

Draft

strategy and action plan
to deliver a Marches network
for charging electric vehicles

(the council areas of Herefordshire, Shropshire and Telford & Wrekin)

Contents:

Foreword

Background

Government encouragement

Potential partners

Opportunities for progress

Resource and infrastructure implications

Outline strategy

Outline Action Plan

Foreword

Green Shropshire Xchange (GSX) is a network of environmental groups in Shropshire and Telford & Wrekin and is concerned, amongst other issues, with the improvements required for our transport system.

These include the shift to low emission vehicles, support for public transport, the promotion of cycling and the development of 20mph zones in residential streets.

Investigations showed that a strategy was needed for the growth of the network of charging points for electric vehicles, particularly but not exclusively across rural areas.

The important ambitions to reduce polluting emissions driving climate change and improve air quality for future generations will be enhanced by supporting this strategy.

We will be providing co-ordination support for the action plan and look forward to working with a wide range of partners from across the entire community.

Our vision is of a widespread, reliable network of charging points that provides reasonable choice to drivers in charging their vehicles across the Marches at a fair price with minimal inconvenience and supported by local amenities.

We look forward to reading or hearing of your thoughts and comments.

Tony Green

Chairman

Green Shropshire Xchange

Background

The government announced on 26 July 2017 the end of the sale of all new 'conventional' cars and vans by 2040. This effectively challenges vehicle manufacturers to phase out production of 'conventional petrol and diesel cars and vans' and pursue increasing sales of non-fossil fuelled vehicles, assumed to be electric, although alternatives do exist such as hydrogen fuel.

It has also recently launched the Automated and Electric Vehicles Bill. This suggests motorway services and large fuel retailers *could* be made to provide electric charging points and hydrogen refuelling stations. This would have relatively little effect *directly* in *rural* geographical Herefordshire and Shropshire (including Telford & Wrekin), so there remains a challenge to provide local charging points.

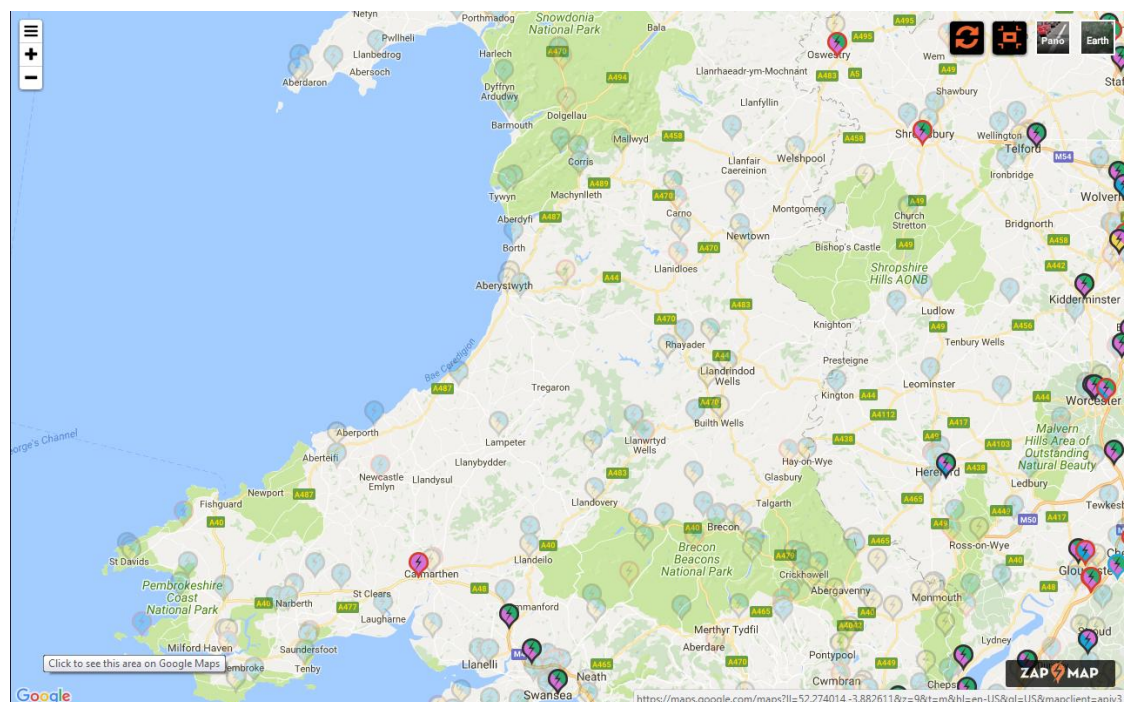
A challenge arises from the lack of an existing adequate 'network' of electric vehicle charging points in the Marches area: there are too few points and a limited geographical coverage.

