



Llywodraeth Cymru
Welsh Government

Action Plan

Electric Vehicle Charging Strategy for Wales

Facilitating the Transition to Net Zero

Action required to achieve the vision

In April 2021, Welsh Government published the Electric Vehicle Charging Strategy, setting out its plans for charging electric cars and vans in Wales. It is written within the context of Llwybr Newydd: a new Wales Transport Strategy and establishes an ambitious vision for charging in Wales:

“By 2025, all users of electric cars and vans in Wales are confident that they can access electric vehicle charging infrastructure when and where they need it”.

Four main outcomes are highlighted to achieve this vision: increased total charging provision, a quality charging experience, a sustainable approach (aligned with the decarbonisation agenda) and localised benefits.

The strategy is based on the sustainable transport hierarchy: recognising the need for modal shift and increased use of public transport and active travel to help achieve decarbonisation targets. The actions provide targeted means to enhance local, social and environmental benefits, and capture economic benefit from investment in and servicing of charging infrastructure across Wales.

Welsh Government recognises its enabling role in delivering electric vehicle charging infrastructure and will work with all providers to address the low provision of charging infrastructure across Wales in comparison to other regions of the UK. It is essential that the public and private sectors work together to make this strategy a reality.

There are clear commercial opportunities in the provision of electric vehicle charging. Our goal is to ensure full national coverage which may necessitate commercially grouping locations of low and high return to achieve that aim.

The actions set out in the following pages will be developed and implemented up to 2030 in line with the timeframe of the strategy. It may be appropriate for targeted action to continue post 2030 depending on the prevailing conditions at the time. Each action has been assigned a specific timescale to aid delivery.





Key Performance Indicators (KPIs) are included in this Action Plan, which will be monitored and reviewed annually to help track progress towards better charging infrastructure.

Welsh Government will use regulatory and planning levers, as well as land use planning guidance, public land and resources, funding, and targeted support programmes as appropriate to help make this happen.

We will work with the electricity sector to ensure availability of power for the charging infrastructure required. This will include the use of renewable energy and engagement with communities in alignment with other Welsh Government policies.

Partnerships will be integral in driving forward the vision. Collaboration across public, private, non-profit and academic organisations will create a powerful and integrated suite of skills, knowledge and resources.

Action required to achieve the vision

Outcomes	Actions	Expected results	Sustainable outcomes
 Total charging provision	<ol style="list-style-type: none"> 1. Charging infrastructure. 2. Optimisation of energy provision 3. Enhanced rapid charging provision 	<p>Improved charging provision at key public locations.</p> <p>Connections group established to develop viable network solutions.</p> <p>Network of rapid charging across Wales' strategic trunk road network by 2025.</p>	 <ul style="list-style-type: none"> • Use of locally generated power. • Integrated transport strategy. • Circular economy opportunities. • Local air quality, health and well-being benefits. • Integrated cross-sector planning and collaboration.
 Quality outcomes	<ol style="list-style-type: none"> 4. Welsh quality standards 5. Regulatory facilitation 6. Partnership and collaboration 	<p>Improved customer experience.</p> <p>Updated regulatory framework where appropriate to facilitate decarbonisation goals.</p> <p>Working group established to soft test solutions.</p>	
 Localised benefits	<ol style="list-style-type: none"> 7. Increase public awareness 8. Encourage investment opportunity and innovation 9. Create synergies 	<p>Improved public confidence in the transition to electric vehicles.</p> <p>Engagement from Welsh business in innovation and supply chain opportunities.</p> <p>Coordinated spatial planning with charging incorporated.</p>	



Total charging provision

1. Delivery of charging infrastructure through funding and collaboration

The Welsh Government Ultra Low Emissions Vehicle Transformation Fund (ULEVTF) will be used to kick-start initiatives and promote collaboration within delivery groups.

Projects will be promoted across the themes set out below together with development of a network of rapid/ultra-rapid charging stations across the strategic road network of Wales.

- Multi-modal transport hubs with charging.
- Destination charging.
- Charging that supports the visitor economy.
- Rural community charging.
- Urban charging hubs.
- Workplace charging.
- On street residential charging where appropriate.
- Other forms of public charging.

We will work with partners in the community to address the needs of those that are unable to charge at home, mobility impaired users and rural communities amongst others.

Work with local authorities will aim to establish projects that align with Llwybr Newydd, that are replicable, scalable, and support local needs.

The integration of infrastructure to support public transport, active travel, car share schemes and other Welsh Government policy initiatives with charging will help deliver benefit to communities and help deliver net zero targets.

