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Your ref

Our Ref

Date

12 January 2021

Contact / Extension

[redacted]

Scott Mathieson

Dear Team,

#### **ELECTRIC VEHICLE CHARGING MARKET STUDY- INVITATION TO COMMENT**

SP Energy Networks (SPEN) owns and operates the electricity distribution networks in the Central Belt and South of Scotland (SP Distribution) serving 2 million customers as well as (SP Manweb) which serves 1.5 million customers in Merseyside and North Wales. We also own and maintain the electricity transmission network in the Central Belt and South of Scotland (SP Transmission).

We have a responsibility to develop and maintain an economic, efficient and coordinated electricity network. We extensively use market driven competition to do this for the benefit of consumers, with around 96% of our regulated transmission construction activities being delivered by the market. As part of our RIIO-T2 Business Plan submission to Ofgem, we submitted a Competition Plan, detailing the activities we will carry out to continue to support competitive processes within the next price control.

We welcome the opportunity to respond to this Invitation to comment in relation to the CMA's second theme "*effective consumer interaction with the sector*". In particular, how to ensure people using electric vehicle chargepoints have confidence that they can get the best out of the service as SPEN also have a responsibility to ensure that the electricity network which we own and operate is capable of facilitating the rollout of low carbon technologies (LCTs) as part of the electrification of the economy. Essential to this is the timely rollout of critical Electric Vehicle (EV) charging infrastructure, which is vital in meeting the UK and Scottish Governments' Net Zero targets.

SPEN fully supports market led solutions for EVs, whether in a private driveway, a commercial location such as a supermarket or on the public highway. However, we have concerns that the market model will not support all of GB's communities, and many will be left behind from the benefits of access to zero emissions private and public transport, as many locations will not offer the required commercial returns for some market players. For the uptake of EVs to be successful, the infrastructure requires to be in place to provide

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**Internal Use**

confidence to customers, which would have a positive knock on effect for the wider market led opportunities, as more and more customers gain the confidence to purchase an EV.

SPEN believes there is a potential role for DNOs in leaving no community behind whilst ensuring the efficient and effective role out of EV infrastructure with market led solutions as far as possible. This has been evidenced by the benefits from our PACE and CHARGE projects detailed below.

### **Project PACE - Key Role for DNOs in optimal and cost-effective site selection**

As part of our wider Strategic Partnership (with the Scottish Government and Scottish and Southern Electricity Networks), SPEN has led an innovative pilot project, Project PACE, which provides a strong framework for Distribution Network Operators (DNOs) playing an active role in the planning and siting of cost effective EV charging infrastructure.

Project PACE is delivering around 180 EV chargers across more than 40 EV charging hubs in central Scotland (North and South Lanarkshire) by April (funded by a grant from Transport Scotland). This is targeting an increase in the number of public EV chargers for Lanarkshire communities by over 200% and increasing the number of public EV chargers in Scotland as a whole by around 14%<sup>1</sup>. The additional ca.10MW of EV charging capacity, an increase of 360% in Lanarkshire, is expected to accommodate the charging of around 5000 more EVs.

By choosing charging locations that make effective use of the existing electricity network, Project PACE is expected to achieve between £30,000 and £60,000 average savings on electricity grid connection costs per new EV infrastructure location. This equates to a total of between £1.3million to £2.6million of taxpayer money saved<sup>2</sup> across all of the current planned sites.

Scaling up this DNO-led site selection activity to the whole of Scotland would cost ca. £7.5million and could save more than £26million in estimated connections costs<sup>3</sup>. Rolling out this DNO-led framework across the whole of the UK would cost ca. £94million and could save more than £310million in estimated connections costs<sup>4</sup>.

Attached to this letter is a copy of the Project PACE Fact Card which details the projects key findings.

### **Project CHARGE – Key role for DNOs in identifying the best locations for EV infrastructure**

Project CHARGE combines transport and electricity network data to highlight the best locations for EV charge points, accelerating the investment and deployment of public EV charging infrastructure throughout

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<sup>1</sup> 1 Compared to the number of EV chargers on the ChargePlace Scotland network at December 2019 as listed in Table 13.12 of Scottish Transport Statistics No. 38, 2019 Edition, which can be found here

<https://www.transport.gov.scot/media/47300/scottish-transport-statistics-2019.pdf>

<sup>2</sup> when comparing the 44 progressed hubs vs 44 average and 44 most expensive sites.

<sup>3</sup> calculated on 10% of all publicly available chargers by 2050.

<sup>4</sup> calculated on 10% of all publicly available chargers by 2050.

our SP Manweb network in Merseyside and North Wales. The project will benefit all EV users, including those without the ability to charge at home.

Using cutting-edge technologies, Project CHARGE will analyse and compare network capacity and EV driver behaviour projections. The resulting data will highlight prime locations for EV charge points, across SPM's network, based on anticipated traffic flow and network capabilities. This data will also enable SPEN to introduce smart charging connections.

Smart charging connections will enable chargepoint owners and operators to install chargers cheaper and more quickly than through a conventional connection by making use of the existing network capacity and potentially also avoiding the need for disruptive groundwork. EV drivers will benefit by being able to charge at lower costs, resulting from time signals and reduced connection costs being passed through from charge point installers and operators. Smart charging will also allow DNOs to encourage the efficient use of existing network assets and efficiently plan when and where they need to reinforce their networks, ultimately benefiting the UK consumer through reduced costs.

SPEN will launch an interactive map in March this year that will highlight to customers the optimal location for investing in public charging infrastructure based on travel patterns, EV uptake and available network capacity. The quality and granularity of the capacity maps, produced by EA Technology, will be industry leading. SPEN will also launch a publicly available interactive online tool, ConnectMore later this year, which is a user-friendly web application that will show users where EV charging demand is, and where the electricity network has the capacity to support charge point installations. It will also consider the benefits that smart charging can offer in managing network demand.

We believe this joined up approach bringing transport and electricity network experts together for the first time will enable the sharing of data to create a network that will meet the needs of EV drivers in our region now, and in years to come, as we strive towards the UK's Net Zero target.

We fully support a market led approach for EV chargepoints, however, we must be cognisant to the fact that the market will not deliver for all of GB. The above Project PACE and Project CHARGE projects provide strong case studies in considering an alternative, cost-effective approach to the delivery of EV charging infrastructure when the market is unable to deliver. We believe that acting on the findings from the above studies will help ensure a level of confidence that all people using electric vehicle chargepoints have confidence that they can get the best out of the service, and that the availability of chargepoint infrastructure does not inhibit their ability to own an EV.

Yours sincerely

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