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

Dec 2024

Project Reference Number

NGED_NIA_078

Project Registration

Project Title

On Boundary Enhanced LCT Integrating Service Cabinet (OBELISC)

Project Reference Number

NGED_NIA_078

Project Licensee(s)

National Grid Electricity Distribution

Project Start

January 2025

Project Duration

2 years and 6 months

Nominated Project Contact(s)

Laurence Hunter

Project Budget

£996,582.87

Summary

Retrofitting domestic customers to a three-phase supply will enable them to connect EVs and heat pumps to reduce their impact on the climate while delivering whole system benefits of reduced reinforcement and losses.

There are significant issues with upgrading using existing 3ph equipment, such as: resizing the meter cabinet to enable the connection; difficulty accessing service positions; drawing new 3ph service cables across existing properties and heat rise. This and more leads to increased costs and reduced customer acceptance, introducing more barriers to net zero.

Project OBELISC will aim to solve this problem by developing a new type of meter cabinet installed near the boundary edge of domestic properties to serve as the 3ph domestic connection point to the distribution network.

Problem Being Solved

The majority of NGED's customers are single phase (1ph) connected but expect to be able to connect EVs and heat pumps to reduce their impact on the climate. NGED already connect new customers with three phase services (3ph) to enable the additional load of LCTs, and retrofit of existing customers to 3ph would provide these same benefits, in addition to whole system benefits of reduced reinforcement and losses.There are significant issues with upgrading using existing 3ph equipment, such as: sizing or resizing the meter cabinet to enable the connection; difficulty accessing service positions, particularly in older homes where these are in the middle of the property; drawing new 3ph service cables across existing properties and heat rise in well-insulated new homes reducing validity of the maximum rating. This and more leads to increased costs and reduced customer acceptance, introducing more barriers to net zero.

Method(s)

Project OBELISC will aim to solve this problem by developing a novel solution for upgrading the connections of domestic customers to allow them to adopt the LCTs that will achieve net zero more efficiently. It will develop a new type of meter cabinet installed near the boundary edge of domestic properties to serve as the 3ph domestic connection point to the distribution network. The new solution must:

- Integrate the existing 1ph connection and enable connection of low carbon technologies to one or three phases
- Eliminate the disruption of dragging a new 3ph service cable across gardens and into homes
- Have an appearance and footprint which customers will accept in their homes
- Enable balancing of LCTs across phases on the LV network

Stages

The project will be delivered in four stages, with stage gates in-between to sign off on proceeding to the next stage.

Stage zero: Initiation and buy-in

This stage will focus on obtaining end-user buy in to the project concept. It will ensure that the project is designing a product customer's want and will accept on their properties. It will achieve this by engaging customers through representative groups and presentations at customer events.

At the end of this phase, it is expected the OBELISC solution will be confirmed at TRL 2.

Stage one: Requirements of the solution

This stage will focus on capturing the internal and external stakeholder requirements for the solution, including: use cases, standards compliance, regulatory compliance, operational requirements, distribution system integration, consumer connection technical requirements, amenity and cosmetic requirements and installation requirements.

It will also assemble a stakeholder review panel that will provide feedback and review throughout the course of the project and define the requirements of the OBELISC solution. The review panel is aimed to be at least15 key persons from a wider stakeholder pool of around 400 invitees and will be empowered via dedicated stakeholder engagement partner to be a voice ensuring value for customers is embedded in the solution design.

This stage will develop a functional specification for partners to use to develop technical designs.

At the end of this phase, it is expected the OBELISC solution will have achieved TRL 3.

Stage two: Solution design

A design process will be agreed separately between Frazer-Nash, Cubis, Proteus and Lucy for development of the solution against the functional specification. The solution design will be delivered as per the agreed process.

This stage will also define the functionality and compliance test regime for the solution. This will include estimating the number of prototypes of the final design that will be required to be manufactured to deliver this test regime.

At the end of this phase, it is expected the OBELISC solution will have achieved TRL 4.

Stage three: Validating the designed solution

This stage will produce prototypes of the final design and carry out functionality and compliance testing as defined in the previous stage to ensure the solution meets all requirements defined in stage one.

