

Electricity/Gas Network Innovation Competition Screening Submission Pro forma

Notes on completion			
<p>Before completing this form, please refer to the relevant Network Innovation Competition (NIC) Governance Document(s).</p> <p>Please use the default font (Verdana size 10) in your submission. We will only accept the text visible in the text entry areas. The text entry areas are predetermined and should not be changed. The full-completed submission should not exceed 10 pages in total.</p> <p>Ofgem will publish all the information contained within this Screening Submission.</p>			
Is the application for the Gas or Electricity NIC?	Gas NIC <input type="checkbox"/>	Electricity NIC <input checked="" type="checkbox"/>	
Cross Industry Project	YES <input type="checkbox"/> <i>If yes, please fill out Cross Industry Projects section</i>	NO <input checked="" type="checkbox"/>	
Funding Licensee(s)			
London Power Networks plc, Eastern Power Networks plc, South Eastern Power Networks plc			
Network Licensee Project Partners			
Hitachi Vantara, Hitachi Europe, Hitachi Capital, Scottish and Southern Networks (SSEN), Centrica, Uber			
Funding Licensee area(s)			
London Power Networks plc, Eastern Power Networks plc, South Eastern Power Networks plc, Southern Electric Power Distribution plc			
Project Title			
Optimise Prime			
Project Summary			
<i>The Licensee(s) must provide an approximate Project start and end date.</i>			
<p>The project (January 2019 to February 2022) is intended to be the largest data-driven electric vehicle (EV) trial focusing on commercial vehicles. Fleet vehicles make up circa 20% of the UK's total vehicle population (excl. HGV and motorcycles) and their transition to EVs is expected to be at scale and within a short period. At the same time, there is currently limited understanding of the charging models for these vehicles and their impact on distribution networks. The residential private owner model of EV grid impact has suitably been covered by Low Carbon London, My Electric Avenue and Electric Nation. However the fleet segment still has some gaps. By collecting data from up to 3,000 commercial EVs operating within the UK Power Networks (UKPN) and SSEN areas, the project will generate valuable learning to unlock the EV transition of business vehicles by helping DNOs understand and plan for future charging requirements. The project will develop and test a range of technical and commercial solutions to understand the technical feasibility, customer response, network impact and cost effectiveness of a range of smart charging operating models. It will also optimise the utilisation of existing network and charging infrastructure, and make the EV transition of commercial vehicles more seamless. The project partners will support this by providing extensive expertise in the operation and management of vehicle fleets, mobility services and the development and implementation of advanced Information and Communications Technology (ICT) solutions.</p>			
Estimated Project funding			
<i>The Licensee must provide an approximate figure of the total cost of the project and the NIC funding it is applying for.</i>			
Total Cost of Project	£18.450m	NIC funding requested	£16.605m
Is the TRL of the Project at start date between 4 and 8?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	

