

Wales' Electric Vehicle Charging Strategy & Action Plan Progress Report – December 2022

Introduction

In the first year of the EV Charging Infrastructure Strategy for Wales and its accompanying Action being published, our focus as Welsh Government has been on setting out how the Strategy and Action Plan will be delivered in practice, as we set out to accelerate the roll-out of EV charging infrastructure across Wales. A key element of this work has been to consider the case for Welsh Government intervention to maximise the potential of the EV charging market.

We have collaborated closely with Transport for Wales, Local Authorities and the private sector to start delivering a baseline infrastructure across Wales, and to identify future opportunities that will support different charging needs; that will ensure sufficient provision of charging infrastructure is available to allow equal access and create a seamless and enjoyable experience for all users.

Welsh EV Charging Market

In September 2022, the total number of licensed battery electric vehicles (BEV) in Wales was 13,000, which represents approximately 1% of the total car fleet. BEVs are approximately 12-13% of new car sales in Wales¹.

Wales has 1,417 public chargepoints installed,² approximately 1 chargepoint for every 9 BEV³. The total UK figure is 1 chargepoint for approximately every 16 BEV.

Since we, as the Welsh Government, published our EV Charging Strategy in 2021, the installed charging infrastructure in Wales has already increased from 21 chargepoints per 100,000 residents (data in the Strategy is from June 2020) to 39 chargepoints per 100,000 residents – a change of around 666 CPs in June 2020 to 1,222 CPs in September 2022, or around 84% growth.

Significant further investment will be required to meet projected levels of EV uptake and demand, especially after the proposed ICE ban and into the 2030s.

¹ UK Department for Transport Vehicle licensing statistics (veh0132)

² Zap-Map.com

³ UK DfT Electric vehicle charging device statistics

Action Plan: Progress against the 9 actions

Outcome 1: Total Charging Provision

Action 1: Charging Infrastructure

The Welsh Government has invested just over £26 million in the delivery of charging infrastructure at public locations in Wales since 2019.

Together Welsh Government and Transport for Wales have provided funding, guidance and technical support to local authorities to deliver On-street Charging and Destination Charging facilities across Wales. We have also worked closely with the Office for Zero Emission Vehicles (OZEV) to promote their grant schemes to local authorities for the installation of charging infrastructure; our intervention will help 18 out of the 22 Welsh local authorities deliver approximately £3 million of on-street charging infrastructure throughout Wales within financial year 2022-23 and leverage just under £2.5 million of UK Government funding to Wales.

These projects target charging infrastructure at key public locations across Wales and will promote the transition to EVs.

Action 2: Optimisation of energy provision

The Welsh Government, Transport for Wales and local authorities in Wales have been collaborating with the Distribution Network Operators (Scottish Power Energy Networks (SPEN) and National Grid) to maximise the availability of power for EV charging.

National Grid and SPEN have used the Green Recovery funding awarded by Ofgem to reinforce certain areas of their network. National Grid selected sites across the South Wales region on the basis of proximity to the Welsh Strategic Road Network (SRN) and also for proximity to key substations which will make connections to the electrical network more cost effective. Whilst SPEN have also done this, they have worked closely with us to choose 17 electrical connections of up to 1MVA (megavolt amperes) across their North Wales region specifically for EV charging. These connections have an average value of £100k each. The locations were set against a preferred network of proposed rapid charging stations across the SRN generally located at key road junctions. The SPEN approach has proved successful, leveraging private sector investment in EV rapid charging infrastructure at all 17 sites.

Welsh Government and Transport for Wales have also collaborated with the DNOs in developing tools that model the electricity network and its constraints and help pinpoint constraints on the grid where investment is most likely to lead to significantly improved opportunities for EV infrastructure development.

Going forward, we will look at the creation of a connections group that can help maximise the availability of power for charging EVs even further; and help realise the benefits as described in the Action Plan.

