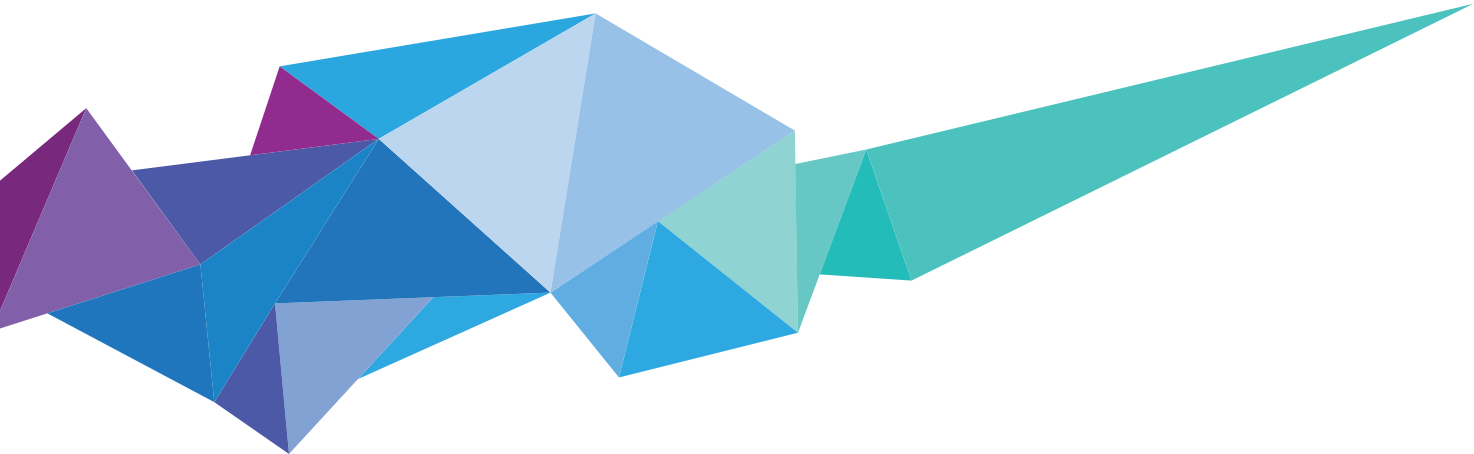


Electric vehicle strategy

December 2021



Contents



Welcome

Welcome to our electric vehicle strategy which sets out our plans to lead and support our stakeholders on the journey to decarbonise the region's transport. Our role is to enable this journey by preparing the electricity network for the rapid uptake of electric vehicles (EVs) and associated charging infrastructure needed to support this.

Driven by the [Climate Change Act \(2008\)](#), the UK government has laid down challenging targets to protect the environment and cut carbon emissions to [net zero by 2050](#), by reducing our reliance on fossil fuels like gas and oil. In 2019 the government went further by becoming the first major economy to legally commit to this target. In 2020 an ambitious interim target to achieve a 68% reduction in emissions from 1990 levels by 2030 was announced.

Our work on establishing a viable regional master plan for decarbonisation shows that if we are to achieve these targets, the rapid and widescale uptake of low carbon technologies such as EVs is essential. In 2020, the government announced plans to ban the sale of new petrol and diesel cars by 2030. EVs were raised as a specific element of the government's '[Ten-point plan for a green industrial revolution](#)'. In September 2020 the sale of EVs surpassed diesel for the first time, a trend which is set to continue; the number of EVs on the UK's roads is predicted to rise to more than 35 million by 2050, with over three million of these predicted to be within the North West.

As the network operator for the North West of England, we will play a key role in facilitating this change. It's our responsibility to plan for the future needs of our customers and stakeholders and support the region's economic development and transition to a net zero carbon economy.

To meet the rapidly changing needs of our customers we are developing smarter, more affordable techniques to create a dynamic and interactive electricity network. Between 2019 and 2023 we are investing £63.5 million as part of our [Leading the North West to zero carbon plan](#) to help the North West decarbonise and pave the way for the growth of renewable energy. Our [Distribution System Operation strategy](#) sets out further plans to provide a smart and flexible electricity distribution system.

The decarbonisation of transport will impact public transport, taxis, commercial vehicles and private cars and will benefit everyone in the North West with reduced carbon emissions, cleaner air and reduced noise pollution.

Our EV strategy will support this transition. We will take prompt action to ensure that carefully planned infrastructure is in place, when and where it is needed, to support the installation of a vast network of EV charge points, and make it as easy as possible for our customers to adopt EVs.

Our customers are at the heart of this strategy, whether they are householders, businesses or local authorities. We will ensure that no-one gets left behind in the energy transition, by ensuring that our processes for the connection of EVs and support services are fully inclusive and accessible to everyone.

Our customers and stakeholders have told us we need to help them become more energy efficient and to adopt low carbon technologies. We will provide extra support by offering a neutral and trusted source of impartial information as they take their first steps on their decarbonisation journey.

In response to our stakeholders' request to lead by example and underline our credibility, we have put in place a low carbon transport policy. As part of this policy we will adopt low emission fleet vehicles and help colleagues to decarbonise their individual means of transport.

At a national level we are working to pave the way for the adoption of EVs across the UK, ensuring that their road to integration is smooth and that our distribution networks are prepared.

This document sets out our ambition to facilitate the transition to EVs and make the North West a cleaner, greener place to live and work. We hope you find it useful and informative.

Steve Cox
DSO director



Executive summary

Our EV strategy focuses on the following five key principles and sets out the actions we will take to lead and support our customers and wider stakeholders on our journey to decarbonise the region's transport. Central to these actions will be the preparation of the electricity network for the decarbonisation of transport and the rapid uptake of EVs.

Making it simple

We will make it as simple as possible for all the homes and businesses across the North West to charge their EVs. We will launch a simple and effective online applications process for customers who want to install their own EV charge point and offer flexible connection solutions to keep costs down.

Listening to our customers

We will continue to talk to, and listen to, our customers as their needs change in the low carbon future. We will support them by offering impartial and practical help and advice to encourage them to adopt EVs.