More importantly, no-one has any strategy nor funding to develop a strategic Marches network. The challenge is to develop such a strategy and action plan with a coherent approach and co-ordination which embraces the existing piecemeal activity.

The aspiration is to both widen and deepen the poor existing network.

To illustrate the situation a map is provided below of rapid chargers only in the Marches and Wales area from January 2018. This gives a clear impression of the need to improve the network across the Marches.

The charging point situation is fluid with a series of initiatives from government and announcements from major companies with technology also moving on apace. It is considered inappropriate to be too prescriptive in defining a network of a slow, medium and rapid charging points. Nonetheless later in this document a list is provided of geographical locations where it is suggested charging points should be introduced or added to.



The local challenge

The electric vehicle fleet is expected to grow quickly and this rapid growth challenges the Marches community, and particularly the business, public and non-government sectors, to ensure a suitable network of electric vehicle charging points is increasingly in place to meet these needs.

Our vision is of a widespread, reliable network of charging points that provides reasonable choice to drivers in charging their vehicles across the Marches area at a fair price with minimal inconvenience and supported by local amenities.

Unfortunately, an initial assumption was that electric vehicle (EV) owners / users would charge up at home and consequently there was little need for action. This is wrong as EV owners will increasingly not be able to charge up at home because of practicalities such as living in homes with no adjacent parking place, for example a block of apartments or terrace house, etc.

It is suggested that approximately 43% of existing car owners do not have access to off street parking.¹

On-street charging points are limited in their practicalities:

- occupied by non-EVs, i.e. internal combustion engine vehicles (ICEs), (already experienced at designated charging points such as at Wellington Civic Centre)
- shuffling vehicles around overnight to enable other vehicles to charge (unless every on-street parking space was provided with its own adjacent charging point)
- owners parking well away from home to find an unoccupied space and
- the lack of oversight of the charging.

Electricity distribution network

With the increasing numbers of vehicles wanting to charge there is the likely inadequacy of the local distribution network to actually deliver such high levels of power to residents.

National Grid will have to manage with DNOs (Distribution Network Operators) access to EV charging to ensure that there is no overload on the local grid which will have variables such as location, limits on power to be drawn at particular times of day, etc.²

Consequently there needs to be a network of charging points that can meet the needs of EV users across the geographical area of Herefordshire and Shropshire.

National Grid and the DNOs will play a key role in facilitating the development of EV charging points here in the Marches and across the country. Copies of this consultation are being shared directly with these companies.

¹ Source: Our energy insights - Forecourt thoughts: Mass fast charging of electric vehicles, National Grid

² Source: <http://www.electrification.org.uk/about/the-project/>

Why electric charging at filling stations only will not suffice

A simple response would be to assume that existing filling stations would install a few charging points and problem solved.

The reality belies this assumption for several reasons:

- The time taken for a conventional refuelling of petrol or diesel is a matter of, say, four minutes. Even rapid chargers³ can take around 30 minutes and slow / medium chargers clearly take much longer.
- Given the flow of traffic through existing fuel filling stations additional parking spaces would be required. For most fuel filling stations, constrained by existing neighbouring properties this is physically impossible.
- Meanwhile, petrol and diesel pumps will continue to operate as today.

It is also advised that 'The vehicle when charging at the maximum length of the charging cable must be outside of any hazardous area, whether around pumps, fill points, tanker stand or vents. The distances are not affected by the rating of the charger.'