Benefits of this action

This will support knowledge sharing and dissemination across Wales, and empower local authorities to deliver localised solutions. Links will be made between Welsh Government grant funding and growth partnerships using ULEVTF grants. Strategic and spatial regional plans will be aligned with integrated energy planning and infrastructure investment.

KPI

The provision of one public charge point for every 7 to 11 electric vehicles on the road by 2025. As adoption increases these numbers rise proportionately to approximately 25 vehicles per charge point.

Responsibilities

- Welsh Government to administer and direct funding.
- Delivery partners in implementation.

Delivery partners

- Local authorities.
- Community based organisations.
- Regions and local growth partnerships.
- Charge point installers and operators.

Timescales



2. Optimisation of energy provision

The supply of power is the responsibility of electricity network operators and is regulated by UK Government and Ofgem. We will work with Distribution Network Operators (DNOs) in Wales to maximise the availability of power for charging vehicles.

We will support meeting the needs of charging in a way that is efficient for electricity network. This means incorporating renewable generation, energy storage, smart technology and being ready to capture the benefits of vehicle to grid.

Digital modelling will aid the planning process with outcomes using smart power management where appropriate, to obtain best value from the electricity network.

A connections group will be established involving Distribution Network Operators, charge point providers and Government. The aim is to ensure resources are directed to facilitate a comprehensive charging network.

Ofgem has recommended that a new independent body be established to run the electricity system to meet the demands of electric vehicles, while maintaining secure energy supplies. The connections group will work closely with any independent body set up in this capacity.

Benefits of this action

Establishing a connections group will support cross-sector coordination and create synergies across infrastructure investment programmes. It will help integrate planning for net zero, localised power generation and energy storage with planning for electric vehicle charging. The group will assist in capturing the market opportunities associated with network flexibility.

KPI

- Connections group to report in the current financial year.

Responsibilities

- Welsh Government will establish the group and work with partners to maximise availability of power.

Delivery partners

- Distribution Network Operators.
- Transmission systems operator.
- Other utility providers.

Timescales



3. Enhance rapid charging on the strategic trunk road network

Welsh Government will work with Transport for Wales to deliver the provision of rapid charging every 20 miles on the strategic trunk road network of Wales by 2025.

Further phases of delivery will be identified by Welsh Government and targets set that align with the predicted demand for charging within the strategy, over the next ten years. Welsh Government will work with private sector and community based groups to deliver public procurement exercises (further to public procurement delivered by Transport for Wales in 2021).

The public estate across Wales will be used where possible to bring forward appropriate sites based on a strategic spatial planning exercise. Sites identified will be based on an analysis of evidence and spatial data.

The identification of sites will be based upon:

- Available locations.
- Predicted demand.
- Charging speeds and charging behaviours.
- Grid connection capacity.
- Synergies with other planned infrastructure/transport projects and programmes.

Certain locations will include provision of amenities and rest facilities for users, as requested through feedback from the consultation. Developments will be expected to link to local businesses and source from the community, following models similar to Rhug Estate, Gloucester and Tebay.

Benefits of this action

Improving access to rapid charging will give drivers in Wales confidence in undertaking long distance journeys in electric vehicles and encourage nationwide uptake. Local economic opportunities will benefit the Welsh economy.

KPI

- Network of charging forecourts across Wales at approximately every 20 miles across the strategic trunk road network by 2025.

Responsibilities

- Welsh Government in setting the strategic framework.
- Transport for Wales in overseeing implementation.
- Connections group will feed into the evidence base.

Delivery partners

- Private sector.
- Community based organisations.
- Local planning authorities.
- Regional and growth partnerships.

Timescales





Quality outcomes



4. Develop a Welsh Quality Standard for charging

In the next year the UK Government will set national standards for quality of charging provision. Welsh Government is influencing the development of these and will supplement them where appropriate to ensure the needs of Wales are addressed. This will include:

- Standards for reliability and availability.
- Standards for safety, accessibility, safety and security, particularly for the most vulnerable users.
- Bilingual 24/7 customer care in Welsh and English.
- Parking and payments for charging in a safe well-lit environment.
- Charging facilities available to everyone, including those with accessibility needs.

- Payment platforms that are simple, accessible and easy to use. Payment will be by contactless debit or credit card and an associated app-based system as expected to be mandated by UK standards.
- Digital connectivity and data standards for open access. Specifications for data capture in support of the low carbon transition.
- Promoting where possible charging that integrates renewable energy generation and storage.
- Promoting good quality sustainable design that includes green infrastructure.

Standards will be tested with stakeholders for suitability and applicable to the Welsh context, whilst aligning with current and emerging industry standards.

Benefits of this action

This will provide a reliable mechanism to drive an improvement in industry standards while ensuring that our charging infrastructure meets the needs of the Welsh population in a consistent and integrated way. Provides clarity to developers in the provision of infrastructure.