Working smart

We will invest in the latest innovative technologies and ensure we prepare our network for the rapid uptake of EVs. Our [innovation strategy](#) is designed to support the affordable decarbonisation of our region and specifically to support the reliable charging of EVs. We have already led ground-breaking work on making EV adoption affordable through our [Celsius](#), [Smart Street](#) and [Reflect](#) innovation projects. We will also embrace the learning from the work of others such as Western Power Distribution's Electric Nation project and SP Energy Networks' Charge project.

Leading by example

We will support the transition to EVs in the North West by decarbonising our own transport and encouraging our colleagues to do the same. As part of our low carbon transport policy we will make it easier for colleagues to adopt EVs by installing charge points at our sites, offer an EV and cycle purchase scheme and we will incentivise the use of public transport and cycling. We have already begun the replacement of our own fleet vehicles with low emission alternatives, including equipment such as excavators.

Playing our part in the national strategy

We will work with government, the electricity and transport industries and our stakeholders to inform national policy and guide the regulatory rules that govern our business. We work with national and international groups to develop safe working practices, codes of practice and guidelines to ensure that the transition to EVs is carried out safely and efficiently.



A guide to electric vehicles

An EV is any vehicle that is powered by an electric motor. The term covers a range of transportation types including cars, vans, trucks, trains, trams, boats, aircraft, bicycles and motorcycles.

There are a number of different types of EVs available, most of which can be categorised as pure electric, plug-in vehicles or hybrids. Hybrids combine battery power with a regular internal combustion engine.

Pure battery electric vehicle

Commonly known as BEVs, these vehicles run completely on electricity which is stored in an internal battery.

Hybrid with internal combustion engine

These vehicles combine the range of an internal combustion engine with the benefits of an electric motor. Drivers are encouraged to use battery power for shorter trips but can use the internal combustion engine for longer journeys. The battery is recharged directly from the engine (hybrid electric vehicle/HEV) or from mains power (plug-in hybrid electric vehicle/PHEV).

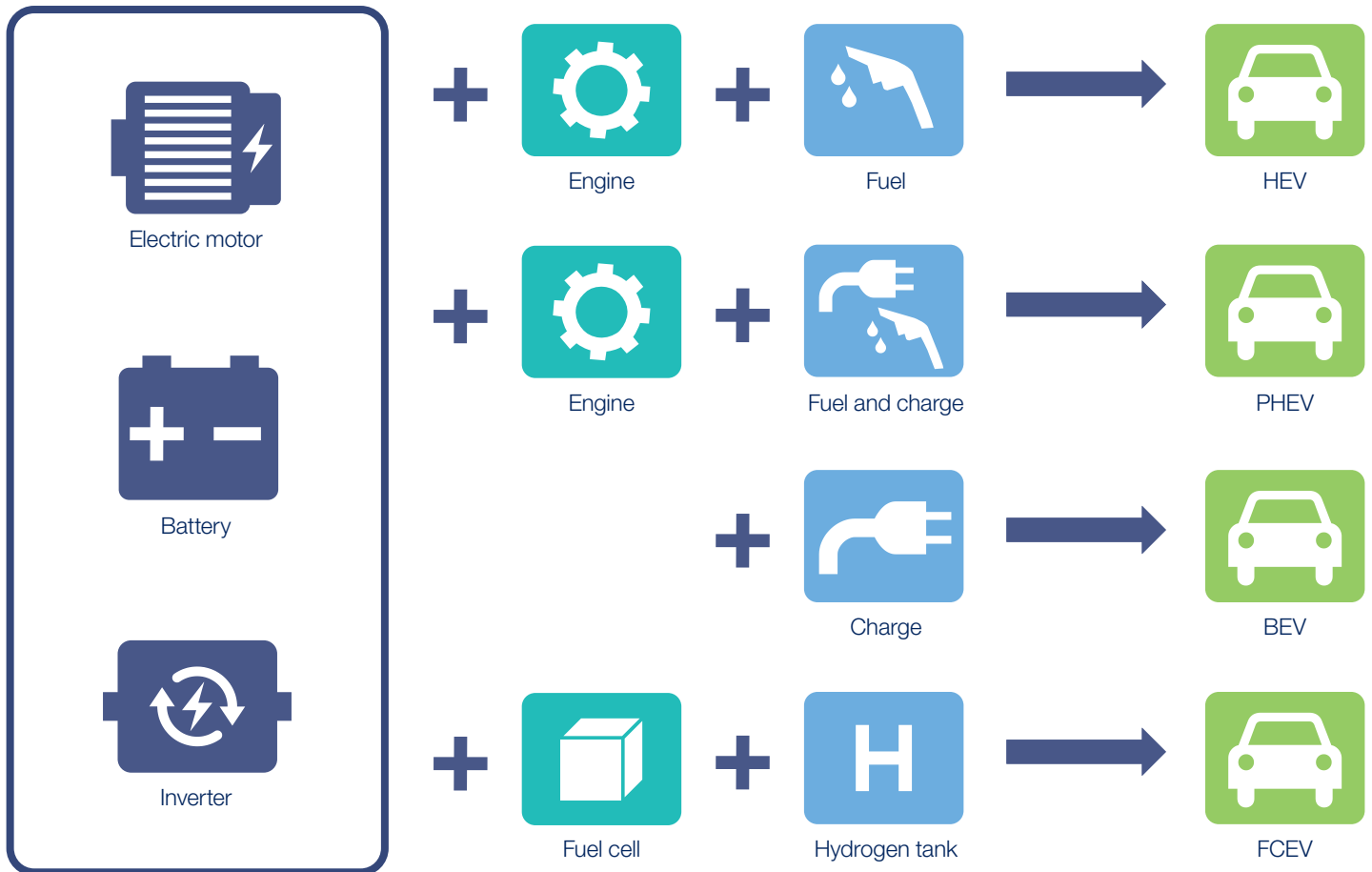
Hybrid with alternative fuel source

These vehicles offer the benefits of a battery powered electric motor in conjunction with alternative fuels such as compressed natural gas, liquefied petroleum gas, bio-ethanol and hydrogen fuel cell (FCEV). This means that fewer harmful emissions are generated compared to petrol or diesel equivalents.