{advised as guidance from the 4th edition of the EI Guidance '*Design, construction, modification, maintenance and decommissioning of filling stations*' by Association for Petroleum and Explosive Administration (APEA) and Energy Institute (EI). Not published at that time.}

Whilst the network would include fuel filling stations, it has to be extended to places where no additional land is needed to accommodate vehicles whilst charging for whatever period of time. Opportunities to extend the network include both public and private locations:

- work places, business parks / industrial estates, public car parks, on-street, retail parks, supermarkets, etc.
- hotels, guest houses, tourist attractions (e.g. Ironbridge Gorge Museums, British Ironwork Centre, National Trust properties) and other leisure facilities

The likely duration of the visit to any particular EV charging station location will help determine the type of EV charging equipment that should be provided:

- Where the EV user is likely to be parking for a longer period, such as at the workplace, National Trust, etc., the choice may be to install a slow / medium charging point

The choice will also be restricted due to the existing power capacity.

'While the UK electricity system has plenty of capacity to deliver energy to EVs, if lots of people in one area have electric vehicles and clusters of cars develop, more EVs would have a greater impact on local electricity networks. Charging vehicles with larger batteries, at faster rates, and over longer periods could exacerbate this pressure.

The Electric Nation project is being hosted by Western Power Distribution. ... The project aims to provide local electricity network operators with the tools to be able to ensure that their networks can cope with this massive new challenge, whilst avoiding replacing cables and substations.

³ At a fuel filling station, rapid chargers are the more likely choice

... It has been proven by the My Electric Avenue project that at least 30% of GB low voltage networks (the cables and substations nearest to homes and businesses) will require investment by 2050 if adoption of electrified transport is widespread. This would represent a present day cost of £2.2bn.’² {since made worse by increasing battery sizes and charging rates}

It might be considered that rapid charging points have relatively little need of any amenities whilst charging at work or on a longer stay at a town centre, sports facility or museum, will naturally entail other activities. Given our vision of a widespread, reliable network of charging points includes reasonable choice to drivers there is merit in locating charging points supported by local amenities, such as publicly accessible toilets, café or restaurant. Care must also be taken to provide reassurance regarding safety and security. A significant challenge that can arise is to restrict parking in the bays associated with a charge point to those actually recharging an electric vehicle.

In summary, therefore, there is a major opportunity in the Marches area to significantly expand the existing small and limited geographical network both more widely and deeply. We have high ambitions for a much improved network but realise that what is practicable is limited by our voluntary resources and the response we meet when approaching potential site owners. If there is a poor response then the Marches will be seen as backward and unwelcoming to visitors, businesses and its residents who will increasingly seek to drive electric vehicles, whether cars, vans or larger vehicles.

2 Source: <http://www.electricnation.org.uk/about/the-project/>

Government encouragement

The government announcement of 26 July 2017 included a 'Plan for roadside NO2 concentrations and a new Clean Air Fund'.⁴ The plan's clear intention is to bring forward the shift to electric (or other sustainably fuelled) vehicles. A crucial step is to establish the national network of charging (or refuelling) points. This document explains how local bodies can provide the network in the Herefordshire Council, Shropshire Council and Telford & Wrekin Council areas. This part of the document describes the financial support schemes offered by the government to do so.

The government directly supports investment in charging infrastructure through the Office for Low Emission Vehicles (OLEV) for residential, workplace and other public recharging facilities.' This is a response to:

'.. 'range anxiety' (the concern about 'running out of juice'), which is one of the key barriers to the uptake of plug-in vehicles. It is important to note that plug-in hybrid and extended-range electric vehicles do not have such range constraints. In addition, evidence from real-world trials⁵ suggests that this concern appears to reduce appreciably once people use plug-in vehicles regularly.

Electric Vehicle Homecharge Scheme

This provides support towards the costs of installation of a home charger for electric vehicle users.

On-street Residential Chargepoint Scheme

It aims to increase the availability of plug-in vehicle charging infrastructure for residents who do not have access to off-street parking. Local authorities are invited to submit applications to receive funding towards the installation of on-street electric vehicle charge points in residential areas to The Office for Low Emission Vehicles (OLEV). £2.5 million funding was available until 31st March 2018 but has now been extended.

Workplace Charging Scheme

It allows any business, charity or public authority to claim the grant towards the cost of installing EV charging points provided they have dedicated off-street parking for staff or fleet use only. The authorised charge point installer will claim the value of the voucher (£300) for each socket (to a maximum of 20) on the applicant's behalf.

The Energy Saving Trust (<http://www.energysavingtrust.org.uk/travel/electric-vehicles>) has web pages devoted to electric cars and vehicles, promoting the government support for electric cars and vehicles.