Assuming testing is passed, a trial installation of the prototype will be carried out at an NGED training school site to develop the techniques for installation on the network.

This stage will also perform a cost-benefit analysis for all stakeholders of the deployment of the solution on NGED / DNO networks.

These activities will inform a final review to evaluate the project's success and decide whether to accept into the new product into NGED business as usual procurement and operations.

At the end of this phase, it is expected the OBELISC solution will have achieved TRL 6. The expectation is that the OBELISC device will be functional and meet all necessary compliance standards to be installed in homes – however, as this project does not include an installation live on the distribution network it does not meet TRL 7 or 8 by the strictest interpretation of their definitions.

Workstreams

Following the approval of a functional specification for the project solution, two solutions will be designed and tested in separate

Workstreams. The aim of having dual Workstreams is not to draw a comparison between the two designs, but to increase market options for customers after the project. The ideal scenario is that both Workstreams are successful.

- Workstream Alpha will be delivered by Proteus Switchgear and Cubis Systems
- Workstream Beta will be delivered by Lucy Electric

Work Packages

Within the four stages the project, work activity and outputs will be delivered within five work packages.

WP0. Project management

This work package includes all activities to manage and deliver the project to time and cost, ensuring all NIA governance requirements are met and that the project stays on scope. It also provides for final review and approval of all project deliverables.

WP1. Stakeholder engagement

This work package will encompass all activities to assemble and manage the stakeholder review panel, coordinate stakeholder engagement events and prepare materials for stakeholder review.

It will develop the customer business case, understanding the quantitative and qualitative value directly to customers receiving the OBELISC solution and using this to inform scenarios for the wider cost-benefit analysis of the solution.

A dedicated stakeholder engagement partner, separate from the technical design process, will translate key project outputs into digestible formats and independently collate responses and feedback.

WP2. Technical development, policy and system integration

This work package will develop the engineering requirements and justification for the OBELISC solution for distribution networks. It will produce the technical policy for construction and installation of the solution. It will also encompass activities to ensure compliance with all necessary standards and that the solution integrates with the distribution network.

WP3. Specification and design

This work package will plan and deliver the process for designing the solution against the functional specification.

WP4. Prototyping, testing and analysis

This work package will involve all activities to produce and test a prototype of the solution design. It will also carry out the cost assessment of the new solution and compare this against the standard.

A Data Quality and Measurement Statement is provided with this document.

Scope

This project aims to demonstrate how an on-boundary three phase service cabinet can serve as an alternative method for upgrading domestic customers to a three-phase supply, overcoming barriers in the customer journey to net zero by:

- A reduction in disruption to customers by avoiding laying new three-phase service cable across properties, protecting the integrity of frontages and improving the customer journey to decarbonisation
- Enabling the decarbonisation of domestic energy consumption by allowing the connection of LCTs
- Simplifying the installation process of connecting LCT supply cables behind the meter

It is anticipated that developing an on-boundary three phase service cabinet will enable NGED to lower the costs of both providing three-phase upgrade to customers and the cost of domestic reconfiguration, delivering measurable reductions in customer bills.

Key activities that will be carried out during the project include:

Stakeholder engagement to:

- Obtain end-user buy in to the project concept, ensuring the customers wants and will accept devices on their properties.
- Capture stakeholder requirements including: Use cases, consumer connection technical requirements, amenity and cosmetic requirements and installation requirements

- Test stakeholder acceptance at key milestones

DNO internal engagement to capture standards compliance, operational requirements, distribution system integration

Production of requirements and functional specification documents which describe in detail the OBELISC system functions

Design of two potential solutions against the functional, working through multiple design variations (e.g. through rapid prototyping or other processes)

Functionality and compliance testing on the finalised prototypes of each solution

Test installation of the prototypes in NGED Training School

Cost-benefit analysis to assess the validity of the new solution across the network

Objective(s)

