wherever possible is active travel, shared or public transport with the location of electric vehicle charge points supporting those choices.

This aspect of the Vision aligns with wider national transport and planning policy; focused upon a shift towards increased levels of active travel and greater use of public and shared transport, as well as travelling less and staying local. To enable a healthier, fairer and greener Scotland, the Sustainable Travel Hierarchy is clear that we need a radical shift towards more sustainable forms of travel. Reducing dependency on cars is a key element of this, as reflected in the Scottish Government's route map to achieve a 20 percent reduction in car kilometres by 2030.



A one-size-fits-all approach to integrating the public charging network into the wider sustainable transport system will not be feasible across Scotland; as there will be a higher dependency on car use in some areas, particularly in rural settings. The location of charge points can shorten car journeys and reduce dependency on privately owned vehicles; by providing people with greater opportunities to take alternative and more sustainable forms of travel, such as car clubs, buses, trains as well as enabling onward journeys by cycling, wheeling, scooting or walking. They can also support sustainable approaches to the transit of goods and services in vans, including last mile delivery. Importantly, a public charging network that is fit for the future, needs to ensure that the physical location of charge points does not impede other users of pavements and roads including pedestrians and cyclists.





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