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

Nov 2021

Project Reference Number

NIA_NGN_345

Project Registration

Project Title

Customer Energy Village: Project 1: Energy Efficiency

Project Reference Number

NIA_NGN_345

Project Licensee(s)

Northern Gas Networks

Project Start

November 2021

Project Duration

3 years and 6 months

Nominated Project Contact(s)

Keith Owen kowen@northerngas.co.uk

Project Budget

£1,655,274.00

Summary

This project will construct new research infrastructure, the Customer Energy Village [majority funded by the UK government's Getting Building fund], which reflect the challenges of heat decarbonisation faced by millions of consumers. It will then utilise that infrastructure to undertake research, with partners National Energy Action [NEA] and Newcastle University, into new energy efficiency measures from across the supply chain, [digital, physical and commercial], and working with the NEA customer base explore the barriers to adoption of those measures, to support development of future policy and training materials, which would enable these to make a significant impact in reducing existing heat demand, thus enabling decarbonisation to take place ahead of any significant technology switch to either electrical heat or decarbonisation gas.

Third Party Collaborators

North East Local Enterprise Partnership

Ove Arup & Partners Ltd

Napper Architects

Wainwrights

Energy Innovation Centre

National Energy Action

Newcastle University

Nominated Contact Email Address(es)

innovation@northerngas.co.uk

Problem Being Solved

In 2021, the Fuel Poverty Strategy 'Sustainable Warmth: Protecting Vulnerable Households in England' (BEIS, 2021) updated the fuel poverty metric in England to 'Low Income, Low Energy Efficiency' (LILEE). This replaced the previous 'Low Income, High Cost' (LIHC) metric, acknowledging the three key drivers of fuel poverty as:

- the price of energy,
- low household income, and
- level of energy efficiency of the home.

The strategy provides a model to illustrate how improving the energy efficiency of a household can result in a reduction in energy costs and recognises that providing support for low-income households to switch to low carbon technologies plays an important role in a just transition to net-zero – "ensuring that the poorest in society not only is not left behind but can be some of the earliest beneficiaries". The Energy White Paper (BEIS, 2020) committed to driving 'greatly improved energy performance in both existing and new buildings to reduce consumption and help keep bills affordable and recognised the 'huge challenge' of retrofitting almost 27 million existing homes to be fit for a clean energy future.

In order to meet the challenge of achieving net-zero by 2050, there is a need for complementary material change across all energy networks and all households. The UK needs to decarbonise an average of 20,000 properties each week for the next 20 to 25 years to meet its goal. This includes work to improve the energy and water efficiency of households, which will look at the technologies and appliances, as well as the building fabric itself. Such a large-scale implementation requires influencing household behaviours. Even small changes at the household level when it comes to technology adoption and consumer behaviour can result in a significant impact on energy suppliers and network operators when aggregated.

Convincing households that local change matters should be a priority. Still, for many households, there is an even greater challenge. Millions of households across the UK struggle with their finances, living in fuel poverty and/or water poverty. The Covid-19 pandemic is likely to have significantly increased the number of households struggling financially, yet, the overall impact is still unknown. These households already face substantial challenges to afford the basics, often making tough decisions between heating and eating, or going without and cutting back on basic necessities. Many households are living on negative budgets, meaning their income does not cover their essential outgoings each month. These households are more likely to ration their energy and water use (if metered), and so their primary focus is on keeping warm, on staying alive, and not on reducing the amount of carbon they use. For such households, it is imperative that their needs and special circumstances are taken into consideration and that appropriate strategies are put in place to support them.

Vulnerability does not only refer to finances and is complex and intersectional. Vulnerability can relate to personal characteristics (about the person, e.g., health or age), situational (about the property or income) and structural (relationship to the energy market or services) – it can also arise or change when these three converge. As such, many households face multiple challenges, including struggles with their physical and mental health. These challenges can limit their ability to change their behaviours, to understand both the need for change and the change itself. There are strong correlations between mental health illnesses and debt, with half of the households in problem debt also experiencing a mental health problem. Additionally, there are households for whom English is not their first language or those who have additional communication impairments, such as being deaf, blind, or experiencing cognitive issues including dementias. These households will all require additional, tailored support with any substantial transition, especially those which directly impact their home life.

In light of this very challenging situation, what is required to enable change to low carbon technologies, to minimise the cost impact of the energy systems transition on customers, and to positively influence a fair transition for all and not just the 'can pay' segment? Importantly what might be the impact on utilities through this transition period as take up / adoption of technologies accelerates and what might act as a brake to progress?