What is the Problem?
<p><i>The Licensee must provide a narrative that explains the Problem(s) that the Project is seeking to address.</i></p> <p>To meet air quality and climate change targets, uptake of EVs in the UK is expected to increase rapidly in coming years – from 139,000 vehicles today to a goal of 30-40% of new vehicle sales by 2030 (1.2-1.7m cars & vans based on 2017 sales) and 100% by 2040 (UK Clean Growth Strategy). The Committee on Climate Change estimates that the UK will need to transition faster, reaching 60% of sales by 2030, to meet climate change objectives.</p> <p>The charging of these vehicles will have a significant impact upon distribution network operators. SSEN's 'My Electric Avenue' demonstrated that by 2050 the clustering of EVs would result in the need to reinforce ~30% of GB low voltage networks (representing a present day cost of £2.2bn to GB customers). Most studies to date have focused on the impact of private vehicles.</p> <p>Commercial vehicles are expected to be the first to transition to electric at scale (currently 55% of all new vehicle registrations are to businesses – SMMT). Fleet and private hire (PH) vehicles are expected to exhibit clustering – both in terms of location and time. Their higher mileage will result in increased network demand compared to private vehicles. The extent of this needs to be quantified.</p> <p>The costs and timescales required to upgrade the network via traditional means to support the roll-out of EVs is becoming a significant barrier to the implementation of sufficient charging infrastructure, both at business premises and on-street, and may lead to a shift towards more home-based commercial vehicle charging, incurring higher costs for domestic customers. These costs can outweigh the benefits of adopting EVs for fleets and PH drivers, compound the issues of domestic charging and hold back the overall transition to EVs. Although some smart charging solutions are available in the market, they still leave a significant reinforcement need. Solutions are required to match network capacity to business requirements in a way that is cost effective for both parties.</p> <p>The utilisation of on-route chargers is not fully understood or in any way optimised. The requirement for additional chargers and the opportunity for better utilisation of existing chargers, through novel commercial arrangements, must be quantified. This is needed to allow DNOs and Charge Point Operators (CPOs) to plan for and meet future charging demand.</p> <p>At present, 50% of London's NOx air pollution is a result of road transport, contributing towards thousands of premature deaths each year and an estimated £3.7bn cost to the city's economy. Failing to make a timely transition to zero emission vehicles will have a significant impact on the health and wellbeing of UK's population.</p>
What Method(s) will be used?
<p><i>The Licensee must describe the Method(s) that are being demonstrated or developed. It must also outline how the Method(s) could solve the Problem. The type of Method should be identified where possible eg technical, commercial etc.</i></p> <p>A third party led consortium has been formed which will provide both the volumes of EVs and the technical, commercial and innovation capabilities to develop and deliver a project that will underpin the GB network providers' approach to meeting their customers' needs during the EV transition, at the lowest cost. To do this and address the problems highlighted above, the project will focus on answering six key research questions:</p> <ol style="list-style-type: none"> 1. What is the network/system impact of EV fleets and PH vehicles? 2. How much, where and what kind of infrastructure will be required to optimally charge future EV fleets and PH vehicles? 3a. How can we minimise customer impact of optimised charging? 3b. How will customers react to use of optimised charging and what will the network impact be? 3c. What commercial levers will fleets and PH drivers respond to from network flexibility offers? 4. What business models are needed to enable cost effective EV charging solutions? <p>Key to this will be the project's scale and scope; up to 3,000 vehicles will be included in the trial across the three principle commercial use cases:</p> <ol style="list-style-type: none"> 1. Home based, where commercial vehicles return to the drivers' homes to charge; 2. Depot based, where vehicles of one or more fleet and PH operators charge at the same location; and 3. On-route, where top-up charging is required.

Method(s) continued

Underpinning this project will be the data it will generate. Fleets and PH drivers have different charge requirements to private vehicles. Real time location and charge monitoring will provide an understanding of the energy requirements for each use case and the impact these will have on distribution networks. Telematics data from commercial vehicles will also help understand the power rating, type and strategic locations of charge point and network infrastructure needed for facilitating maximum EV adoption for commercial fleets and PH vehicles.

New business models can, through smart charging, potentially influence the charging patterns of EVs. The project will test how effective these schemes are for the different use cases in regards to supporting the electricity network. The project will make recommendations on how to maximise effectiveness of the trialled schemes and minimise end user impacts (seamless scheme integration, level of incentives for customers etc.).

The driver facing solutions will test different charging and cost optimisation technologies and models which, integrated with vehicle usage data, will help understand the optimal and most cost efficient methods for managing EV fleets and PH vehicles, unlocking the full potential of existing network and charge point infrastructure, minimising the need for network upgrades.

Collecting data for the project requires a significant deployment of Internet of Things (IoT) connected EVs and associated smart charging infrastructure (mostly partner funded), as well as integration with existing charging stations (particularly for the on-route use case).

Alongside all three charging use cases will be a service user engagement programme and socio-economic analysis. This work will research user acceptance of the solutions facing the network and the different fleet and PH vehicles, to ensure any barriers to adoption (and therefore benefits realisation) are understood, and where possible, mitigated through further solution refinement.

