SP Energy Networks
Newsletter February 2020

SP Energy Networks drives electric transport forward with Charge Project

When Ofgem announced earlier this month that the UK needed a network that could support 10 million electric vehicles (EVs) by 2030, motorists were not the only ones to take notice. SP Energy Networks (SPEN) and its partners in the Charge Project are already a year into an extensive four-year programme to accelerate deployment of public charging infrastructure across the SP-MANWEB region.

The Charge Project brings together experts from transport planning and electricity networks, as well as charging-technology innovators, to translate the vision for easy EV charging into a reality for drivers in West Cheshire, North Wales, and Merseyside. The government is looking to speed up the transition away from fossil fuels as early as 2032 and implement the "road to zero", a long-term strategy to transition to zero-emission road transport. For this, reliable, readily available on-street and other publicly accessible charge points will require well-planned decisions now from property developers, forecourt operators, local authorities, and electricity networks. SPEN is bringing these stakeholders together to encourage informed investment based on research into vehicle demand and consumer driving habits.

While it is expected that the majority of EV charging will take place at home and in the workplace, there will also be a need for on-street charging, as well as facilities for charging at public destinations such as leisure and shopping centres, tourist attractions, and filling-station forecourts. Through the Charge Project, SPEN will gain better understanding of how increased demand for electricity from transport will impact the network, considering locations, the hardware installed, usage patterns, and whether smart charging arrangements can be used.

The Charge Project's research will benefit regional development, giving West Cheshire and North Wales businesses, infrastructure investors, and local authorities a head start on planning to accommodate the growing number of EV drivers working in, living in, and visiting the region.

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Three Common Questions

How will the growth of electric vehicles change the relationship between transport planning and the electricity network over the next 30 years?

The Charge Project is modelling how, where, and when the uptake of EVs will impact the electricity network. The transport model built by project partner PTV estimates the potential volume of EVs that will drive on the road network in the SP-MANWEB licence area; where they are likely to park and for how long; and the distances these vehicles are likely to travel. These results will be presented as "heat maps" from 2020 to 2050, which will show how demand for charging could increase with time across the region.

What smart charging solutions will be able to coexist with, and eventually replace, the petrol and diesel filling stations that drive the refuelling industry today?

As investors and developers look to make the major capital investments necessary to ensure timely, cost-effective development of driver-focused EV infrastructure in the region, Charge Project partner Smarter Grid Solutions is developing, trialling and assessing the role of various smart charging solutions for EV infrastructure. Practically and economically, smart charging solutions to maximise use of existing electricity network infrastructure will cut down on the cost and disruption of connecting charge points. Developing and trialling smart charging solutions now will ensure modern charge points are future-proofed and able respond to external signals to avoid network overloads. The trials the Charge Project will conduct over the next 24 months will assess the performance of a range of smart charging solutions and their impact on customers' ability to charge their EVs and the business case for investors.

How will electric vehicle infrastructure providers access the learning from the Charge Project?

The Charge Project's research and technology trials will culminate in the "ConnectMore" web app. Currently being developed by EA Technology, the tool will offer infrastructure providers a simple, user-friendly interface with which to find information. It will be able to give the likely demand for chargers at any location, the type of charger or chargers required, the available network capacity, connection options based on smart charging solutions, and an indicative cost for each of the connection options. ConnectMore will encourage wider deployment of EV chargers by bringing together the key considerations for an installation into a single app. It will also enable customers to make their own connection assessments, explore multiple options, and consider the cost implications quickly.

The Charge Project has a big vision to prepare the region for a future driven by electric vehicles. SPEN and its partners are working alongside regional stakeholders at each step; they recognise the opportunity to access valuable information that will help shape the deployment of chargers on the road and across the electricity network. Working together with investors, local authorities, forecourt owners, and developers, the Charge Project will deliver a viable, best-in-class model to show how EV charging infrastructure can develop rapidly and deliver economic and environmental benefits across the UK.

Project Partners