- Develop a novel solution for upgrading customers to a three-phase supply, so they can adopt LCTs to achieve net zero
- Develop a new three phase connection point which can be installed at the boundary edge of domestic properties
- Deliver a solution which key stakeholders and end users will accept to be installed at the boundary edge of domestic properties
- Design a cost-effective solution which reduces the cost and disruption of upgrading customers to a three-phase supply
- Increase the capacity of LV networks to connect large volumes of low carbon technologies by balancing load across all three phases

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

One of the main benefits to the solution will be ensuring that the customer journey to a three-phase upgrade will be less disruptive, primarily by reducing the need for civil and electrical works on customer properties. This benefit will be especially impactful for customers in vulnerable situations, who would be most affected by the disruption to their homes. As such, it is anticipated that the solution will support the wellbeing of vulnerable customers.

Success Criteria

- A new type of service cabinet will be designed to serve as the 3 phase connection point near the boundary edge of properties
- The new solution will integrate the existing single phase service cable into its architecture and comply with domestic wiring regulations
- The new solution will have an outward appearance and construction that a majority of stakeholders will accept on the boundaries of their properties
- The new solution will allow low carbon technologies to be connected directly to it instead of via the existing consumer unit attached to the domestic property to reduce domestic disruption.
- The new solution will allow the load from low carbon technologies to be balanced across the three phases of the LV network in retrofit situations
- The new solution will be cost-effective benchmarked against the existing process for three-phase upgrade in enough use cases to justify scale up to business as usual

Project Partners and External Funding

National Grid Electricity Distribution

NGED have a long track record dating back more than a decade of delivery of numerous innovation projects. NGED produces and uses a large suite of policies, techniques and equipment specifications which ensure safe operation and asset management of the distribution network in the Midlands, South West and South Wales.

NGED's main role in the project will be:

Innovation

o Technical direction for project

o Review and sign-off for all project outputs

Policy

o Review of applicable and legacy standards (service and metering)

- Development of requirements and functional specification (service and metering)
- Development of technical policy
- Development of testing regimes and acceptance criteria (service and metering)

Training school

- Developing installation techniques through trial installation at the NGED training school

NGED will be providing a contribution to the project of £127,317.42.

Frazer-Nash Consultancy

Frazer-Nash have a track record of project management delivery in innovation funded projects, such as the NGED NIA PIONEER project and NGET SCADENT project.

Frazer-Nash have a range of experience designing human-centred products to meet technical specifications, including functional, ergonomic and aesthetic requirements.

Frazer-Nash will subcontract Building Services Group (BSG), an electrical design and construction company with strong credentials in the residential sector. BSG will provide focused knowledge of industry good practice and standards compliance in domestic and residential settings.

FNC's main role in the project will be:

Project management

- Ensuring timely delivery of outputs and milestones
- Coordinating activity between partners
- Managing project management documentation
- Ensuring compliance with governance

Technical oversight

- Review of applicable standards (consumer connections)
- Development of requirements and functional specification (consumer connections)
- Development and oversight of design process
- Development of testing regimes and acceptance criteria (consumer connections)
- Cost-benefit analysis of the OBELISC solution compared to the current standard for three-phase retrofit
- Verifying that designs are likely to be successful
- Production of a technical review document analysing whether the project outcomes justify a rollout of the OBELISC solution in to BAU

Building Services Group

- Domestic installer subcontracted to Frazer-Nash
- Provide expert opinion on domestic LCT requirements
- Estimation of costs and works required on customer side of OBELISC

FNC will be providing a contribution to the project of £26,793.69.

EQ Communications

EQ is a specialist consultancy in stakeholder and community engagement. EQ have a track record in the electricity industry, delivering NGED stakeholder engagement events, primarily for the Connections Strategy team.

EQ's main role in the project will be:

- Coordination of the stakeholder review panel
- Development of stakeholder review materials by translating key documents into briefings accessible to non-technical and technical stakeholders
- Coordinating attendance of stakeholder events

EQ will be providing a contribution to the project of £8,535.00.

Cubis Systems

Cubis is NGED's current supplier of meter boxes with a global track record in design and manufacture projects to develop innovative solutions.