It is planned that the project will be organised into six core activities:

1. Real-time vehicle & charger telematics and big-data analysis.

Utilising telematics to enable the tracking of circa 3,000 commercial vehicles, integration of vehicle telematics and charger data on an IoT platform to gather vehicle journeys, charging, state of charge and other data. Management and analysis of data on vehicle and charger use. Machine learning based prediction models to forecast network loading from EVs.

2. On-route charging flexibility enablement & study

Developing IT platforms to test the effectiveness of variable pricing upon users of on-route EV charging as part of a demand side response (DSR) strategy. Measuring the impact in terms of behaviour change versus the level of incentive schemes. Developing technology to enable interoperability across multiple CPOs, to notify users of variable pricing, route drivers to chargers and complement existing DSR strategies. Developing a scalable charging hub model.

3. Energy Optimisation

Integrating smarter charging solutions in partners' depots and in the homes of drivers in order to measure the impact of EV charging and to trial control methods to flex this demand to benefit the network or control peak load. Exploring the use of behind-the-meter technologies to reduce peaks. Integration with existing DNO active network management.

4. DNO-facing solutions

Integrating with the processes of the DNOs to provide realistic simulated demand response signals and measure the impact of interventions. Working alongside existing programmes to ensure compatibility with ongoing DNO to Distribution System Operator (DSO) transition plans.

5. Analysis, Consulting & Business Model Design

Utilising data from all parts of the trial to draw conclusions on the potential effectiveness and scalability of the trialled optimisation strategies. Production of a planning tool to aid charge point location and business models for commercial services trialled in the project

6. Project Management

Managing the design and operation of the trial and project deliverables. Reporting and dissemination of project outcomes amongst Network Operators and the wider industry.

Funding Commentary		
<i>The Licensee must provide a commentary on the accuracy of its funding estimate. If the Project has phases, the Licensee must identify the approximate cost of each phase. OFTOs should indicate potential bid costs expenses</i>		
<p>The estimated total cost of £18.450m is based delivering the six identified core activities:</p> <ul style="list-style-type: none"> • Real-time vehicle & charger telematics and analysis (£5.200m); • On route charging flexibility enablement & study (incl. incentives) (£6.650m); • Energy Optimisation (£2.000m); • DNO Facing Solutions (£0.500m); • Analysis, Consulting & Business Model Design (£1.600m); and • Project Management (£2.500m). <p>These estimates are based on our and the partners' experience in delivering similar ICT systems and services, together with people costs based on current rates and estimated work volume and material costs based on current unit costs and estimated volumes. A more detailed cost break down will be built up for the FSP.</p> <p>The project partners plan to make a contribution of a minimum of £1.845m, representing 10% of the project value, resulting in a NIC funding requirement of £16.605m.</p> <p>The contribution will include in-kind provision of time, resources and data, ensuring that the project can proceed at a lower cost than if it was delivered commercially and allowing the project to utilise existing Intellectual Property (IP) and vehicle and routing data held by the partners. Full details of partner contributions will be provided at FSP.</p> <p>The project will require a significant deployment of both EVs and associated charging infrastructure, in addition to the improved utilisation of existing charging infrastructure. Partners have been selected on the basis that they have EV transition plans in place. The majority of infrastructure, including vehicles and charge points, is not intended to be funded from the NIC.</p> <p>While we have confidence in the estimated costings, the rapidly developing nature of the EV market means that there are a number of factors that may require future budget revisions and re-allocations:</p> <ol style="list-style-type: none"> 1. The availability of EVs to fleet and PH drivers, especially light commercial vehicles, is currently limited. As such assumptions on vehicle mix may be revisited or cost estimates revisited; 2. The smart capabilities of vehicles and charge points is still developing and may affect the requirement for additional communication and monitoring devices; 3. Commercial viability of EV use is evolving and parity on total cost of ownership has not been universally reached. The project must respect the financial and operational requirements of fleets, PH drivers and CPO partners; and 4. The project is complex and involves multiple stakeholders. The detail behind all elements will be further refined and decided as part of the FSP process. 		
Which Specific Requirements do the Project fulfil?(Please tick which of the Specific Requirements this Project fulfils)		
	Electricity	Gas
A specific piece of new (ie unproven in GB) equipment (including control and/or communications systems and/or software)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A specific novel arrangement or application of existing electricity/gas transmission and/or distribution equipment (including control and communications systems software)	<input type="checkbox"/>	<input type="checkbox"/>
A specific novel operational practice directly related to the operation of the electricity/gas transmission and/or distribution systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A specific novel commercial arrangement	<input checked="" type="checkbox"/>	<input type="checkbox"/>