National industrial and clean growth strategies

The national industrial strategy was launched in 2017 demonstrating 'the government's commitment to minimise business energy costs and support the competitiveness of UK companies as we pursue our climate change targets in the most cost effective way.'

4 (<https://www.gov.uk/government/news/plan-for-roadside-no2-concentrations-published>)

5 Everett A, Walsh C, Smith K, Burgess M and Harris M, Ultra-Low Carbon Vehicle Demonstrator Programme, May 2011

More recently the government launched its Clean Growth Strategy ⁶ in October 2017 which sets out proposals for decarbonising all sectors of the UK economy through the 2020s. It explains how the country can benefit from low carbon opportunities, while meeting national and international commitments to tackle climate change.

Highways England

Highways England is demonstrating its commitment to help the government deliver a growing network with its recently announced objective '*to ensure that 95% of the SRN {Strategic Road Network} has a charge point at least every 20 miles and to complement the support given by the Office for Low Emission Vehicles (OLEV) and industry for residential, workplace and other public recharging facilities.*' ⁷

West Midlands Combined Authority

The WMCA at a regional level is prioritising electric vehicles and associated technology with the Mayor of the West Midlands Andy Street welcoming an £80 million funding boost for a new national battery facility in the Coventry area. ⁸ The National Battery Manufacturing Development Facility will be set up by WMG (Warwick Manufacturing Group) at the University of Warwick in partnership with Coventry City Council and the Coventry and Warwickshire Local Enterprise Partnership (CWLEP).

⁶ <https://www.gov.uk/government/publications/clean-growth-strategy>

⁷ <https://www.gov.uk/government/publications/highways-england-air-quality-strategy>

⁸ <https://www.wmca.org.uk/news/80-million-supercharge-for-region-s-electric-vehicle-technology/> Wednesday 29 November, 2017

Private sector initiatives

Ecotricity with its 'Our Electric Highway' initiative has taken a lead together with other charge point operators (for example Chargemaster, POD Point and Charge Your Car), to develop networks but their extent is nowhere near nationwide and does not seem likely to be.



Potential partners

The organisation behind this initiative, Green Shropshire Xchange, has no formal responsibility or powers to deliver a strategic or integrated network of charging points. In fact no-one has any responsibility to do so and therein lies the problem.

Any assertion that the free market will deliver a suitable network is a chicken and egg situation as evidenced by the inertia in installing charging points across the Marches. Such inertia generates further inertia by deterring the purchase and use of EVs.

Highways England

Highways England's plans limits them as a potential partner. Its pursuit of its own objective is undoubtedly helpful. However, this has two shortcomings:

- it is focused on its Strategic Road Network, namely the M54 / A5 and A49 between Hereford and Shrewsbury;
- it is confined to rapid charging points only.

The business organisations, including the Marches LEP (Local Enterprise Partnership)

In earlier work approaching the business community the support was gained of the Shropshire Chamber of Commerce; Shropshire, Herefordshire & Worcestershire Federation of Small Businesses; and Herefordshire and Worcestershire Chamber of Commerce. The interest of the Business Environmental Support Scheme for Telford (BESST) has also been gained so there is a receptive business community with many potential partners likely interested in considering workplace charging facilities.

Herefordshire, Shropshire and Telford & Wrekin Councils

Significant interest has been shown by the Marches LEP and the unitary councils from whom we hope for further support. Nonetheless taking a lead has been left to a voluntary organisation.

The consultation process offers a formal opportunity to extend the invitation to partnership to a much wider audience of the voluntary sector, public sector, the visitor economy and general public.

Following the revision of the draft strategy and action plan in light of comments received it is intended to practically pursue the action plan involving willing partners to identify and sound out potential charging point hosts and begin the process of making the necessary charging point network a reality. The business community will be particularly important to the success of developing a network through workplace charging and facilities for visitors. It is also hoped that filling stations will actively pursue developing facilities to supplement the fossil fuel offer.