KPI

- Welsh Government will deliver a National Quality Standard to be used in public sector procurement by the end of 2021.

Responsibilities

- Welsh Government will develop a National Quality Standard.

Delivery partners

- Transport for Wales.
- Charge point operators.
- Public and private sector partners involved in procurement.
- Office for Zero Emission Vehicles in alignment with UK standards.

Timescales



5. Facilitating Infrastructure Delivery

In the next year, Welsh Government will review building regulations to support the provision of home and workplace charging across Wales for both refurbishment and new build projects. We will also work with the electricity industry to facilitate a further review of the requirements for electrical supply to buildings for future resilience that incorporates potential charging needs.

Welsh Government policy and regulations will be kept under review 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.

Benefits of this action

It will encourage a consistent, efficient approach to the delivery of charging-ready infrastructure. The use of Welsh Government planning levers will act as an enabler to address barriers to delivery identified by those seeking to deliver and invest in electric vehicle charging.

KPI

- Review of policy and regulations by 2022 and updates made, where appropriate, to support electric vehicle uptake.

Responsibilities

- Welsh Government.
- Local authorities.
- National Park authorities.

Delivery partners

- Local planning authorities.
- Local authority building control.
- Approved building control inspectors.

Timescales



6. Partnership and collaboration

Coordination of Charge Point Operators in determining suitable locations is key to the delivering our vision of the electric vehicle charging network across Wales. Welsh Government will establish a Charge Point Operator working group involving private, public, not-for profit and community organisations in pursuit of this aim.

The working group will enable the communication and knowledge sharing between stakeholders in a rapidly evolving sector for Wales.

The constraints and opportunities associated with charging infrastructure will be identified through these conversations and shared experiences.

We will encourage the soft testing of actions and solutions within this space to work through the constraints and maximise opportunities identified. This soft testing will provide confidence and resilience in advance of full implementation. The group will consider the impact and opportunities for market interventions and regulatory functions that will support the transition to electric vehicles.

Benefits of this action

The working group will provide an advisory function in support of developing and soft testing quality standards and other emerging initiatives within the sector. It will provide a forum to allow development of solutions to ensure all areas of Wales receive network coverage. This will enhance long term outcomes to align policy, strategy and direct delivery of market- based solutions.

KPI

- Establishment of a charge point operator working group in 2021.

Responsibilities

- Led by Welsh Government.

Delivery partners

- Local planning authorities.
- Charge point operators.
- Community based organisations.

Timescales





Localised benefits



7. Increase awareness of the needs of transport decarbonisation

We will seek to raise public awareness of electric vehicle charging infrastructure across Wales. Communications will seek to provide consistent, transparent and accessible information to consumers and the wider public.

Welsh Government will work with the public and private sectors to:

- Raise awareness of the electric vehicle charging strategy and action plan.
- Keep stakeholders and public updated with progress and implementation of the action plan.
- Improve coherence in messaging and cross-sectoral collaboration in the context of decarbonisation.

- Provide independent consumer advice to support the transition to electric vehicles, supporting private vehicle owners, public sector, shared and community mobility providers and businesses.
- Engage with the wider public to encourage sustainable behaviours.

Benefits of this action

This will aid public understanding of electric vehicle charging. Improved public trust and confidence will support the transition to electric vehicles. Future improvements in user experience of charging in Wales will be communicated to users and potential users to enhance public perception of the charging experience in Wales.

Wider knowledge will support uptake and confidence across all user types, including within a workplace setting, across public transport and decarbonised and shared mobility services.

Where independent consumer advice is being provided this will be within the context of supporting sustainable transport behaviours as outlined in Llwybr Newydd.

KPI

- Enhanced public confidence in electric vehicle charging, moving Wales from the innovator stage to early majority stage of market maturity by 2030.

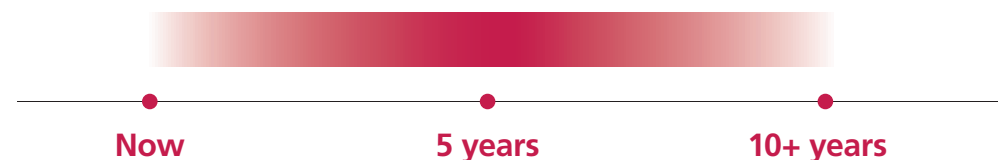
Responsibilities

- Welsh Government in partnership with public and private sector.

Delivery partners

- Transport for Wales.
- Community interest groups.
- User groups.
- Trade bodies and organisations.
- Charge point operators and delivery organisation.