Action 3: Enhanced rapid charging provision

Transport for Wales has been leading a project to deliver 17 rapid EV charging points on the Strategic Road Network. This is being delivered by a unique partnership whereby the network is largely funded commercially, but public funding is focused on “unlocking” sites with severe grid constraints through funding DNO works. The location of these sites is focused in areas which are considered unlikely to benefit from purely commercial investment in the near to mid-term, yet are vital for ensuring consistency of provision across the SRN for “top up” charging en-route to key tourist and other destinations across Wales. Development is also focused on sites in public ownership, with the added benefit of providing a modest income stream from the lease with charge point operators. Sites have also been carefully selected based on the facilities nearby, including their ability to provide benefits to existing local businesses and the hospitality sector. Completion of this project in the first quarter of 2023 will see rapid charge points at least every 25 miles and for most of the network every 20 miles across Wales – two years ahead of the Action Plan target.

This baseline charging infrastructure across Wales’ SRN is a major step towards providing users with the confidence that they can drive across Wales without running out of charge.

Outcome 2: Quality Outcomes

Action 4: Welsh quality standards

Welsh Government has commissioned external expertise to develop National Standards for EV Charging Infrastructure in Wales. The online guide details a set of best practice recommendations for safe, accessible, and reliable public electric vehicle charging in Wales. The Standards have been developed for use by public sector organisations, community enterprises and delivery partners involved in the deployment of electric vehicle charging infrastructure in Wales. Except where explicitly stated, the recommendations set out in the National Standards are not legally binding. Instead, they have been developed to form an informative best practice guide to support Wales towards its net zero carbon targets.

The recommendations cover areas including the specifications surrounding charge point design, such as speeds, planning requirements and plug connection types, as well as placement of the charge point within the surrounding environment. They also cover aspects of streetscape, including accessibility and security, energy and connection needs, operational aspects, procurement notes and emerging and future considerations. They provide solutions to avoid any obstruction of footways and safeguard travel routes. It is appreciated that not all the recommendations will be applicable in every situation as each individual charge point needs to respond to local needs and nuances, as well as regional and national policy frameworks. However, the National Standards strive to ensure that, going forward, all users of electric vehicles in

Wales are confident in their ability to access charging infrastructure wherever and whenever required.

The guide will be published on the Welsh Government website in the next few weeks.

Action 5: Regulatory facilitation

The Welsh Government intends to consult on draft amendments to Building Regulations during the first half of 2023. The draft amendments are to mandate the provision of EV chargepoints for each new dwelling with an associated car parking space and that every new non-residential building with more than 10 car parking spaces to have one chargepoint and additional cable routing.

We will also work with the electricity industry to facilitate a further review of the Welsh Government policy and regulations to support electric vehicle charging. This will include whether any further measures can be taken to support local and regional spatial planning and a framework for strategic and local development plans. There will be a review of Permitted Development rights in view of industry alignment and addressing any inconsistencies in development control or the way in which it is applied across the UK. There will be ongoing engagement and collaboration with local planning authorities to support the development of local approaches.

Action 6: Partnership and collaboration

The accelerated roll-out of EV charging infrastructure across Wales will require cross collaboration and buy-in from a wide range from stakeholders, from Chargepoint Operators (CPOs) to residents. We are planning to develop a programme-level communication and stakeholder management plan.

The scale and complexity of delivering the Action Plan necessitates a strong and effective deliverability plan which sets out how WG and delivery partners will deliver and manage the EV charging infrastructure programme. For this reason, in the last year we invested resources in setting out the key actions that will inform the development of the deliverability plan, which includes market engagement with CPOs to help identify the likely public sector interventions, and the formation of a public-private sector working group. We are planning to establish a charge point operator group, as described in the Action Plan, within the next six months.

The private sector is expected to provide the majority of the investment required to deliver EV charging in Wales; however, we currently have little insight into specific private sector plans. Some engagement has already taken place, but we need to understand how much charging the private sector will deliver, where, and by when.

In November 2022 Welsh Government and Transport for Wales held a workshop with charge point operators to discuss how to strengthen collaboration between the public and private sector in delivery. This looked at how to avoid duplication of effort, for the public sector to understand the conditions that can facilitate investment, and be able to forecast where commercial investment is most likely to occur. This workshop will be

followed by close dialogue with individual industry actors to “soft test” potential actions and support tools that can be made available to gain market intelligence and share data on opportunities and constraints.