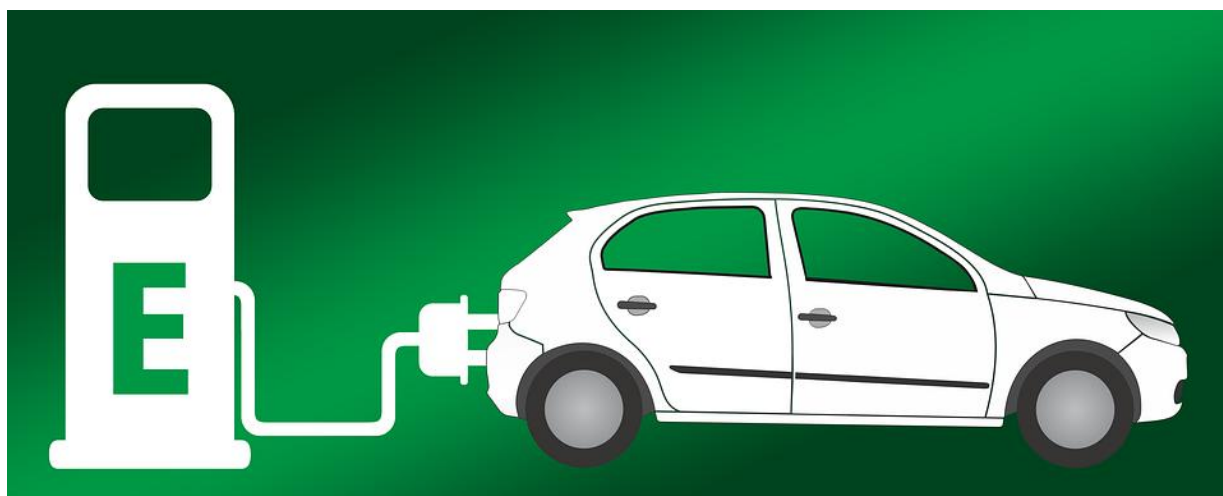
Marches businesses

Take-up by employers of workplace charging has been slow and similarly for public facilities. EV drivers should not be confined to their local area but be able to travel further afield hence the need for wider availability of charging points, such as in Herefordshire and Shropshire which are significant tourist and visitor destinations. Exemplified by Discover Telford, Shropshire Tourism, Ironbridge Gorge Museums, etc.

The consultation process offers a formal opportunity to extend the invitation to participation to a much wider audience of the voluntary sector, public sector, the visitor economy and general public.

Opportunities for progress

There are clear opportunities to make significant progress with the national organisations already pursuing the installation of charging points and others open to seriously considering the issue.



Highways England is working towards new rapid charging facilities along the A49 between Hereford and Shrewsbury. Warner Leisure Hotels has announced the installation of free-to-use EV charge points across its portfolio of locations. This would include the nearest facility at Holme Lacy House Hotel, Holme Lacy, Herefordshire.

Shell has begun introducing 50kW fast in 2017 although their filling stations in Herefordshire and Shropshire (including Much Wenlock, Newport, Sutton Maddock and Telford) will be likely much later in the rolling programme. BP has similarly announced its intention to install electric car charging stations across its UK petrol station portfolio. See the Appendix under the heading Media reports.

The National Trust is rolling out EV charge points across an increasing number of its sites after agreeing a partnership deal with Rolec EV.⁹

In addition to such national initiatives local businesses should be seizing the opportunity to bring forward the establishment of an effective, comprehensive charging network. Several potential partners were identified earlier in this document in the section *Potential Partners*. These range across the public and private sectors including major employers, local authorities, town and parish councils, the NHS, leisure facility operators and voluntary organisations such as Ludlow 21¹⁰ and Stretton Climate Care.¹¹

The intention behind this draft strategy is to bring forward the development of the local infrastructure and the shift to electric vehicles rather than to await a haphazard piecemeal development of unco-ordinated, singular charging points that fail to meet our strategic needs.

⁹ <https://www.nationaltrust.org.uk/features/electric-vehicle-charging-points>

¹⁰ <http://www.ludlow21.org.uk/>

¹¹ <http://strettonclimatecare.org.uk/>

Resource and infrastructure implications

Green Shropshire Xchange, as a small network of local groups in Shropshire and Telford and Wrekin, does not have the funds nor own sites to help establish such a network. It does, however, have the drive and ambition to work with others to help co-ordinate and establish such a network. It intends to work with interested parties, such as local businesses (both large and small), business representative organisations, unitary and town and parish councils, the public and voluntary sector to identify and evaluate potential host sites such that investment can be forthcoming - either from the host, supported by public funding as appropriate, or national or regional operators.

