

What is the Charge Project?

The Charge Project is an exciting initiative from SP Energy Networks, delivered in collaboration with EA Technology, PTV Group and Smarter Grid Solutions, which aims to accelerate the UK's transition towards electrified transport.

It's also a vital part of SP Energy Networks' commitment to help the UK achieve net zero by 2050.

Running for four years throughout Merseyside, Cheshire, North Shropshire, and North and Mid Wales, the Charge Project will – for the first time – merge transport and electricity network planning together. It will create a comprehensive map of the region that identifies where EV chargepoints are needed and can be best accommodated by the electricity network. It will also pioneer Smart Charging Connections to accelerate chargepoint installation.

ConnectMore Cost Estimator feature launched

The **ConnectMore EV Connection Cost Estimator** – another key element of the Charge Project's innovative mapping tool – has gone live.



Developed by EA Technology, ConnectMore is an **interactive online map** that combines current and future transport patterns with the electricity network. Free and available to anyone, it enables users to identify the best places to install chargepoints based on predicted charging demand and existing network capacity.

The Cost Estimator now enables users to not only identify the optimal location for chargepoints, but also get an instant quote for how much it will cost to connect them to the electricity network.

John Orr, Charge Project Lead, comments: "The Cost Estimator is another significant step forward in fulfilling the Charge Project's mission of accelerating EV chargepoint roll-out. ConnectMore is designed to make this process as quick and easy as possible, from beginning to end. Now, users can go from identifying the best chargepoint locations to getting a connection

quote in a matter of minutes. Having budgetary information like this at your fingertips is a major boon when progressing EV charging projects."

The Cost Estimator provides up-to-date budgetary price estimations via an online portal, with quotes provided for connecting to a specific point on the low voltage (LV) or high voltage (HV) electricity network. In addition, the Cost Estimator will provide data that enables users to consider flexible connections – including Smart Charging Connections – where applicable.

By trying out different options regarding the location, ground type, distance, existing demand constraints, potential network reinforcement work, and size of the connection, the Cost Estimator enables the most cost-effective chargepoint connection to be identified.

Timothy Butler, manager for the Charge Project at EA Technology, comments:



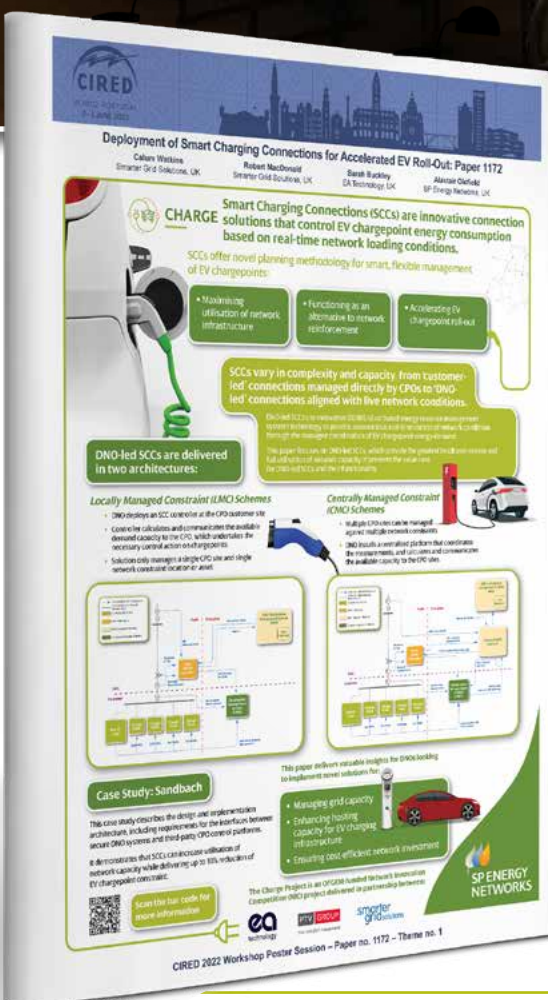
"The Cost Estimator will allow connection decisions to be better informed and quicker, speeding up the deployment of EV chargepoints and allowing more efficient use of existing electricity network assets. This free to use web-based tool has turned complex network data into an easy-to-use platform."



DNO-focused paper and case study presented at CIRED 2022

On 2-3 June 2022, Charge Project partner Smarter Grid Solutions attended the **CIRED Workshop 2022** and presented the paper *Deployment of Smart Charging Connections for Accelerated EV Roll-Out*.

CIRED is the International Conference on Electricity Distribution and has been running since 1971. It is dedicated to the design, construction and operation of public distribution systems, and of large installations using electrical energy in industry, services and transport.