Timescales



8. Encourage investment and innovation

Welsh Government sees significant opportunity for developing economic activity for Welsh business in the deployment of infrastructure to address the needs of decarbonisation.

Potential opportunities include:

- Economic benefit through job creation from local supply chains to support electric vehicle infrastructure and wider electrification of transport.
- Localised benefit through the role of community-led and not-for-profit initiatives alongside renewable energy and storage opportunities.
- The creation of new business models to incorporate charging as part of an integrated low carbon transition for Wales, in line with Llwybr Newydd and Future Wales.
- Skills and training provided in Wales to support implementation, servicing, maintenance and digital jobs in the sector.
- Research and innovation to drive continuous improvement across the industry.
- Implementation that seeks to support wider objectives by facilitating air quality improvements, active travel and decarbonisation objectives set out in Llwybr Newydd and Future Wales.
- Maximising the use of Wales' industrial clusters to support manufacturing and other supply chain needs.
- Circular economy opportunities (including the design, manufacture, installation, operations and maintenance decommissioning and recycling/reuse of equipment).

Benefits of this action

This will contribute to decarbonisation, improved sustainability and value creation across the whole asset lifecycle, while encouraging innovation and job creation on a wider scale.

KPI

- Complete a supply chain and opportunities review by end of 2021.
- Establish a programme to realise opportunities for innovation and investment.

Responsibilities

- Welsh Government.

Delivery partners

- Transport for Wales.
- Charge point operators.
- Public and private sector partners involved in procurement.
- Trade organisations.
- Professional bodies.

Timescales



9. Maximise synergies between different charging needs

We aim to identify locations where renewable generation coupled with energy storage can assist in providing power for the charging network to the benefit of the people of Wales. This can benefit rural communities, public sector fleet and the integrated transport system where shared or co-located charging facilities will create synergies where different needs can be met.

Examples include rural charging hubs powered by community renewable projects incorporating charging hubs, car share and community transport or modal interchanges in towns linking rail, bus and local services with active travel infrastructure.

Welsh Government will work with Transport for Wales and Local Government to support the integration of multi-modal transport services alongside electric charging infrastructure.

We will identify and oversee collaboration to create cross-sectoral synergies through place-making opportunities around localised services and high street retail in line with Llwybr Newydd and Future Wales.

Benefits of this action

This will assist taxis, buses and public fleet to transition more quickly, in line with current policy and regulatory drivers. The policy change in Llwybr Newydd and Future Wales has a key role in promoting behavioural change to a more sustainable transport system.

Coordination in spatial planning at a local authority and regional scale will deliver greater value on investment. It is likely that place-making solutions (where goods and services can be co-located) and investment in the green recovery can be delivered alongside or with charging incorporated.

Collaboration will support emerging business models from e-mobility service providers to new opportunities to decarbonise freight and deliveries.

KPI

- Charging infrastructure to be considered in all relevant new and emerging local and regional development plans, starting 2021.

Responsibilities

- Welsh Government to oversee.
- Transport for Wales in strategy and implementation.

Delivery partners

- Local planning authorities.
- Regional and growth partnerships.

Timescales



What's next?

This action plan will be reviewed and monitored annually to track and manage progress. Welsh Government will, with Transport for Wales and wider stakeholders develop the governance and delivery arrangements, embedding the Five Ways of Working of the Well-being of Future Generations Act.

The electric vehicle charging sector and environment is rapidly evolving in response to policy and legislative drivers. The Five Ways of working help provide a framework for stakeholders to continue to engage in this highly dynamic environment whilst working towards the strategic vision set out in the Electric Vehicle Charging Strategy for Wales.

Technological change will influence the shape of electric vehicle charging infrastructure in the future, including improvements in battery technology, micromobility, autonomous vehicles and use of hydrogen and other alternative fuels. As the electric vehicle market grows, user behaviours will evolve. These aspects will be kept under review as part of ongoing delivery.

Adoption of the five ways of working defined by the Wellbeing of Future Generations Act will aid delivery in the next stages of implementation. These ways of working encourage better working together to deliver the vision set out within the Electric Vehicle Charging Strategy for Wales.



Long-term

The importance of balancing short-term needs with the needs to safeguard the ability to also meet long-term needs.



Involvement

The importance of involving people with an interest in achieving the well-being goals, and ensuring that those people reflect the diversity of the area which the body serves.



Prevention

How acting to prevent problems occurring or getting worse may help public bodies meet their objectives.



Integration

Considering how the public body's well-being objectives may impact upon each of the well-being goals, on their objectives of other public bodies.



Collaboration

Acting in collaboration with any other person (or different parts of the body itself) that could help the body to meet its well-being objectives.