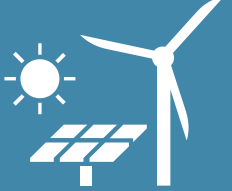
Wired electric vehicles

This group of EVs are directly connected to the electricity network during transit. Currently the most common of these vehicle types are electric trains and trams.

ELECTRIC VEHICLE CORE TECHNOLOGY



THE BENEFITS OF ELECTRIC VEHICLES

| Reduced emissions | Reduced running costs | Incentives | Air quality | Use renewable energy |
|---|--|---|---|---|
|  |  |  |  |  |
| EVs do not produce harmful exhaust emissions which is better for the environment and will help the UK reach net zero carbon | Charging an EV is currently around 60% cheaper than petrol or diesel Maintenance costs should also be cheaper | Current government incentives include discounts on purchase price, grants for installing charge points and preferential taxes | Some of our towns and cities are set to introduce clean air zones and will impose taxes on vehicles producing emissions | EVs can be powered from renewable sources such as wind or solar power, further helping to protect the environment |



The challenge

In 2019 the UK became the first major economy to legally commit to the target of [net zero carbon emissions by 2050](#). A significant part of this journey is the revolution of our electricity industry – the way energy is generated, stored, transported and traded.

The urgency of the need to decarbonise has created local, regional and national momentum. Here in the North West, local leaders have set more challenging targets to achieve net zero even earlier than the national target. It is our job to support these ambitious plans.

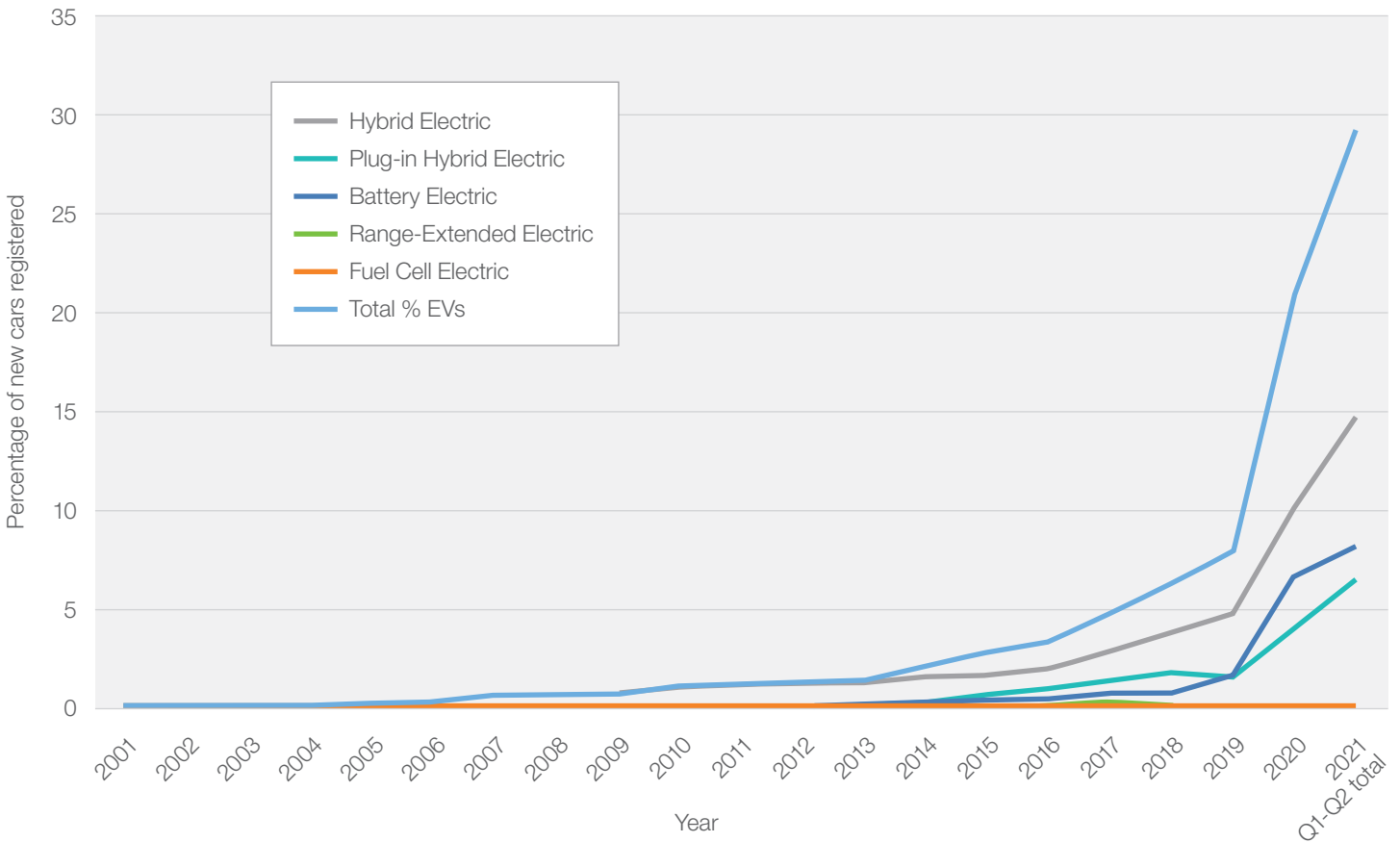
With the government’s commitment to achieve net zero emissions by 2050, transport has increasingly become an area of focus, as it is responsible for a third of all UK emissions. This has led to recent changes in government policy with the ban on the sale of petrol and diesel vehicles brought forward to 2030. As we get closer to this deadline, the challenge will become even greater. EVs already account for 18% of all new car sales nationwide and 7% of all vehicles registered in the UK are in the North West. It is estimated that by 2050 there will be over 3 million EVs in the North West.

Our customers will be connected to networks which were not originally designed to accommodate these technologies. It is predicted that peak time demand could increase by 1.6-2.4 times by 2040 from today’s peak. To meet this increase, significant investment in our network will be required. The costs associated with this would ultimately be passed down to all customers through their electricity bills.