How does the Project accelerate the development of a low carbon energy sector & have the potential to deliver net financial benefits to existing and/or future customers?

The Licensee must demonstrate that the Solution has the potential to accelerate the development of the low carbon energy sector in GB and/or deliver wider environmental benefits to GB customers. The Licensee must demonstrate the potential to deliver net financial benefits to existing and/or future customers.

As a major contributor to UK and global CO₂ emissions, the decarbonisation of the transport sector is critical. The Climate Change Act and air quality policies are driving the electrification of road transport, which currently contributes ~20% of overall UK CO₂ emissions. The Carbon Plan highlights the electrification of transport as a critical component of our low carbon transition but also identifies challenges that networks will face with peak demand in particular. Road transport is also a significant source of pollutants such as NO_x and particulate matter.

Vehicle manufacturers are responding by rapidly innovating: producing new models as well as reshaping their wider businesses to consider future mobility models. The move from private vehicle ownership to Mobility-as-a-Service is likely to be highly dependent on electric mobility. The other, equally important, element is the charging infrastructure needed to power the EV transition. This part of the EV ecosystem gets less attention than the vehicles, but it is a key enabler of electric mobility and requires a similarly innovative approach.

Should the necessary infrastructure be put in place by unlocking barriers relating to network capacity, the transition to EVs could be accelerated and help minimise climate impact. For every 100,000 vans which transfer from diesel to electric we estimate that there could be annual emission savings of 345,000 tonnes of CO₂ on a tank-to-wheel basis, 270,000 tonnes of CO₂ on a well-to-wheel basis (factoring in carbon cost of electricity generation), in addition to 1,490 tonnes of NO_x emissions. Accelerating the transition to EVs will also help the UK meet its 2050 climate change commitments: to meet them the Committee for Climate Change predicts that the UK will have to achieve 60% EV car sales by 2030 and exceed the current 40% target for van sales.

This project is therefore of national significance to the UK, providing DNOs with the ability to:

- Determine the impact of commercial EVs and smart charging on peak load across the network, including commercial vehicles that are charged on domestic premises;
- Learn if and how commercial EVs can be incentivised to change their charging behaviour;
- Understand fleet and PH vehicle charging patterns, allowing for better planning and use of active network management solutions, such as UKPN's Active Response; and
- Compare economic benefit of the use of smart charging technology to better utilise existing infrastructure against network reinforcement.

The wider benefits for all electricity consumers will be through optimising network investment to minimise cost, based on what is learnt in this project. By trialling smart commercial and technical solutions the project will maximise the use of existing network and charging point infrastructure and hence minimise the need for network upgrades.

Furthermore, the project will remove constraints to the widespread adoption of EVs from commercial fleets and PH vehicles therefore contributing to the national carbon targets and air quality improvements in major cities. It will do so by delivering:

- Optimal commercial solutions for EV charging, possibly including DNO flexibility services, reducing the total cost of ownership for EVs and allowing faster EV take-up;
- A better EV charging experience, with solutions to maximise the use of existing charge points; and
- Tools to identify optimal type and location of charging infrastructure (taking into account demand, capacity and connection costs) allowing economic development of hubs and depots.

By optimising the deployment and usage of EVs from network, infrastructure provider and vehicle operator perspectives, this project will help to build the technical and financial solutions to accelerate the adoption of low carbon transport solutions.

The project has been developed to support UKPN's Future Smart DSO strategy, with a specific focus on addressing challenges two (use of customer flexibility as an alternative to network upgrades) and five (prepare and facilitate the uptake of EVs). It will contribute comprehensive understanding of the impact and economic viability of DSO flexibility solutions to support the decarbonisation of the road transport sector.