As an indication of potential expense the cost of a *rapid* charging point can be around £35k to 40k. Large areas of Herefordshire and Shropshire are rural so accessing higher electric capacity can be a significant challenge physically and financially. Many potential sites would not already possess the necessary spare capacity for one or more rapid chargers, far less the forthcoming 'very rapid' chargers of some 150 to 350kW. There would be on-going maintenance cost implications which would likely relate to the intensity of usage of the equipment and its degree of complexity.

Common sense suggests that rapid (and potentially 'very rapid') charging points are more appropriate to urban sites that would attract higher levels of usage and thereby generate the income to provide some return on the investment. It should be kept in mind that such facilities are typically managed remotely, for example via 3G, LAN or Wi-Fi. This is critical to ensure that remote management is practicable and that 'live' information is available on the internet, through the various charging point map websites. Potential users must be able to identify in advance of arrival whether the equipment is in working order, available for use or is currently charging other vehicles.

Numerous charging points in our area can be checked by phone call in advance to the host to verify their availability and notify one's intention to arrive.

Given the rural nature of much of Herefordshire and Shropshire and the poor mobile phone / broadband coverage this may put a question mark against how practicable and affordable more remote charging points can be as regards having 'live' data available on the internet for smart phones, tablets, etc. Nevertheless, it is noted that the Co-wheels Shropshire car club operates in Shropshire (and similarly elsewhere) using the mobile phone network to record vehicle usage and members' intentions.

Given the high costs of rapid and 'very rapid' charging points it is more practicable to have (cheaper) standard or fast chargers in locations where time is not so critical, such as hotels, guest houses, restaurants, and tourist attractions. Here EV users would likely be amenable to return to their vehicles after several hours of charging.

Potential costs of charging points

The cheapest chargers are those for home use which can be fully installed from as little as £199 (inc VAT), given the householder is OLEV grant funded.

The Energy Saving Trust advises:

'The typical cost for a home charge point and installation is approximately £1,000. As part of its Electric Vehicle Homecharge scheme, OLEV (Office for Low Emission Vehicles) currently offers applicants £500 towards this cost. EST will provide up to £500 further funding on top of this.'¹²

12 <http://www.energysavingtrust.org.uk/scotland/grants-loans/domestic-charge-point-funding>

For workplaces or businesses looking to offer the public the opportunity to charge their EV choices range from the relatively inexpensive to more costly.

Zap-Map advises ¹³ :

‘The most common workplace installation is a wall-mounted Type 2 7kW charger, which is compatible with most of the best-selling electric vehicles and will charge a vehicle fully in around 3-4 hours. Some businesses may wish to install a faster 22kW unit or even a rapid charger if cost and space allow.

For businesses that plan to install their charge point in areas that are publicly accessible, it is essential to consider wider access issues. Most charge point manufacturers offer units that can be accessed with either a key or RFID (radio frequency identification) card to prevent unwanted usage.

Zap-Map identifies two elements to the overall costs, namely the price of the charging unit and the installation cost. Every situation will be different, but assuming there are no particular difficulties indicative costs are:

- a ‘standard’ scheme ‘fully installed Type 2 7kW double-header would typically cost around £1,500, after the WCS (Workplace Charging Scheme) Grant – in this case worth £600 – has been applied.
- a 22kW double-headed post unit typical costs are £2,500-£5,000 (including Workplace Charging Scheme Grant),
- whilst a fully installed rapid charge unit can cost up to £35,000.’

Green Shropshire Xchange and the local authorities do not have the financial resources to invest in the necessary infrastructure. Therefore, it is intended to reach out to potential hosts who may have an interest in pursuing such investment independently, with relevant government financial support or working with the national or regional operators, in line with the action plan proposed.

Existing and future infrastructure

Some existing charging points offer free charging whilst others are more commercially oriented and charge a fee, with some network operators having a monthly subscription and / or a fee for the electricity used. Simple payment at the charging point by contactless credit or debit card is ideal for wider accessibility.

Payment for use can be direct to the site operator, for example by purchased tokens.