Therefore, the challenge for network operators, as key players in the UK’s transition to net zero carbon, is to continue to provide and plan for a reliable and efficient network, while accommodating increases in low carbon technologies such as EVs and keeping costs low for our customers.

It is estimated that by 2050 there will be over 3 million EVs in the North West

EV PERCENTAGE OF NEW CARS REGISTERED IN THE UK



THE SCALE OF THE CHALLENGE

2019



33% of all UK CO₂ emissions linked to transport

2021



EVs account for 29% of all new car sales,
up from 18% in 2020

2021



7% of all UK vehicles registered in North West

2022



GMCA propose to implement clean air zone

2030



UK ends sale of new petrol and diesel cars and vans

2035



All new cars and vans in UK to be fully emission
free at the tailpipe

2040



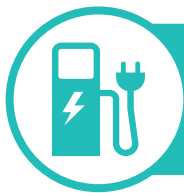
Peak electricity to increase by 1.6 - 2.4 times
2020 demand

2050



Over 3m EVs connected to regional network

Making it simple



We will make it as simple as possible for our customers to connect their EV charge points to our network

A simple, seamless connections process will ensure that our customers receive the best possible service. Our aim is to get every connection request right first time for customers purchasing and charging an EV.

Self service

We already offer a self-service tool which allows customers to check their location on our low voltage network to connect their EV charge point or to request a supply increase. Currently this service is aimed mainly at homes and small commercial customers. In the future we will develop a range of enhanced self-service tools to allow customers to lead their own connection processes, speeding up the time it takes to get connected and reducing labour-intensive processes.

Simple connections processes

Our 'fit and inform' policy ensures that the majority of EV charge points at homes and small commercial premises can be connected to our network without the need for a connections application. Assuming the charger does not incorporate vehicle-to-grid capabilities, an installer can assess the suitability of the supply and notify us following installation, providing the existing supply is already adequate. For more complex installations, including vehicle-to-grid (V2G), please contact our [connections team](#). A prompt, affordable service will be offered to handle customer's charge point enquiries. As far as possible we will offer 'off the shelf' standard solutions for EV charging, integration of renewable generation, smart charging, V2G, etc.

Our 'fit and inform' policy ensures that many EV charge points can be connected without an application

Sharing knowledge

We have a wealth of knowledge that we can share with our customers including our experience of installing EV charge points at our own sites. We have a number of company experts and external contacts available to answer customers' questions on almost any subject relating to electric transport. These experts can also offer timely advice and support for cost-effective solutions. If you have any questions, please [contact us](#).

Network capacity and cost to connect

In most cases new EV charge points can be installed without the need to reinforce the surrounding network. Occasionally we may need to carry out additional work to maintain quality of supply. For the vast majority of customers this work will be carried out free of charge. There may be charges for sites requiring significant levels of new capacity or for new connections.

A significant proportion of our services to customers' homes are 'looped' off another service and are therefore limited in capacity. This is estimated to impact up to 25% of our domestic service connections. This may constrain a customer's ability to connect an EV charge point or heat pump. By unlooping these services, we can ensure that when customers are ready to adopt low carbon technologies in the future, the network will have the capacity to connect them.

For the vast majority of customers, this work will be carried out free of charge

If we determine that an installation needs to be upgraded, we will look at options to reinforce the local network, using flexible solutions where these are economical and practicable. Examples of problems include constraints where an area of network becomes overloaded by too much demand or generation.

SOLUTIONS TO RESOLVE NETWORK CONSTRAINTS

| Solution | Definition |
|--------------------------------------|---|
| Flexible services | Paying customers to change their site output to offset demand or generation |
| Flexible connections | <p>A connection that has constraints associated with the terms of connection. These constraints may relate to time limits or system abnormalities, e.g.</p> <ul style="list-style-type: none"> Controlling a site's demand in real time Pre-agreeing a demand profile which will not overload the network |
| Active control of network assets | <p>Controlling assets using automation to reduce the stress on the network e.g.</p> <ul style="list-style-type: none"> Changing the network running arrangements of how a customer is supplied to deliver the path of least resistance for energy to flow Actively controlling network voltage to decrease/increase network demand such as by using our Smart Street technology |
| Conventional reinforcement | <p>Installing new assets to provide more network capacity, e.g. by increasing the size of transformers or installing new supply cables</p> <p>We are upgrading hundreds of items of switchgear to increase their fault level capacity, which is a known barrier to low carbon technology connection. This strategic reinforcement will help to remove barriers to connecting low carbon technologies while also reducing the timescales and costs of connection</p> |

Training

As with any new technology deployed on the electricity network, it is important that our colleagues are provided with appropriate training on EVs and the connection of EV charge points so that they can properly support and advise our customers. We will provide detailed

EV training for our connections and operations teams, including the safety implications associated with providing connections for EV charging infrastructure.

Making it easy – strategic commitments

| Simple connection processes | Offer quality impartial advice | Quality network expertise |
|---|--|---|
| <ul style="list-style-type: none"> We will develop a range of self-service tools to allow customers to get information quickly and reduce the amount of paperwork required We will automate connection processes to reduce the amount of manual input We will utilise our 'fit and inform' policy as much as possible to allow for quick connections | <ul style="list-style-type: none"> We will offer access to company experts on EVs for our customers We will provide open, transparent and quality advice to customers about EVs and other decarbonisation activities | <ul style="list-style-type: none"> We will provide EV-specific training to our connections design and delivery colleagues We will provide training to operational teams on EV charging infrastructure safety We will provide carbon literacy training to our colleagues, so that they understand the causes of climate change and can offer quality advice on how to decarbonise |

Listening to our customers



We will support and engage with our customers and wider stakeholders to help them decarbonise their transport

Engaging with our stakeholders is vital to the way we run our business. It is important that we develop strong relationships with stakeholders and understand their needs so that we can deliver our ambitious plans for decarbonisation together.

In some cases, the support we provide is as simple as ensuring that we can maintain a secure and stable electricity network to charge our customers' EVs. We also offer one-to-one support to take a customer through the different steps needed to choose and connect the right low carbon technology for their needs.

Our teams can provide tailored guidance and support for a wide range of decarbonisation activities, whether this is to install charging and heating at existing properties, or wholistic planning of electricity demand for new developments.