How will the Project deliver value for money for electricity/gas customers?
<p><i>The Licensee must demonstrate that the Method(s) being used can derive benefits and resulting learning that can be attributed to or are applicable to the electricity/gas transmission and/or distribution systems.</i></p>
<p>The project will have a direct impact on the electricity network by reducing the amount of reinforcement required to electrify transport. My Electric Avenue estimated the network cost of EVs at £2.2bn by 2050. Even deploying existing smart solutions like DSR and Active Response the scale of the challenge is still £1.6bn. If the project can enable a further 2% reduction it will generate a return on investment to customers. Other projects like Electric Nation are already demonstrating the potential benefits of domestic EV flexibility but none have tested this with commercial EV operations.</p> <p>Commercial fleets and PH vehicles are likely to have more significant impact on the electricity network due to their use patterns and clustering. This project will enable a better assessment of possible solutions. 3,000 vehicles provides sufficient volume to test the three use cases (charging at home, depot and on-route) representing over 2% of EVs on UK roads today. This volume of vehicles will provide GB DNOs with robust data with which to make investment plans that account for the EV transition of commercial fleets and PH vehicles, especially in highly urbanised areas. Well informed investment and infrastructure planning will be more cost efficient than a reactive approach.</p> <p>A key aim of the project is to understand, develop and test different business models to ensure the electrification of fleets and PH vehicles and operation of charging infrastructure are viable. We can then investigate how to meet carbon goals at lowest cost to customers.</p> <p>Better information on charger use, and greater interoperability, will help the industry focus investment on new infrastructure and prevent multiple, under-utilised, infrastructures being connected to the network, reducing available capacity.</p>
How will the Project generate knowledge that can be shared amongst all relevant Network Licensees?
<p><i>The Licensee must explain the learning that it expects the Method(s) to deliver, and how it will be shared. The Licensee must demonstrate that it has a robust methodology in place to capture the learning and how the learning is disseminated.</i></p>
<p>The project will, through a comprehensive data gathering exercise covering vehicles, chargers, grid and socio-economic data, create a world class dataset of the network impact of commercial EVs. This new data, along with the analysis, insights and solutions from this project will be of value to all the GB DNOs along with policy makers, city planners, fleet operators, taxi drivers and PH operators, CPOs and other EV ecosystem players from across the value chain.</p> <p>Specifically, the project will generate the following learnings of importance to licensees:</p> <ul style="list-style-type: none"> • Data on the electricity demand from commercial EVs, allowing DNOs to improve the accuracy of their forecasts and optimise future network investments more effectively; • Analysis of the potential to influence charging activity through incentives, including consideration of technical, economic and behavioural issues, allowing DNOs to implement optimal demand response strategies as they transition to DSOs; • Mapping of charger location and charging demand against network constraints, together with a methodology that allows this exercise to be repeated in other DNO areas; and • Learnings relating to the effect on the network of implementing a range of smart charging methodologies, and how these can be influenced to increase benefits to the network. <p>Hitachi, the lead project partner, brings with them extensive experience in the management, visualisation and sharing of rich datasets. In addition it is intended that expert academic and/or specialist consultants will be employed to analyse and report on the findings of the project and the applicability to the wider electricity system and support the development of commercial business cases.</p> <p>This learning will be disseminated to licensees through existing channels including bi-annual reports, LCNI conference/events, ENA working groups, stakeholder groups and project closeout events. UKPN and SSEN will work together to enable parallel learning within the project.</p>