Some site owners may be happy to operate free point of use, at least in the short-term. It is likely that the charging points delivered through this initiative will be ‘independent’ rather than managed by national or regional businesses that may tend to operate membership and or monthly subscription requirements for their use.

To put a figure on the necessary investment to provide a much improved network is highly speculative but is certainly in the region of £1m and upwards. As an illustration providing 100 no. 7kW double-header points, 100 no. 22kW double-header and 25 no. rapid chargers would cost around £1.6 million. This is derived from roughly £210,000 for the 7kW, £500,000 for the 22kW and £875,000 for the rapid chargers.

13 <https://www.zap-map.com/charge-points/charging-work/>

As indicated earlier our strategy is largely based on local investment rather than attracting national charging network operators who will typically prioritise sites which provide a significant financial return. An anecdote of the reality of current charging is as follows:

‘Shropshire rapid chargers busy yesterday. At about 4pm, Oswestry rapid had two plugged in, a Zoe and a Leaf. I had 30 plus % so carried on to Shrewsbury. A Zoe plugged in there needing 30 minutes to get to Stoke (nice guy, came out and talked to me) and a Leaf arrived just after me to join the queue - and not really spaces to queue at Shrewsbury rapid as adjacent spaces filled.

In the end I popped back to the Co-op at Bicton Heath in Shrewsbury. Glad of the 6kwh charger, **decided to treat myself to a £5 carvery at the Toby over the road**, which gave my charge time to rise from 8 to 50%, and I left for home.’

This shows the local economic benefit that can often arise from the non-rapid charging points where the driver (and passengers) have a longer stay in the vicinity whilst the vehicle is charged up over a longer period of time.

Outline strategy

This strategy recognises that many existing and imminent owners or users of electric vehicles have home or business charging points. As wider use of electric vehicles is intended to grow the provision of charging points to cater to those without ready access to home or business charging or those travelling greater distances becomes more critical and essential to the achievement of fossil fuel free transport.

The future network?

The network could therefore consist of a range of charging points including the following:

- On-street within residential and business areas
- Within public and private car parks, such as workplaces
- Retail car parks such as supermarkets, out-of-town retail parks, etc.
- Leisure and tourism sites such as hotels, guest houses, restaurants, tourist attractions, such as the Ironbridge Museums, Attingham Park, the Flaxmill Malting, etc.
- Fuel filling stations, including independents, supermarkets and oil company linked, widening their offer to electric vehicle users

The technological developments of electric vehicle batteries and charging equipment is significantly reducing the time taken to charge vehicles to a full or near full state (typically 80%) such that users will no longer have to leave the vehicle for many hours or overnight to recharge their batteries. Such equipment is currently very expensive requiring a higher throughput of customers to justify the investment.

This should make provision at traditional fuel filling stations increasingly attractive to the retailers where customers would welcome a more amenable environment whilst recharging. Complementing this, many EV drivers would be happy to refuel whilst enjoying a meal, a family visit to a museum or National Trust property, etc. This suggests a role for slower chargers where time is not of the essence.

Consideration must be given to existing travel patterns and volumes of vehicles on the many roads across Herefordshire and Shropshire. Highly trafficked routes include the M54 / A5, A438, A44, A49, A442, A41, A4103, A449, A454, A458, A465, A53, and A518, but a priority of this strategy is to also meet the needs of the more rural areas, making them more 'EV friendly' and thereby encouraging greater use of electric vehicles.

Exploring travel patterns will help to inform what good electric vehicle charging provision will look like, such as provision related to shopping, commuting for business and education, recreation, tourism, and travel between Marches settlements and through the Marches.

Existing fuel filling stations are typically focused on urban locations and supermarket sites. Provision in rural areas is limited and under significant economic pressures. Nevertheless, many of the leisure sites are situated in rural areas, such as National Trust properties, golf clubs, camping sites, etc.

It is likely that the faster the charging time the higher the likelihood of a premium rate being applied is higher. Those willing to return to their vehicle in a few hours might

expect a lesser financial charge for the same amount of electricity because the equipment is cheaper and the service is more 'standard' than 'First Class (quicker turnaround).' Thus a fuel filling station would likely invest in rapid chargers whilst a hotel would more likely not.