Calum Watkins from Smarter Grid Solutions comments:



"CIRED 2022 was a great engagement opportunity and an excellent way to present our work on accelerating the connection of electric vehicles. It was also very insightful hearing from industry and academics across Europe and Asia on how we can prepare the energy system for the enormous task of moving to zero carbon transport."



Smart charging refinement report goes live

The Charge Project has released the latest in a series of reports that outline the achievements of the project to date and analyse its results. *Definition, Refinement and Design of EV Smart Charging Connection Solutions* has been produced by Smarter Grid

Solutions, and looks at how the concept of smart charging has been refined and adapted during the project following initial trials and stakeholder feedback.

The report is available to read and download [here](#).

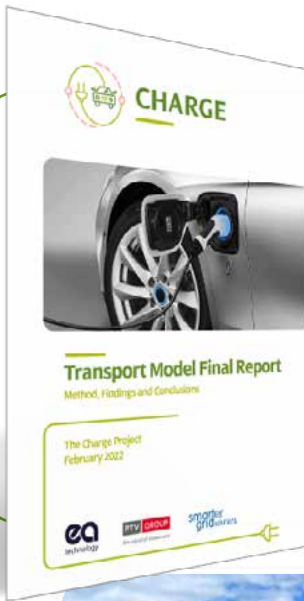
The report is split into four main sections:

- An assessment of the viability of smart charging concepts against customer needs in different network connection scenarios, and the specific Smart Charging Connection (SCC) solutions developed as a result.

- A summary of the customer requirements for implementation of customer-led SCCs and the design and deployment architecture for these solution types.

- A summary of key findings from stakeholder feedback, in which user considerations, SCC viability and implementation challenges are highlighted.

- An overview of DNO-led SCCs, detailing the components and control philosophy required for implementation, including commentary on specific DNO requirements.



Transport modelling paper presented at EVS 2022

On 14 June 2022, Charge Project partner PTV Group presented the paper *An Integrated Approach for the Planning of Public Charging Infrastructure* at EVS 2022.

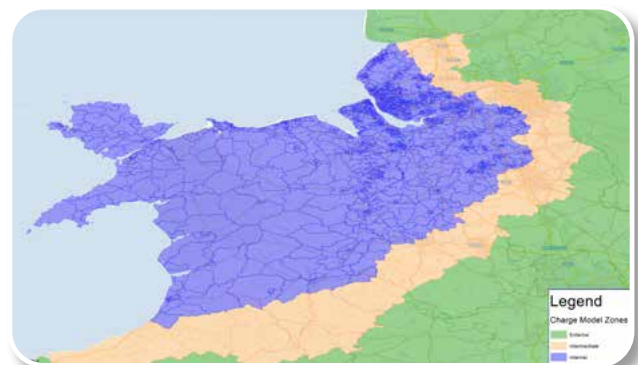
EVS - the **International Electric Vehicle Symposium** – is the most important conference, exhibition and networking event for the EV industry in the world, gathering together policymakers, industry representatives, relevant research communities, and NGOs.



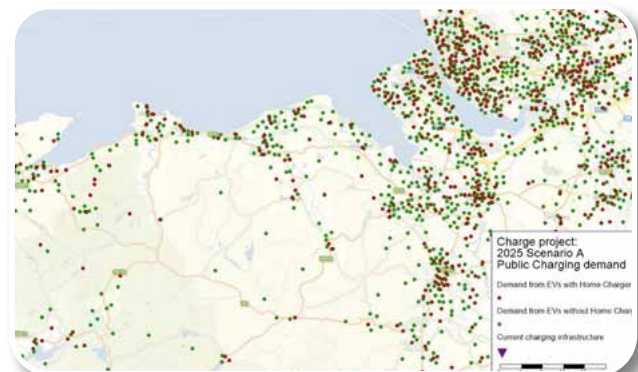
Laurence Chittock from The PTV Group comments:



"It was fantastic to be at the heart of the EV industry's premier global event, talking about the work we've been doing to accelerate the roll-out of the UK's charging infrastructure. It was great to highlight the role that transport modelling has to play in chargepoint deployment, as this is one of the defining features of the Charge Project."



Internal and Intermediate Zone Regions



Visual Display of Public Charging Demand



Example of En Route Charging Demand Data from Charge Transport Model

Q&A

Meet the team



John Orr
Charge Project Lead,
SP Energy Networks

How did you become involved with the Charge Project?

My esteemed colleague Geoff Murphy has taken up a new role within SP Energy Networks, so I'm on board for the final part of the journey. It's very cool indeed to see an awesome collaboration coming together that will benefit so many!

