Notes on Completion: Please refer to the appropriate NIA Governance Document to assist in the completion of this form. The full completed submission should not exceed 6 pages in total.

NIA Project Registration and PEA Document

Date of Submission

Mar 2020

Project Reference Number

UKPNEN03

Project Registration

Project Title

Optimise Prime

Project Reference Number

UKPNEN03

Project Licensee(s)

UK Power Networks

Project Start

January 2019

Project Duration

3 years and 1 month

Nominated Project Contact(s)

Sung Oe

Project Budget

£34,691,000.00

Summary

With businesses buying 58% of all new vehicles in the UK, it is expected that commercial vehicles will determine the speed of the transition to low carbon transport. Compared to vehicles used for domestic purposes, commercial electric vehicles (EVs) – i.e. vehicles used for business purposes, including the transport of passengers and goods – will have a much greater impact on the electricity network. Therefore, it is important that network operators, technology providers, fleet and transport companies work together to test and implement the best approaches to the EV rollout for commercial enterprises, while keeping costs low for network customers.

Optimise Prime is the world's largest trial of commercial EVs. It seeks to understand and minimise the impact the electrification of commercial vehicles will have on distribution networks. It will develop technical and commercial solutions to save customer costs (estimated to £207m savings by 2030) and enable the faster transition to electric for commercial fleets and private hire vehicle (PHV) operators. The project is also vital if the UK wants to meet its carbon reduction targets. The accelerated adoption of commercial EVs will save 2.7m tonnes of CO2, equivalent to London's entire bus fleet running for four years or a full Boeing 747-400 travelling around the world 1,484 times. The flexibility provided by the project will also free up enough capacity on the electricity network to supply a million homes.

Nominated Contact Email Address(es)

innovation@ukpowernetworks.co.uk

Problem Being Solved

Method(s)

Scope

Objective(s)

Led by global data technology solutions provider Hitachi Vantara and UK Power Networks, this three-year project will see up to 3,000 EVs from Royal Mail, Centrica and Uber, supported by Scottish and Southern Electricity Networks, Hitachi Europe and Hitachi Capital

Vehicle Solutions. It will be split into three trials, reflecting the three partner fleet use cases:

· Trial 1: Home Charging (British Gas) – A field study of charging behaviour and flexibility with a return to home fleet.
· Trial 2: Depot Charging (Royal Mail) – A field study of charging behaviour and flexibility with a depot-based fleet. Additionally, testing of profiled connections.
· Trial 3: Mixed Charging (Uber) – A study based on analysis of journey data from electric PHVs.

Optimise Prime will create a detailed understanding of the impact of commercial EVs and the opportunities for flexibility. This will allow electricity network licensees to accurately forecast and plan mitigations, including flexibility and profiled connections, minimising costs for the connected and connecting customer. Depot-based tools and home charging strategies will allow fleet and PHV operators to electrify more quickly at a reasonable cost, without negatively impacting the distribution network.
More information available at:
· UK Power Networks innovation website: https://innovation.ukpowernetworks.co.uk/projects/optimise-prime/
· Optimise Prime website: https://www.optimise-prime.com/

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

n/a

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

n/a

Geographical Area

Revenue Allowed for the RIIO Settlement

Indicative Total NIA Project Expenditure

Project Eligibility Assessment Part 1

There are slightly differing requirements for RIIO-1 and RIIO-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RIIO-2 / RIIO-1).

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations (Please complete sections 3.1.1 and 3.1.2 for RIIO-2 projects only)

Please answer **at least one** of the following:

How the Project has the potential to facilitate the energy system transition:

n/a

How the Project has potential to benefit consumer in vulnerable situations:

n/a

Requirement 2 / 2b

Has the potential to deliver net benefits to consumers

Project must have the potential to deliver a Solution that delivers a net benefit to consumers of the Gas Transporter and/or Electricity Transmission or Electricity Distribution licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the GB Gas Transportation System, the Gas Transporter's and/or Electricity Transmission or Electricity Distribution licensee's network, or wider benefits, such as social or environmental.

Please provide an estimate of the saving if the Problem is solved (RIIO-1 projects only)

n/a

Please provide a calculation of the expected benefits the Solution

n/a

Please provide an estimate of how replicable the Method is across GB

n/a

Please provide an outline of the costs of rolling out the Method across GB.

n/a

Requirement 3 / 1

Involve Research, Development or Demonstration

A RIIO-1 NIA Project must have the potential to have a Direct Impact on a Network Licensee's network or the operations of the System Operator and involve the Research, Development, or Demonstration of at least one of the following (please tick which applies):

☐ A specific piece of new (i.e. unproven in GB, or where a method has been trialled outside GB the Network Licensee must justify repeating it as part of a project) equipment (including control and communications system software).

☐ A specific novel arrangement or application of existing licensee equipment (including control and/or communications systems and/or software)

☐ A specific novel operational practice directly related to the operation of the Network Licensees system

☐ A specific novel commercial arrangement

RIIO-2 Projects

☐ A specific piece of new equipment (including monitoring, control and communications systems and software)

☐ A specific piece of new technology (including analysis and modelling systems or software), in relation to which the Method is

unproven

☐ A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)

☐ A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology

☐ A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution

☐ A specific novel commercial arrangement

Specific Requirements 4 / 2a

Please explain how the learning that will be generated could be used by the relevant Network Licensees

n/a

Or, please describe what specific challenge identified in the Network Licensee's innovation strategy that is being addressed by the project (RIIO-1 only)

n/a

☐ Has the Potential to Develop Learning That Can be Applied by all Relevant Network Licensees

Is the default IPR position being applied?

☐ Yes

Please demonstrate how the learning from the project can be successfully disseminated to Network Licensees and other interested parties.

Please describe how many potential constraints or costs caused, or resulting from the imposed IPR arrangements.<

Please justify why the proposed IPR arrangements provide value for money for customers.

Project Eligibility Assessment Part 2

Not lead to unnecessary duplication

A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed.

Please demonstrate below that no unnecessary duplication will occur as a result of the Project.

n/a

If applicable, justify why you are undertaking a Project similar to those being carried out by any other Network Licensees.

n/a

Additional Governance And Document Upload

Please identify why the project is innovative and has not been tried before

n/a

Relevant Foreground IPR

n/a

Data Access Details

n/a

Please identify why the Network Licensees will not fund the project as apart of it's business and usual activities

n/a

Please identify why the project can only be undertaken with the support of the NIA, including reference to the specific risks(e.g. commercial, technical, operational or regulatory) associated with the project

n/a

This project has been approved by a senior member of staff

☑ Yes