Cubis's main role in the project will be:

- Review / comment on requirements and functional specification as they are produced
- Design of the Workstream Alpha service cabinet enclosure
- Manufacture and assembly of prototypes
- Non-electrical testing of prototypes

Cubis will be providing a contribution to the project of £4,428.00.

Proteus Switchgear

Proteus is a British switchgear manufacturer specialising in 400V and 230V industrial and domestic switchgear. As well as standardised products, Proteus have an in-house service to develop bespoke units.

Proteus's main role in the project will be:

- Review / comment on requirements and functional specification as they are produced
- Interior electrical design of the Workstream Alpha service cabinet
- Manufacture and assembly of prototypes
- Electrical testing of prototypes

Proteus will be providing a contribution to the project of £4,050.00.

Lucy Electric

Lucy Electric is an industry mainstay in secondary power distribution solutions, and is a manufacturer of low voltage cut-outs and cabinets. Lucy has a track record on innovation projects, such as the Electric Nation and ALARM NGED innovation projects.

Lucy's main role in the project will be:

- Review / comment on requirements and functional specification as they are produced
- Interior electrical design of the Workstream Beta service cabinet
- Design of the Workstream Beta service cabinet enclosure
- Manufacture and assembly of prototypes
- Electrical and non-electrical testing of prototypes

Lucy will be providing a contribution to the project of £3,440.00.

Potential for New Learning

The project will generate the following learning that can be used by network licensees:

- The principal design and specification of the new solution which can be used to upgrade network licensee customers to three phase supply

- Where the new solution is value for money to customers by providing a cheaper and less disruptive option
- A policy explaining how the new solution can be integrated into LV system design approaches
- Standard techniques for installation of the new solution
- A basis from which to grow the market for supply of the solution

Learning will be disseminated through NGED's proven mechanisms. This includes (but is not limited to):

- Reports
- Workshops
- Stands at NGED and other organiser events
- Website updates
- Publications at national and international conferences

Scale of Project

This project aims to take the proposed solution from concept all the way to a technical demonstration. This will include production and testing of prototypes in a factory setting and installation on an NGED training site.

Existing vendors conform to the specifications DNOs provide for three phase cut-outs and service cabinets and as such it is unlikely that they will deviate or iterate upon these specifications without direction from DNOs. As such, it is necessary for DNOs to drive the development of a new solution which improves the cost-effectiveness and consumer friendliness of a three-phase upgrade. This also provides the opportunity to ensure the future needs of both consumers and the DNO are embedded into the specification of the new solution.

As noted in the benefits case below, even in the most pessimistic future energy scenario (Falling Short) an average cost reduction of 5% would be pay back the cost of development by 2033 and deliver benefit between 2033 and 2050. Whereas in the most optimistic scenario (Customer Transformation), the project will have paid for itself four times over by 2033 even if only a 2.5% average cost reduction is achieved.

Technology Readiness at Start

TRL2 Invention and Research

Technology Readiness at End

TRL6 Large Scale

Geographical Area

Stakeholder engagement will aim to take in events in all four licence areas, plus potentially other DNO licence areas if they are supporters of the project. The trial installation will take place at an NGED training school, either in the South West or West Midlands licence areas.

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

Total Project Cost	£996,582.87
Agreed Partner Contributions (Frazer-Nash)	£26,793.69
Agreed Partner Contributions (EQ)	£8,535.00
Agreed Partner Contributions (Lucy)	£3,440.00
Agreed Partner Contributions (Proteus)	£4,050.00
Agreed Partner Contributions (Cubis)	£4,428.00

Funding from ED1	£0.00
Sub Total	£949,336.18
NGED DNO Contribution	£91,335.42
NGED Contribution in Kind	£35,982.00
Funding from NIA	£822,018.76

Total costs are presumed fixed until the end of Stage 2, at which point it will be assessed whether to continue with both design workstreams and the full extent of cost-benefit analysis work required to be carried out.

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:

The project facilitates the energy system transition by enabling the mass adoption of electric cars and vans and mass-market scale up of heat pump adoption. The major infrastructure challenge of mass adoption is to facilitate the connection of EV charging points and heat pumps in domestic properties. The new solution will ensure that DNOs have the capability to increase domestic capacity in the most cost-effective and least disruptive way, improving acceptance and opportunity for mass LCT adoption.