Does the Project conform to the default IPR arrangements set out in the NIC Governance Document?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
<p><i>By selecting NO, the Licensee wishes to deviate from the default requirements for IPR. If this is the case, it must demonstrate how the learning will be disseminated to other relevant Licensees and how value for money will be ensured. The Licensee must also outline the proposed alternative arrangements and justify why the arrangements are more suitable than the default arrangements.</i></p>		
<p>Click or tap here to enter text.</p>		
How does the project demonstrate it is innovative (ie not business as usual) and has an unproven business case, that the innovation risk warrants a limited Development or Demonstration Project to demonstrate its effectiveness?		
<p><i>Demonstrate why the Licensee has not previously used this Method (including where the Solution involves commercial arrangements) and why NIC funding is required to undertake it. This must include why the Licensee would not run the Project as part of its business as usual and why the Solution is not Research.</i></p>		
<p>This project is the first large scale data driven commercial EV trial to capture real time routing and charging data for the purposes of modelling and predicting future distribution network loads. The project is innovative due to:</p> <ul style="list-style-type: none"> • Its unprecedented scale, with 3,000 vehicles, not previously feasible due to the high cost and lack of range of EVs making them unsuitable for many fleet operators and PH drivers; • A multi-use-case commercial focus, different from existing projects focused on residential charging (e.g. Electric Nation) or on specific technologies (e.g. Innovate UK Vehicle-to-Grid (V2G) trials); and • A plan to trial solutions that not only benefit the network, but improve the user experience of EV charging in order to accelerate the adoption by fleets and PH drivers of ultra-low carbon vehicles. <p>The activities that are proposed in this project fall outside of the usual day-to-day activities of the network licensee, requiring additional funding, for the following reasons:</p> <ul style="list-style-type: none"> - The project will need to trial a number of as yet unproven solutions, such as on-route demand response, presenting a risk to the DNO if behavioural barriers prove difficult to overcome; - The project is complex, involving the monitoring of vehicles and the management of the resulting information, requiring active involvement of fleet partners and solution providers; and - The project was proposed by and is intended to be led by a third party. 		

How were project Partners, external resourcing/funding identified, and what are their roles?
<p><i>The Licensee must provide evidence of how Project Partners were identified and selected, including details of the process that has been followed, and the rationale for selecting partners and ideas for the Project.</i></p>
<p><i>The Licensee should provide details of any Project Partners who will be actively involved in the Project and are prepared to devote time, resources and/or funding to the Project. If the Licensee has not identified any specific Project Partners, it should provide details of the type of Project Partners it wishes to attract to the Project.</i></p>
<p>This project was Hitachi's response to UKPN's open Call for Innovation (through the Energy Innovation Centre), and was selected based on its vision to solve and address key network challenges and market gaps in a sustainable and cost effective manner. Hitachi (Hitachi Europe, Hitachi Capital and Hitachi Vantara) is the lead party for the project and will develop and deliver the ICT solutions, integrating with both the DNO, fleet partner, PH operator partner and CPO platforms.</p>
<p>UKPN will be the DNO lead, working with SSEN, and will support Hitachi to integrate and develop the network facing applications. Both DNOs cover the wider London and South East area (the focus for the trials) and bring extensive experience in network EV projects. The confirmed fleet partner will be Centrica (home based), the PH operator will be Uber (on-route) and together with a depot-based fleet operator (name to be confirmed) will provide the target 3,000 vehicles. They were selected based on the volume of vehicles operated (to ensure sufficient trial volumes), EV transition plans, ability to influence the wider EV transition and charging requirements (to ensure variety of charging behaviour and maximise learning). Hitachi Capital's fleet management division will also bring further fleet participants to the project with several clients expressing interest. We will also consider opening the trial to other participants.</p>
<p>Most of the infrastructure costs will be borne by the fleet partners, enabling the scale of project within the available funding. The project is also currently exploring further collaboration with:</p> <ul style="list-style-type: none"> - CPOs to develop a ubiquitous on-route charging solution; and - local authorities and car park operators to test a charging hub concept <p>Each of these elements of the project will be explored further and qualified at the next stage of the application process.</p>
Will the Project require any derogations or exemptions?
<p><i>The Licensee should outline if it considers that the Project will require any derogations, exemptions, or changes to the regulatory arrangements.</i></p>
<p>N/A</p>