We have set out the support we think different groups of stakeholders are likely to need. This is based on the stakeholder feedback we have received so far, but we are continuing to seek your views to help us develop our services further.

Through our programme of engagement, we will encourage all our stakeholders to make electrified transport accessible to all. Adequate charging infrastructure will be needed for all transport types including cars, buses, e-bikes, vans, trucks, trains and boats. It should be accessible across urban and rural locations, on-street and off-street, with a range of public and private ownership. Our work will lead these conversations to ensure equality for all EV owners and users.



Local authorities

Local authorities often hold the responsibility for: defining local planning policies; determining the location of on-street charging infrastructure; defining local building standards; and providing public charging infrastructure on street and in council-owned car parks. They are also looking to decarbonise their own fleet operations.

We work closely with all 37 local authorities in our region to ensure energy infrastructure is systematically incorporated into their planning considerations and that we are able to support their specific decarbonisation ambitions. Our close relationships help us to understand their requirements and what support they would like from us.

As an example, we have been working closely with Greater Manchester Combined Authority and Transport for Greater Manchester to support their ambition of being carbon neutral by 2038. As part of this and to help with their plan to roll-out EV charging, we provided nominated representatives to interface directly with the council's planning authorities. We also set up direct access to our geographic information systems (GIS) planning tool which allowed GMCA to establish the optimal location for charging infrastructure and significantly increased the success of connection applications.

In addition, we are able to share insights gained by working with other local authorities and national bodies to help with decarbonisation planning.

A key aspect of the work we will carry out with local authorities is to help provide charge points for those who do not have access to off-street parking, home charging facilities or private access to charging, including those who live in shared accommodation. We cannot provide this charging infrastructure ourselves, but we will help to establish local policies and develop suitable sites.

Our representatives interface directly with the council's planning authorities

Community energy groups

Community energy refers to citizen-led projects or initiatives to reduce, manage, generate or purchase energy. By engaging and supporting community energy groups in the early stages of project development and rollout, we can help ensure the success of the project, promote a greater uptake of low carbon technologies such as EVs, and control any potential risk to the network.

Our dedicated community energy team offers one-to-one support for community energy groups and supports engagement and the sharing of best practice across the sector.

Commercial and industry stakeholders

Fleet operators and businesses currently account for over half of UK new vehicle sales, so this is a key market for us to support.

We work closely with businesses to help them decarbonise their own fleets and provide EV services. There are a number of actions that businesses can take, ranging from individual small-scale changes to major national infrastructure projects designed to decarbonise transport.

We offer free advice to businesses wishing to decarbonise their operations through our website, at conferences, and via one-to-one support with our decarbonisation team.

Advice and support

Website

Our [website](#) offers a good source of up-to-date information on buying EVs, installing charge points, grants and tax benefits and guidance on connecting charge points to the electricity network.

We will create case studies for those wishing to decarbonise transportation. These will include examples of successful charge point installations at a range of sites and highlight practical examples of EV transport moving away from individual car ownership into other ways of accessing personalised transport, e.g. car clubs, and ride-on-demand services. We will also give examples of integrating on-site renewable generation, ways to make best use of a combined energy generation and transport system through V2G and we will share insights from our own experience.

Charge point installers and operators

Charge points installers and operators are a key stakeholder group who provide public and private charging infrastructure across the UK. The swift rollout of charge points will provide confidence for the transition to EVs and avoid drivers experiencing range anxiety. We are keen to engage further with this stakeholder group to share planning data which show areas of network capacity, discuss development plans and reduce barriers to connection where possible. We will look to discuss the future of smart charging and flexible services, which charge point operators may be able to offer to the market.

Engagement events

Building upon the success of our current stakeholder engagement, we will continue to offer regular bespoke webinars and face-to-face meetings. These events will provide updates to stakeholders on the EV industry, local government and other specialist areas, and will also offer opportunities for networking with other EV stakeholder groups.

Conferences

Our leaders and senior colleagues regularly attend key conferences where they share in-depth industry expertise, experiences and guidance. If you are a conference organiser and would like us to attend, please [contact us](#).

One-to-one support

We offer a range of [face-to-face support sessions](#) for customers to discuss their individual project needs and receive updates on our policies.



Insights

As part of our [ATLAS](#) project, we have developed industry-leading forecasting capabilities. We also publish an annual [Distribution Future Electricity Scenarios](#) (DFES) document which sets out our understanding of the way we think the use of the electricity network will change in our region up to the year 2050. This includes a range of possible scenarios for the expected uptake of EVs in the North West.

Our DFES report incorporates information gathered from local stakeholders such as development plans from local authorities and is accompanied by a detailed data workbook which allows our stakeholders to obtain a local electricity forecast for their specific area of interest.

Our [Reflect](#) project will produce prototype tools and methodologies that can be used by network operators to improve electricity demand forecasting for EV charging by reflecting the regional uncertainties around slow and ultra-fast EV charging.

We have developed industry-leading forecasting capabilities

Engaging with stakeholders – strategic commitments

| Advice and support | Providing high quality information | Working with our stakeholders |
|--|--|---|
| <ul style="list-style-type: none"> • We will provide up-to-date, relevant advice on EVs and how to apply for a network connection on our website • We will provide 1-2-1 advice to customers who need more support • We will produce case studies of successful charge point installations at a range of sites, as well as innovative charging solutions and alternatives to personal vehicle ownership • We will share updates from our engagement and influencing of national strategy | <ul style="list-style-type: none"> • We will offer open and transparent sources of network data to allow stakeholders to make informed investment decisions • We will provide insights into future demand and generation scenarios • We will provide access to external contacts, where appropriate • We will provide information to stakeholders about our flexible services requirements to allow them to participate in these markets | <ul style="list-style-type: none"> • We will support and engage with our customers and wider stakeholders to help them decarbonise their transport • We will tailor our support for local authorities, businesses and community or local energy groups which could include: <ul style="list-style-type: none"> ○ Access to network data to help identify the best point of contact to our network ○ Dedicated points of contact ○ Support with the connections applications process ○ Case studies and examples of how we are decarbonising our fleet and supporting our colleagues to decarbonise |



Working smart



We will use innovation and investment to prepare our network for the rapid uptake of electric vehicles

Our innovation strategy is focused on delivering projects which support the decarbonisation of the entire distribution network and allow us to look at decarbonisation in a holistic manner. We will continue to roll-out the benefits of our previous innovation projects as well as looking at future projects which will support our decarbonisation agenda and benefit all our customers.