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

Financial Benefits

The new solution is aimed at all customers who require an upgraded supply to connect LCTs, predominantly heat pumps and electrical vehicle charging points. The cost savings from the new solution would be passed down to all customers, as the reinforcement costs for this upgrade are socialised except for high capacity "red" rated heat pumps.

Benefit structure

The new solution for upgrading customers to three-phase supply on the boundary edge of their properties will create tangible benefits under two headings:

Avoided network costs. Creating a solution which connects at the boundary and reduces civil works will create value through:

- Reduced costs for digging and reinstatement
- Eliminating costs for expanding meter cabinet recess
- Reduced installation time
- Reducing the volumes of three-phase service cable required to be purchased for upgrading customers

Avoided customer costs. A solution which integrates the existing service cable and connection will produce value to the customer directly through reduced need for in-house electrical remodelling.

As discussed in Section 3, there will be additional value to the customer due to the reduction in barriers to decarbonise their properties and reduction in stress and difficulty of the three-phase upgrade. These have not been quantified in this analysis.

Cost structure

Costs additional or alternative to the standard three-phase upgrade are derived from the development and rollout of the OBELISC solution. These costs fall under two categories:

Development costs. The costs to design and test the system such that it can be integrated into business as usual will come through:

o Delivery of the NIA project. This is aimed at being as cost-effective as possible as per NGED best practice, as described in Section 9

o Training of NGED and contractor staff in the techniques required to install the solution

o Dissemination to NGED planning and design staff when to use the OBELISC solution

o Integration of purchase and supply of the solution into procurement systems

Costs in perpetuity. Costs associated with using the OBELISC solution which occur for each installation will come through:

o Per-unit cost of the OBELISC solution

o Building any additional foundation or support structures for the OBELISC solution

Opportunity structure

The opportunity to produce benefits is derived from reducing the cost and disruption of upgrading domestic customers to three-phase supply. The likelihood this upgrade is triggered is influenced by a number of coincident factors:

- Connection of a heat pump at the property
- Connection of an electric vehicle charging point at the property
- Underlying electrical baseload

The trigger point for three-phase upgrade for NGED is when a supply of 80A is unachievable due to thermal or voltage limitations of the existing connection. Typically this is when demand exceeds the 80A rating of the cut-out fuse, which occurs when demand is around 18.4 kW. For most cases, this means that upgrade is triggered when a heat pump and an EV charging point is connected as neither is likely to exceed that demand on its own.

The opportunity to produce benefit derived is based upon the following assumptions:

- 75% of properties will connect both an EVCP and heat pump by 2050
- Around 45% of properties will be homes likely to have a large enough baseload demand to trigger the upgrade
- There is a 10% chance that the EVCP and heat pump size will coincide to exceed 18.4kW

Counterfactual

The counterfactual scenario is the cost of upgrading customers using a conventional three-phase upgrade, including civil works, capital costs and labour time. This typically ranges between £3,500 and £6,000 per installation, averaged to £4,750.

Expected financial benefits

Assuming a total project development and roll-out cost of £1.5m, even in the most pessimistic future energy scenario (Falling Short) an average cost reduction of 5% would be paid back by 2033 and deliver benefit between 2033 and 2050. Whereas in the most optimistic scenario (Customer Transformation), the project will have paid for itself four times over by 2033 even if only a 2.5% average cost reduction is achieved

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

The solution would be applicable to any domestic LV property in the UK, albeit best suited in use cases that will be clarified through the stakeholder engagement activities in the project. The percentage rollout would be also be determined by the domestic supply policy of each DNO and IDNO, each of which will set its own thresholds for upgrading connections to three-phase supply.

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

The per-unit cost of the end commercial product would be weighed against the per-unit cost of traditional three-phase upgrade and aims to be more cost-effective overall. The only applicable costs for GB rollout would be that for receiving training in the installation of the devices, estimated at 1 day per trainee.