EV Charging Service desk: TfW have begun work to scope the potential of an in-house service desk to facilitate all aspects of EV charge point delivery and management. We believe there is a strong opportunity across both the public and private sector for an integrated, consistent set of support functions, potentially covering installation, maintenance, management and customer services that could reduce the barriers to delivery. Provision of these services could in turn open opportunities for third parties including SMEs and the third sector.

Outcomes 3: Localised Benefits

Action 7: Increase public awareness

The accelerated roll-out of EV charging infrastructure across Wales will require collaboration and buy-in from a wide range from stakeholders, from CPOs to residents. We are aware of the need for Welsh Government to develop a clear plan to engage and communicate with the public, especially as one of the Strategy’s core objectives is to raise public awareness of EV charging infrastructure across Wales.

Work will be required with the public and private sector to keep the public updated with progress and implementation of the Strategy; improve coherence in messaging and cross-sectoral collaboration in the context of decarbonisation; provide independent consumer advice to support the transition to EVs, supporting private vehicle owners, public sector shared and community mobility providers and businesses; and engage with the wider public to encourage sustainable behaviours.

EV charging infrastructure presents a crucial opportunity in how we can transform the way people travel as we transition towards decarbonisation. Our aim is to work in partnership with the private and public sector, to develop a communications strategy which provides consistent, transparent and accessible information to consumers and the wider public.

Action 8: Encourage investment opportunity and innovation

In order to support local authorities to deliver charging infrastructure, we have recognised that there is a need for a Wales specific EV charging infrastructure procurement model. The proposed procurement Framework is being developed and managed by the Welsh Government and provides the opportunity to work collaboratively across the Welsh public sector to ensure a standard delivery model and avoid ad-hoc procurement exercises. The Framework, which is due to be available early 2023, consist of three lots as follows: Lots 1 & 2 – Design and Build Options, and Lot 3 - Renewable generation and energy storage sandbox. The Framework will help deliver wider benefits for Wales with a focus on quality and the ambition to promote innovation and maximise supply chain opportunities, including for local SMEs.

Action 9: Create synergies

Welsh Government has commissioned a colocation tool to assess the opportunity for the colocation of renewables with EV charging infrastructure. The purpose of this tool is to appraise opportunities for the use of renewables within EV charging sites. For a given site, the tool will compare:

1. Connecting the site to the electricity grid with no renewables
2. Using wind and solar canopy with any excess renewables exported to the grid
3. Using ground mounted solar and solar canopy with any excess renewables exported to the grid
4. Using wind and solar canopy with battery storage
5. Using ground mounted and solar canopy with battery storage

The colocation tool, which is now complete, will improve our understanding around the following points:

- The types of EV charging sites most suitable for the colocation of renewables
- The renewable and storage configurations most suitable for colocation with EV charging
- High-level indication of the comparative costs of colocation
- Where additional financial support may be required to support installation of colocation sites

Installing behind-the-meter renewables at EV sites has the potential benefits of providing zero or low carbon electricity to EVs, and reducing demand on electricity networks, particularly in constrained areas.

Progress Report Conclusions

Significant further investment in EV charging infrastructure will be required to meet the projected levels of EV uptake and demand. However we, as the Welsh Government, alongside TfW and the local authorities, have delivered essential planning and scoping work and invested in strategically located charging infrastructure in the first year of publishing the Strategy and its Action Plan. Our actions to date will put the public sector and private sector in a good stead to deliver the acceleration of EV charging infrastructure roll-out.

We believe that Wales has the opportunity to lead by example and help build a reliable, efficient EV charging infrastructure network, transforming the way residents and visitors travel. We are aware that achieving this goal requires a strong, effective programme management and governance. Our immediate tasks for the next six months includes to develop a detailed deliverability plan for the next 1-2 years, setting out the critical path, key tasks and activities, as well as funding requirements and key milestones; to engage with public and private sector organisations to encourage and support the accelerated delivery of charging infrastructure across Wales, and to

identify the likely public sector interventions; to form a public-private sector working group; and to establish a governance structure.

We will ensure progress is monitored and evaluated frequently in the short term to meet the aims of the Strategy and Action Plan. This will ensure it remains relevant in this rapidly developing market. We, as the Welsh Government alongside TfW and local authorities, believe that we are in prime position to respond and adapt quickly to any challenges and opportunities the evolving EV market may bring.