What's the best thing about your job?

The unexpected. There's a new challenge every day: a question gets asked, an incident occurs, a customer wants a particular connection just so, etc. And then preparations and plans, years in the making, kick into play, or at least that's the way

it seems after the event.

My particular focus is on the LV network – in other words, the last mile of cable before your house.

What do you do outside of work?

I've still got little ones in the house, so I'm full-time at SP Energy Networks and a full-time dad too. I know my limits now, so I don't try to help with homework

anymore – integral calculus, maybe, but long division, don't go there!

Working in the centre of Glasgow is great for me – Celtic are back in the Champions League in autumn, so on Wednesday nights I'll go straight from work to the Merchant City for a beer and football under the lights. It's every bhoy's (sic) dream!

What's the biggest challenge that the UK faces in its drive to net zero by 2050?

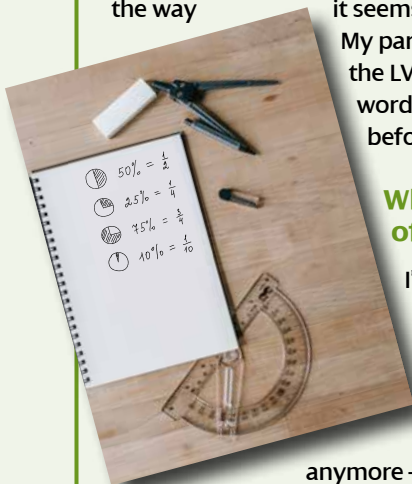
It really is just buying enough time to allow the market to take its course and get the

know-how and tools into the hands of our customers. It's what the Charge Project is all about.

What was your first car and what do you drive now?

My first "car" was the No.37 Glasgow Corporation bus – both my schools, my first job at the South of Scotland Electricity Board, and my first flat were all on that route! After I met my wife, Andrea, we took the momentous step of moving to the adjacent post code: several cars, three houses, three daughters, two dogs, two cats and three boys (in that order) later, I still live on the No.37 route, and now

I'm back on the bus for work. Alas, not the 37 bus itself, which is now a feature in the transport museum, but the distinctly posher and soon-to-be-electrified First Bus No.4 route.





EV charging in the news



Government to introduce new law to make EV charging network 99% reliable

26 April 2022

The UK's electric vehicle rapid charging network will be required to have a 99% reliability rate under new laws coming in later this year.

This, ministers hope, will eradicate range anxiety and create a "world-class" charging grid. The legislation also includes a £1.6 billion investment in 300,000 new chargepoints across the country, which, it says, would be five times as many traditional fuel pumps currently in operation. These will be operational by 2030 and spread across the country, it promises.



AUTOCAR

Cost of ultra-rapid EV charging increases by almost 50%

27 May 2022

The cost of using a public ultra-rapid EV charger has increased by almost 50% in just eight months, new figures show, while the price of rapid charging has risen by one-fifth.

The average cost to ultra-rapidly charge a 64kWh battery has risen from £17.51 to £26.10 – a 16.76p per kWh increase. Users of public rapid chargers have seen a 7.81p per kWh increase, from £18.81 to £22.81. The RAC, which released the figures this morning, has blamed the price rises on the rising wholesale costs of electricity and gas.

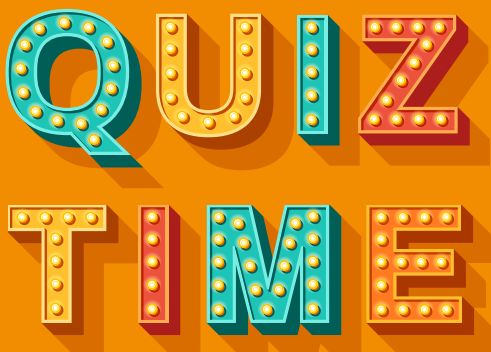
DAILY EXPRESS

New law will force homes to have an electric car charger next week

7 June 2022

New law changes are set to be introduced in the matter of days which will see all new homes and buildings required to have an electric car charger installed.

The new regulations, which will be introduced on June 15, 2022, state that electric vehicle chargepoints must be installed at new residential homes and buildings. Any new building developments with associated parking must have access to electric car chargepoints, according to the Department for Transport.



According to Zap-Map

How many chargepoints are there currently in the North West and Wales?

a) 2,788

b) 3,136

c) 3,902

What percentage of all the chargepoints in the UK does the North West and Wales represent?

a) 9.7%

b) 10.6%

c) 12.1%

Answers: 3,136 and 9.7%