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

The project will generate the following learning that can be used by network licensees:

- The principal design and specification of the new solution which can be used to upgrade network licensee customers to three phase supply
- Where the new solution is value for money to customers by providing a cheaper and less disruptive option
- A policy explaining how the new solution can be integrated into LV system design approaches
- Standard techniques for installation of the new solution
- A basis from which to grow the market for supply of the solution

Learning will be disseminated through NGED's proven mechanisms. This includes (but is not limited to):

- Reports
- Workshops
- Stands at NGED and other organiser events
- Website updates
- Publications at national and international conferences

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

Is the default IPR position being applied?

☑ Yes

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.

The methodology for this project has been reviewed against other projects registered on the Smarter Networks Portal and circulated with other DNOs and TNOs ahead of registration to ensure no unnecessary duplications will occur.

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

To date, there is little evidence of a standalone boundary meter cabinet coming to market. As such, there is a need to drive this kind of solution from concept to prototype to stimulate the market to adopt and iterate upon the base functional specification. This process carries significant risk as the cost-effectiveness and reduced disruption has not been proven.

The project is innovative as it delivers new capability to supply the growing electrical demand of individual homes. It is necessary to build this capability to allow domestic customers to adopt low carbon technologies and achieve Net Zero in the home. It aims to increase the cost-effectiveness of future proofing homes for 2050 and beyond, as electrical demand growth continues to trend upwards.

Relevant Foreground IPR

This IPR will be made available to other GB DNOs on request or as part of the project Closedown Report:

- The NGED engineering equipment specification for the device (WP2 D2. EE specification)
- Briefing to stakeholder review panel on the identified requirements of the project OBELISC solution (WP1 D1. Requirements stakeholder briefing)
- Briefing to stakeholder review panel on the functional specification of the project OBELISC solution (WP1 D2. Functional specification stakeholder briefing)
- Briefing to stakeholder review panel on the design of the project OBELISC solution (WP1 D3. Design stakeholder briefing)
- Briefing to stakeholder review panel on the final prototype review of the project OBELISC solution (WP1 D4. Prototype review stakeholder briefing)
- Requirements documentation for the OBELISC solution (WP2 D1. Requirements document)
- Planning documentation for the implementation of the OBELISC design stage (WP3 D1. Design process plan)
- Functional specification for the OBELISC solution (WP3 D2. Functional specification document)
- Plan for functionality and compliance testing of the OBELISC solution (WP4 D1. Functionality and compliance test book template)
- Documentation for method and results of functionality and compliance tests carried out on prototypes of the Workstream Alpha solution (WP4 D3A. Completed functionality and compliance test book)
- Documentation for method and results of functionality and compliance tests carried out on prototypes of the Workstream Beta solution (WP4 D3B. Completed functionality and compliance test book)
- Cost-benefit analysis of the OBELISC project solution (WP4 D4. Cost-benefit analysis)
- Final review of the OBELISC prototype testing, trial installation and cost-benefit analysis (WP4 D5. Prototype technical review document)

Data Access Details

All project findings will be published on the Smarter Network Portal, and on National Grid’s website.

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

activities

The development of specifications for equipment that does not yet exist in the market is not a regular business as usual activity for NGED. As such, if NGED were to fund the development of a solution it would assign a significant risk to the revenue funding attached to it. This risk would necessitate a conservative approach to the development of the solution and would likely not attain the full potential benefits.

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

Regulated innovation funding is appropriate for a project for which the outcome is unclear and for which the benefits must be carefully assessed throughout the project. The Network Innovation Allowance provides NGED with the mechanism to develop and demonstrate the benefits of an on-boundary three phase service cabinet in an appropriately risk managed way that still allows for pushing the design towards the cutting edge and maximising benefits. If demonstrated and proven, the solution will save significant expenditure for the lifespan of the Net Zero transition by reducing the costs of upgrading thousands of homes to three phase. It will support NGED in delivering excellent customer service by improving the customer experience of retrofit to three phase and eliminating barriers to consumer adoption of low carbon technologies.

This project has been approved by a senior member of staff

☑ Yes