The existing network of largely independent charging points are focused on:

- Bromyard
- Hereford
- Kington
- Ledbury
- Leominster
- Ross-on-Wye
- Church Stretton / Ludlow
- Oswestry
- Shrewsbury
- Telford

Highways England's policy (*focused on the SRN {Strategic Road Network}*) is *likely to deliver* a few rapid charging facilities along the A49 between Hereford and Shrewsbury, and a *possible* facility for the section of the A458 between Shrewsbury and the Welsh border.

There is no other indication readily available in the public domain of significant investment in charging infrastructure. Without these investments, only a few facilities are likely to be established by individual businesses. These could be for private use only or possibly also for public use.

Therefore, considering the wider context of Herefordshire and Shropshire it is proposed to work towards extending the network of charging points as follows (not necessarily complete):

Shropshire

- Baschurch
- Bishop's Castle
- Broseley
- Bridgnorth
- Chirbury
- Cleobury Mortimer
- Clun
- Ellesmere
- Halfway House / Wattlesborough
- Knighton (largely in Powys but partly in Shropshire)
- Market Drayton
- Much Wenlock
- Pontesbury / Minsterley

- Quatt / Shifnal
- Sutton Maddock
- Telford and Newport
- Waters Upton
- Wem
- Whitchurch
- Woore

Herefordshire

- We particularly seek feedback from the Herefordshire community to guide our thinking for locating new facilities.

Outline Action Plan

Following the consultation process it is intended to amend the draft strategy and action plan considering consultees' comments and suggestions in a final document.

This will form the basis for taking forward the strategy through the action plan.

At present the outline action plan is proposed to be taken forward by volunteers (some from the Green Shropshire Xchange network). This clearly limits the pace at which investigations can be pursued to identify, make contact with and assess potential host sites for new charging points. Once a potential site is assessed progress towards installation depends on the interest of the host, the potential cost and sourcing of funding, management of the installation process and possible involvement of national or regional operators who could take on the entire responsibility for the development.

One possibility is that local town and parish councils take a lead in helping identify possible host sites within their area and work with volunteers to take the initiative forward.

Individual businesses can pursue their own schemes to introduce on-site charging points for their own employees and visitors. Others with a more public-facing business, such as a hotel or leisure facility or retail operation, may wish to establish a charging point intended for public use. Clearly it would be of wider benefit if all businesses advise GSX of their thinking to enable a wider understanding of the possible network development and avoid duplication of effort.

We aim to establish a deeper relationship with the three unitary (and town and parish) councils to avoid any duplication of effort and focus limited resources to the best overall outcome.

First steps of the action plan:

Initial exploration of opportunities

- Identify potential host locations and consider the initial suitability of the site.
- Contact the potential host to identify the key contact and discuss establishing a charging point. The discussion's aim will be to identify benefits for the host (and the wider community) and to show how it is part of the wider strategy and action plan.

Development of opportunities

- Given the interest of the host discuss in more detail the range of options, potential costs and means of investigating further the possible installation.
- Provide a summary pack which provides helpful background information on possible equipment, suppliers, charging point operators, power requirements, etc.

Facilitating and promoting schemes

- Provide 'handholding' as appropriate to the potential host and maintain contact as the process unfolds.
- Maintain contact to provide support as appropriate to see the scheme through to installation and commissioning and recording details of the growing network.

- In agreement with the host promote via local media the 'opening' of the new charging point and register the details with the various websites providing mapping and details of charging points.

Subsequent steps

- Maintain co-ordination of the work across Herefordshire and Shropshire with periodic reviews to consider the progress of the initiative and to learn from experience.
- Promote progress through local media and to the wider GSX membership through its website and newsletter. For those hosts and others who wish to be updated provide a periodic update by e-mail.
- Keep up to date with developments elsewhere in the country and maintain the accuracy of the summary pack.
- Continue contact with the hosts of the new charging points to learn from feedback on their use and to share with potential hosts.

The team of volunteers would also pursue a co-ordinating role with a view to sharing information on developments with interested parties such as local organisations, councils and businesses and helping minimise the overall expenditure of time, effort and resources in delivering a network of charging points.

As part of the consultation process volunteers are already establishing relationships with a wide range of organisations, local councils and businesses who can play a key role in contributing to the development of the network, providing a firm foundation to implement the action plan and strategy.