

## SmartSTEP project brings smart EV charging to residential urban streets in industry first

**London, 24 November 2020** - Low carbon energy consultancy Element Energy is to lead a consortium of energy industry stalwarts to deliver new on-street electric vehicle charging infrastructure, enabled by smart meters to integrate seamlessly with the existing electricity network. The consortium includes charge point start-up Trojan Energy, renewable electricity provider Octopus Energy, and Landis+Gyr, a leading global provider of integrated energy management solutions.

As part of its Beyond Off Street programme, the UK Government's Department for Business Energy & Industrial Strategy (BEIS) recently awarded £856,000 funding through its Energy Innovation Programme to the Smart Subsurface Technology for Electric Pathways (SmartSTEP) project. SmartSTEP aims to incorporate smart functionality to the innovative on-street charge points being developed by Trojan Energy.

Affordable, accessible and convenient on-street electric vehicle (EV) charging is key for decarbonising transport and meeting the government's climate commitments. Prospective EV drivers want to know they can charge their car near to where they live, and Trojan's technology aims to facilitate this for the roughly 30% of households that do not have access to off-street parking.

However, whilst meeting the needs of customers is paramount, effectively integrating EV charging so the grid remains balanced is key to success. Smart charging allows customers to access EV charging when electricity is cheapest by automatically shifting the charging period to overnight, or other times of generally lower electricity demand. This will be crucial to balancing the loads on the local electricity distribution network, especially as more and more intermittent renewable electricity generating capacity such as wind and solar is connected.

Whilst smart charging is already in use for home charging and at dedicated public EV charging bays, SmartSTEP will be the first demonstration of smart charging in shared parking spaces on residential streets. This trial will involve charge points slotted into the pavement which will provide access to charging for those that do not have driveways or garages.

The project is split into two Phases: Phase One involves the design, development and testing of the system. In this phase, already underway, Trojan Energy are working alongside Landis+Gyr and Octopus Energy to develop an effective smart charging system. Using the latest technology pioneered by Landis+Gyr as the major supplier in the national smart meter roll out, the charging system will benefit from the most advanced SMETS2 functionalities. These smart meters are connected to the national smart metering system that adheres to the highest standard of security, ensuring data privacy for customers, protecting the grid, and supporting seamless switching between energy suppliers.

Octopus Energy, the UK's latest energy technology 'unicorn', will be providing access and integration with their first-of-its-kind Agile tariff, which allows lower cost renewable energy prices through incentivising off-peak usage. Allowing the project to benefit from low cost green energy when demand on the grid is lower, and renewable energy is more abundant.

Should Phase 1 be successful, in Phase Two the smart charging system will be trialled. SmartSTEP builds on the [STEP project](#) (funded by OLEV) which will see 200 of Trojan's charge points deployed on

streets in the London Boroughs of Brent and Camden from spring 2021. SmartSTEP will involve upgrading 100 of these devices with Landis+Gyr's SMETS2 smart meters. A crucial aspect of the project will be determining the user experience for customers during the trial – an area where Element Energy's sectoral expertise will provide significant value.

**Sarah Clements, Project Manager from Element Energy commented:**

*"Smart charging is a vital enabler of the EV transition, allowing the fine balancing of both customer needs and electricity network constraints. Whilst already available for drivers who charge at home, smart charging has never been tested in an on-street context before. This is essential for ensuring low cost charging is available to all, and we are proud to be managing this industry first project that will help deliver Great Britain's interconnected electricity and transport system."*

**Ian Mackenzie, Managing Director of Trojan Energy commented:**

*"As we roll out our charging technology it is important to be at the cutting edge of what technology allows, as this can bring maximum benefits to our customers, energy suppliers and delivers maximum value for the UK. This trial allows us to push our technology further unlocking new billing options and services for EV chargers throughout Great Britain, advancing our lead further in on-street charging technology, and helping drive adoption of EVs throughout all areas of GB. We are grateful to BEIS and our fantastic consortium team, and are committed to leading the Charge to Net-Zero."*

**Simon Egan, Managing Director of Landis+Gyr UK, commented:**

*"Getting it right with widespread, easy and accessible EV charging will be fundamental to unlocking the potential of this sector and bringing it into the mainstream. SmartSTEP will have huge benefits in terms of widening the potential pool of EV customers and its success will play a major role in driving further roll outs of e-charging infrastructure at scale."*

*"Considering our on-the-ground experience in delivering nationwide Government programmes, as well as our ground-breaking advances in smart technology, I believe we can really make a difference with this project. We look forward to working with BEIS to ensure that those ready and willing to do their part in cutting the UK's carbon footprint are enabled to do so."*

**Phil Steele, Future Technologies Evangelist at Octopus Energy, commented:**

*"Electric vehicle chargers should be accessible everywhere, offering low cost plans where possible and be easier to use if the green energy revolution is to keep driving ahead at full throttle."*

*"Together with our partners, we're excited to be at the cutting edge of developing charging infrastructure, enabled by smart meters and some incredibly innovative technology. Creating an effortless smart charging network is crucial to dispel concerns of EV critics and accelerate the electrification of transport."*

For more information on the project please contact Sarah Clements, the project manager, at [sarah.clements@element-energy.co.uk](mailto:sarah.clements@element-energy.co.uk).

**-ENDS-**

## **Notes to editors:**

The Department for Business, Energy, and Industrial Strategy (BEIS) brings together responsibilities for business, industrial strategy, science, innovation, energy, and climate change. The Smart meter-enabled electric vehicle (EV) charging trial: Beyond Off Street competition is funded by the BEIS Energy Innovation Programme and further details can be found at: <https://www.gov.uk/government/publications/smart-meter-enabled-electric-vehicle-ev-charging-trial-beyond-off-street>.

## **About Element Energy:**

Element Energy is a strategic energy consultancy, specialising in the intelligent analysis of low carbon energy. We provide consultancy services across a wide range of sectors (smart electricity and gas networks, energy storage, carbon capture, renewable energy systems and low carbon vehicles). Our work involves consulting on both technical and strategic issues – we believe our technical and engineering understanding of the real-world challenges support the strategic work and vice versa.

## **About Landis+Gyr:**

Landis+Gyr is a leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios, we deliver innovative and flexible solutions to help utilities solve their complex challenges in Smart Metering, Grid Edge Intelligence and Smart Infrastructure. With sales of USD 1.7 billion in FY 2019, Landis+Gyr employs approximately 5,500 people in over 30 countries across five continents, with the sole mission of helping the world manage energy better.

## **About Octopus Energy:**

Octopus Energy launched to the public in April 2016. It supplies 100% renewable electricity and gas to over 1.7 million UK homes. Octopus Energy is the only Which? Recommended energy supplier for a third year in a row, topping the table in 2020. It also recently won Best Utility at the Utility Week Awards. Founded by e-commerce entrepreneurs, Octopus Energy has a different starting point to other suppliers, aiming to redefine what is possible for consumers and the system by using technology and data to deliver the best products and experiences.

## **About Trojan Energy:**

Founded in 2016, Trojan Energy was formed with one key mission; to ensure everyone benefits from the energy transition. With a strong focus on enabling the uptake of electric vehicles, Trojan Energy developed the Trojan EV Charging System. The unique system, with charge points slotted into the ground, provides charging to EV users without driveways – allowing convenient charging access for all, without the need for on-street clutter.