The projects described below are just some of the ways we are preparing our network for the wide-scale uptake of EVs and other low carbon technologies.

Reflect

The required network planning to facilitate EV charging depends not only on the future volumes of private and commercial EVs, but also on the location and capacity of the charging adopted.

The [Reflect project](#) will produce prototype tools and methodologies that can be used by network operators to improve electricity demand forecasting for EV charging by reflecting the regional uncertainties around slow and ultra-fast EV charging.



Celsius

The [Celsius project](#) has proved that by simply installing thermal monitoring, we are able to better understand the temperature of a transformer and release more capacity.

In addition, we trialled a range of retrofit cooling technologies, such as improved ventilation, heat extraction fans and alternative kinds of backfill material for underground cables, which help to cool down equipment in substations and release even more capacity.

Both techniques reduce long-term costs for customers, avoid early asset replacement and prepare our network for low carbon technologies such as EV charging.

Smart Street

By installing intelligent software and innovative voltage control technology, the [Smart Street](#) system stabilises supply voltage to customers. This makes their appliances and our low voltage network run more efficiently. It can deliver real savings through a reduction in energy used by home appliances, reducing carbon emissions and providing more flexible solutions to help us connect low carbon technologies to the network.



It can deliver real savings through a reduction in energy used by home appliances

Vehicle-to-grid technology

Vehicle to grid technology (V2G) enables energy stored in EVs to be fed back into the electricity network. This means that customers who have their own generation, such as solar panels, can charge their vehicles using excess energy produced from their generator and store the energy in their EV battery for later use. This also helps reduce the level of peak demand on the electricity network.

In addition, customers can benefit from time-of-use tariffs by charging their vehicles when energy prices are cheaper and then discharging this energy to the grid when electricity prices are high.

Unlike regular EV chargers which can be installed under our fit and inform policy, we need to undertake a number of assessments before a V2G charger can be installed. We are currently working with our industry partners to develop a national V2G connections standard. Once this is in place we will simplify our connections process so that V2G chargers can be installed under our fit and inform policy.



Flexible services

The increase in electricity demand and our ambition to use more renewable energy will lead to challenges in securing capacity and balancing the electricity grid. EVs could potentially be used as a power resource and contribute to balancing our future power system.

Individual small charging units will have limited impact alone, but when aggregated these could provide a good source of commercially viable balancing services. We are keen to work with aggregators to develop future [flexible service](#) contracts whereby we pay customers for the power they generate from their EVs to alleviate a network constraint.

EVs could be used as a power resource and contribute to balancing our future power system

Network automation

We are investing in automation tools which help us operate the network more efficiently. Tools such as active network management allow us to utilise spare capacity in the network and create additional capacity via flexible services and connections. In the future we will be able to match demand, created by the increase in EV charging, with generation or demand response services. This network automation can also be used to interface with aggregators of smart charging devices, allowing them to modify charging patterns to avoid network constraints and provide incentivised benefits to their customers.

Smart charging

Smart charging is a method of intelligently managing EV charging so it does not overload the electricity network. Smart charging, during off-peak periods when electricity demand is low, means customers can benefit from cheaper electricity and unnecessary network reinforcement can be avoided. Charging can also be shifted to periods when there is plenty of clean, renewable energy available.

Trials have demonstrated the benefits of preferential charging costs for customers and reduced strain on the distribution network.

In 2019 the UK government launched a consultation process on its proposals to mandate smart charging capabilities for all new EV charge points. Under the current recommendations, EV owners would be able to opt out of smart charging.

Working smart – strategic commitments

| Improve by innovation | Utilise EV charging flexibility services to facilitate the transition to net zero | Invest in automation |
|--|--|---|
| <ul style="list-style-type: none"> We will continue to innovate to drive further improvements to the network for the benefits of connecting low carbon technologies We will learn from other network operators and third-party innovation projects We will integrate learning from innovation projects into business as usual | <ul style="list-style-type: none"> We will incentivise EV smart charging through flexible service contracts to alleviate network constraints We will standardise V2G technology to allow for quick and easy connection We will promote the use of V2G technology to allow customers to unlock the full benefits of owning an EV | <ul style="list-style-type: none"> We will utilise network automation tools to maximise safe use of the network We will utilise network automation to facilitate smart EV charging and V2G We will utilise network automation to reduce the need for network reinforcement associated with EV charging |

Leading by example



We will lead the transition to EVs in our region by identifying opportunities to decarbonise transport in our own business

We are committed to promoting the uptake of low emissions vehicles and reducing our overall impact on climate change. All of our sites, EVs and electrical equipment are already powered by 100% renewable electricity.

Low carbon transport policy

In addition to the installation of EV charge points at our sites, we have introduced a number of measures to encourage colleagues to reduce their transport-related carbon footprints. These include: an online portal for colleagues to buy an EV or hybrid vehicle; availability of EVs and hybrids as part of our company car scheme; increasing the company car cash alternative for colleagues who opt for EVs or hybrids; and interest-free loans for home charge points.

For colleagues who do not drive we offer interest-free loans for public transport season tickets and we have extended our cycle to work scheme to include electric bicycles.