How will the Project activities impact customers?
<p><i>The Licensee should outline any planned interaction with customers or customers' premises as part of the Project, and any other direct customer impact (such as amended contractual or charging arrangements, or supply interruptions).</i></p>
<p>As a large scale demonstrator, this project will involve a number of customer stakeholders – from fleet managers and a PH operator to individual drivers. The project will, however, only impact organisations that are party to the demonstration and their drivers – no impact on other network customers is foreseen.</p> <p>A customer engagement plan will be produced to cover all potential stakeholders. Where necessary user training and support will be provided throughout the project and user feedback will be taken into account when we analyse project outcomes.</p> <p>Given that EV technology is still in its infancy and the supporting infrastructure is not fully developed there is some inherent risk in adopting EVs. We will work with partners to ensure that the trials are designed in such a way that interruption to their business is avoided, and where possible the interventions in the trials will be designed to have a positive or neutral effect on their operations. Discussions with the partners have identified a number of current issues they are facing in the transition to EV. This project will help to resolve these which will be essential to ensure the long-term viability of solutions delivered by the project. Furthermore, we will develop specific business modelling for each partner to ensure they do not incur undue financial risk and will work with them to identify drivers and areas that would most benefit from a switch to EVs.</p> <p>Some interventions may involve the integration of technology in customer homes, business premises and vehicles. The majority of required infrastructure works will be the responsibility of the partners. Where necessary, specific customer engagement plans will be produced for each engagement.</p> <p>As the project is largely focused on the testing of ICT systems and associated services we do not anticipate that customers will experience supply interruptions as a result of this project.</p>
What funding is being requested from each NIC? (Cross Industry Projects only)
<p><i>The Licensee must outline funding that is being requested from the Electricity and the Gas NICs and include a justification for the funding split.</i></p>
<p>N/A</p>

Are there any further details the Licensee feel may support its submission?
<p>As set out above, this project will build upon previous and current Ofgem funded projects. Hitachi, UKPN, SSEN and other project partners bring a great deal of experience and learning to the project. As an example Hitachi is working with local stakeholders on the Isles of Scilly to develop innovative EV mobility and EV energy management solutions. This activity has been highlighted in the recently published Industrial Strategy, sets the goal for the UK to 'become a world leader in shaping the future of mobility'. The fleet and PH operator partners have been pioneers in introducing EVs to their operations.</p> <p>The project also complements a range of other national initiatives, such as the recently announced V2G trials, in addition to further investment planned in both charging infrastructure and the wider sector.</p> <p>We will place a priority on ensuring that this project is complementary to other activities, both within the electricity industry and the commercial vehicle sector, throughout the detailed design and delivery phases. In doing so we will avoid duplication and ensure the latest developments are integrated in the project throughout its life-cycle in this rapidly evolving field.</p> <p>It is in this wider context that, whilst the focus of this project is to underpin future network planning and investment, to ensure the best value to network customers, the learning will have far reaching implications both in terms of supporting the EV transition for different energy and mobility ecosystem participants. It will provide the tools to support policymakers to unlocking barriers to key initiatives driven by health and environmental objectives, such as clean air zones, the Department for Transport strategy 'Creating Growth, Cutting Carbon', the Mayor of London's Transport Strategy and Clean Air Action Plan.</p> <p>All of the Electricity Networks have met via the ENA to discuss the 2018 NIC submissions. The Networks presented their proposed project and discussed the scope to ensure that there was no duplication. In terms of collaboration, where appropriate networks have partnered on certain projects, and have agreed to input and share the learning throughout the course of the projects. These projects will help deliver the outputs and some of the keys areas for innovation that were identified in the Electricity Network Innovation Strategy. This strategy is due to be released on 29 March and will be available on ENA's website here: http://www.energynetworks.org/electricity/futures/network-innovation/electricity-networks-innovation-strategy.html</p> <p>As well as aligning with UKPN's Innovation Strategy and Future Smart DSO strategy this project specifically supports themes 3.3, 3.4, 4.1 and 4.2 of the Electricity Network Innovation Strategy. It also aligns with functions D1, C1, C2, E3, and F3 of the Future Power Systems Architecture.</p>
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