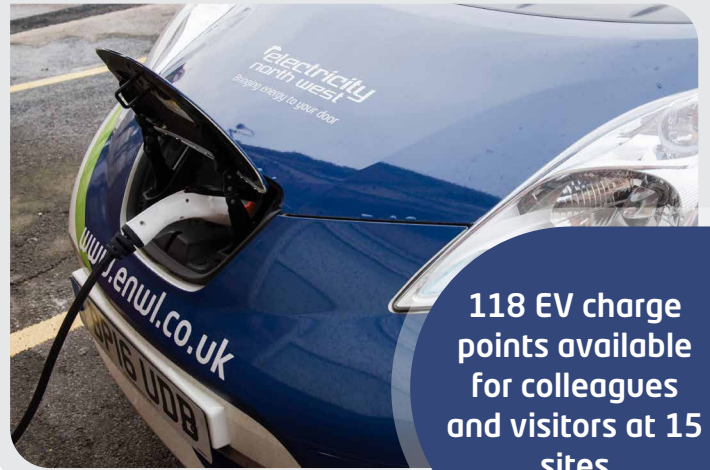
We also encourage colleagues to avoid travelling for business purposes if they can use greener alternatives such as teleconferencing, working from home or working from the nearest site to their home, using public transport, car sharing, walking or cycling.

In 2020 we enhanced our IT systems to facilitate home working which has dramatically reduced colleague mileage.

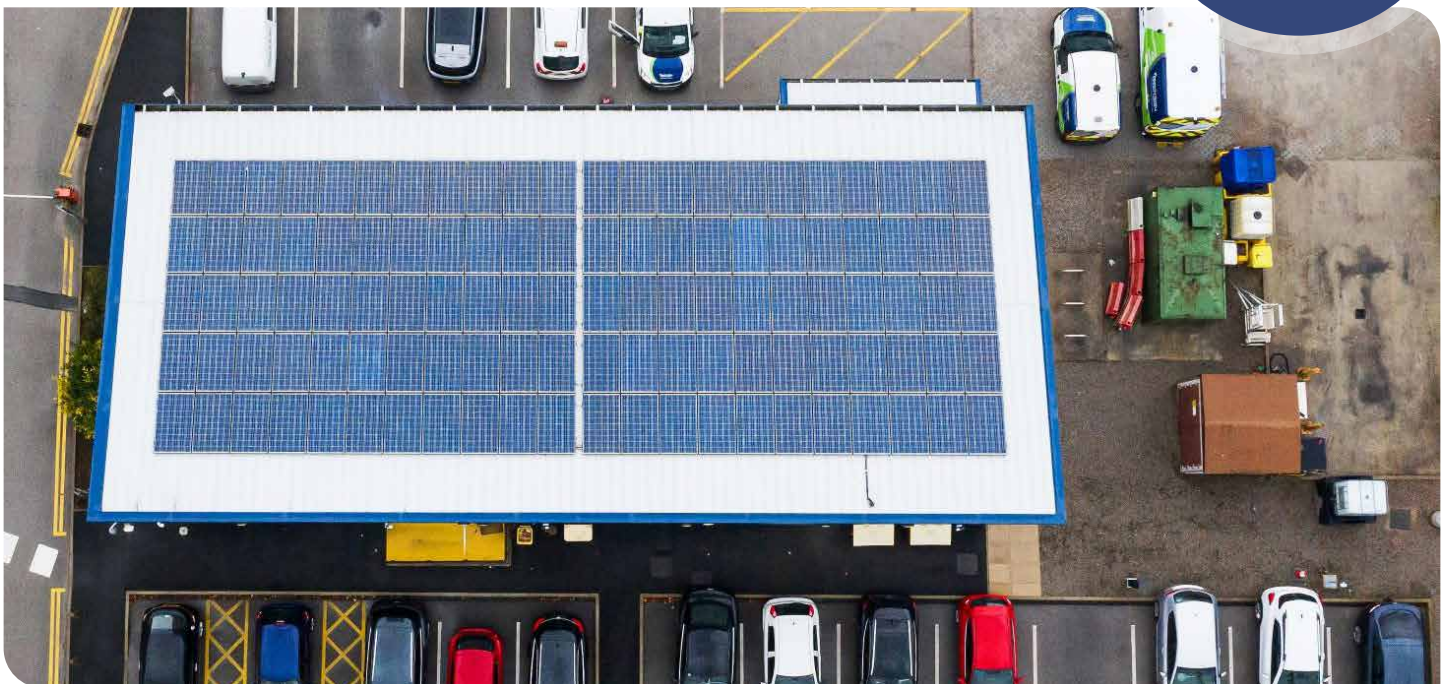
On-site charging

To promote the uptake and usage of EVs we have installed charge points at the majority of our sites.

The chargers are a mix of slow and rapid charge points to allow colleagues to choose the most appropriate charging speed for their needs. We will continue to expand the number of charge points at our sites to meet the growing demands for EV charging for colleagues and visitors.



118 EV charge points available for colleagues and visitors at 15 sites



Electrifying our fleet

We have already taken steps to address our fleet emissions by replacing all of our pool cars with electric plug-in vehicles.

Our goal is that every new car leased by the company will be a low emission vehicle (HEV, PHEV or BEV) by 2023 and have begun a targeted replacement programme.

The work we have been carrying out to review our fleet also includes plant and equipment. In 2019 we purchased four state-of-the-art [electric mini diggers](#) to replace their diesel counterparts.

Each vehicle has reduced our carbon emissions by 64 tonnes CO₂ equivalent a year. Running and servicing costs are significantly lower, and they are five times quieter than traditional diesel equivalents.

Our electric mini-diggers each save 64 tonnes of CO₂ a year



Leading by example – strategic commitments

Lead by example

- We will develop exemplar projects to showcase available technology
- We will share our experiences of transitioning our own fleet

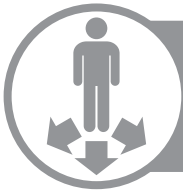
Fully decarbonise our own operations

- We will actively replace our ageing fleet of petrol and diesel cars, vans, trucks and plant
- We will challenge our suppliers to decarbonise their own fleets
- We will offer vehicle charging facilities at all our sites
- We will utilise renewable energy to power our fleet

Encourage colleagues to reduce their transport-related emissions

- We will incentivise colleagues to buy EVs
- We will promote teleconferencing and remote working
- We will encourage use of public transport
- We will promote car sharing
- We will encourage the use of alternative forms of transport e.g. walking and cycling

Playing our part in the national strategy



We will work with the rest of the electricity and transport industries to inform national policy

We recognise that we have a key role to play in supporting the uptake of EVs, both locally and nationally. It is essential that this transition is carried out in a safe manner, particularly in relation to the reliability of EV charging. We are part of national and international working groups which look at developing safe working practices, codes of practice and guidelines.

We provide a voice for our customers at the Society of Motor Manufacturers and Traders (SMMT) EV working group which is made up of key organisations who have influence over the UK's transition to electric transport.

We are also an active member of the Energy Networks Association low carbon technology working group. The primary focus of this group is to look at new technologies such as EVs and develop national policies, procedures, guidelines and working practices. This ensures a consistent approach for the connection of these new technologies across the UK.

An EV energy taskforce has been formed at the request of the UK government to make suggestions to government and industry to ensure that our energy system is ready for, and able to facilitate and exploit, the mass uptake of EVs. We are working with the taskforce to apply its recommendations and support future work.

We regularly interface with national government agencies and policy makers to help guide the focus for the decarbonisation of transport. These include: The Department for Business, Energy and Industrial Strategy, The Office for Low Emission Vehicles, The Office of Gas and Electricity Markets and the Climate Change Committee. It is with the support of the electricity industry that the government has been able to bring forward the target date for banning the sale of new petrol and diesel cars from 2040 to 2030.

During the EV transition period, it is important that there is fair and equal access to charging infrastructure for everybody, including those who do not have access to private off-street parking, have limited means and those who live outside of the main urban areas.

We will look to influence stakeholders at a regional and national level to ensure that access to electrified transport and charging infrastructure is fair and equal and that less commercially-attractive locations such as rural areas and disadvantaged communities are not excluded.

We are part of national and international working groups which look at developing safe working practices, codes of practice and guidelines

Influence – strategic commitments

Influence policy

- We will provide a source of quality information to local and national policy makers to allow them to make informed decisions
- We will use our influence to promote the interests of our customers
- We will encourage policy makers to be even more ambitious with their targets to decarbonise faster
- We will influence stakeholders to provide fair and equal access to electrified transport and charging infrastructure

Standardise across the industry

- We will ensure that there are adequate safety standards applied to products sold to customers
- We will develop standard policies and procedures to allow streamlining of connections and operations

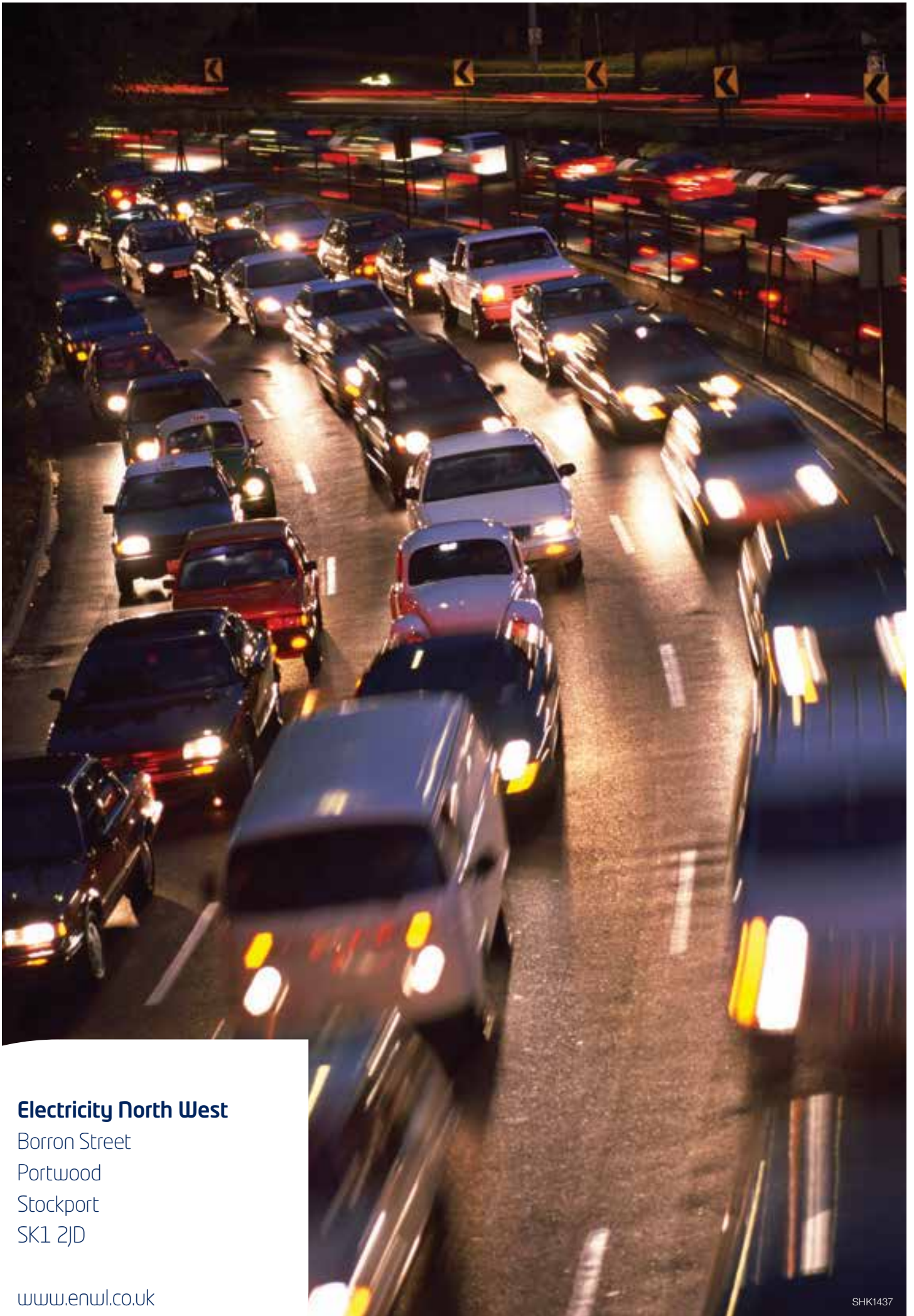
Get in touch

If you have any feedback about our EV strategy, please get in touch. We will routinely review our strategy and your feedback will help us to develop and improve our approach.

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 www.enwl.co.uk/ev-strategy

Stay connected...     



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