Method(s)

Stage 1: Build the Innovation Infrastructure [majority funded via UK governments Getting Building Fund]

This stage of the project will see the construction of the InTEGReL Customer Energy Village. This facility [shown below in figure 1], will consist of:

Five residential buildings, nine homes. There are five buildings in total each building is different being:

1. One 1910 era terrace building with three, two-bedroom homes

2. One 1930s era semi-detached building, two, three-bedroom homes

3. One 1950s era bungalow building, one two-bedroom home

4. One 1970s era flats building, two, two-bedroom homes

5. One 1990s era detached building, one four-bedroom home

Each building is constructed, implementing building standards appliable to the era design, for instance the 1910 terrace must be constructed to 1910 standards, utilising materials used at that time [for instance plaster not plasterboard], to fully reflect the building fabric and challenges that exist with buildings of each era.

This construction stage is anticipated to run October 2021 to July 2022.

Stage 2: Accessing innovative technology

This stage, led by NEA and Newcastle University will engage with the Energy Innovation Centre to select a range of energy saving technologies to be installed, analysed for impact, and reviewed by consumers. This process will add to technology offers already in place from external companies keen to engage on this project. The EIC will utilise its large Innovation Community to identify companies and their solutions that deliver energy savings via various smart home systems and / or energy efficiency solutions and the NEA and Newcastle university team will then shortlist these for installation.

Stage 2: Creation of data platform and data repository.

The NGN IT department (3iG) will work with external partners to create a new data management system specific to the CEV to capture all the measurement points from each home and manage access control of such. This work will also develop a public facing website to display project information and data from the CEV, alongside project updates from NGN and partners.

Stage 3: Understanding the Future implications for our network and customers

1. Design all research materials following a review of academic literature and industry reports.

2. Identify a core research sample of 400 participants from the responses to the pre-screen questionnaire, split equally between vulnerable and non-vulnerable groups.

3. Support the assessment of possible technologies resulting from the EIC open innovation call.

4. Explore the usage of collected CEV test-property data on energy consumption, internal and external temperatures, humidity, air quality, CO, and CO2 levels. Such information can be used for demonstration purposes when engaging consumers.

5. Use the CEV test-site data to estimate the potential benefits and impacts of the technologies in real-homes, shortlisting potential technologies for future in-home testing.

6. Undertake an extensive customer engagement programme (spanning the lifecycle of the project), with identical activities for both the vulnerable and non-vulnerable groups,

Stage 4: Finalising the project and outputs

1. Proof of concept report (including recommendations and next steps, and supplementary short reports on individual technologies to be shared confidentially with manufacturers)

2. Development of an e-learning training module, to share insights and results with frontline delivery organisations.

3. 1-2 academic papers around the themes of Factors that influence to adoption and Consumer Behaviours

4. Presentations at 1-2 academic conferences

5. Presentation/ workshop at NEA annual conference

6. Stakeholder dissemination event.

7. NGN Annual Innovation conference event

Measurement Quality Statement and Data Quality Statement : both NEA and Newcastle university will be undertaking the data analysis and have long standing data management and assurance processes in place to confirm the accuracy of information being analysed and reliability of any results. Newcastle university follow their "Research Data Management Policy Principles & Code of Good Practice" document and utilise the following toolkit [http://research.ncl.ac.uk/rdm/]. The university provide further guidance to their researchers via the following, reflecting the ethical considerations to following: [https://www.ncl.ac.uk/research/researchgovernance/ethics/ethicstoolkit/toolkitdata/]. This approach will be applied across the project to ensure robust measurement and data quality standards.

NEA takes data quality and protection seriously and will act in accordance with our own research ethics and industry codes of practice, and in keeping with the principle of 'do no harm'. We are committed to and comply with the General Data Protection Regulation (GDPR)and the Data Protection Act (2018). NEA has a dedicated Data Protection Officer (DPO), and all staff members receive basic GDPR training. All of NEA's servers are protected by Cisco and Incercept X systems, are backed up every 24 hours, and it has appropriate security measures (RAIDlevel 3) in place to maintain system integrity. NEA also has an uninterruptable power supply device ensuring data is not lost during a power outage. Paper-based information will be stored in a locked filing cabinet and system data will be stored on NEA's secure server or cloud-based system which is password-protected. To reduce risk of data becoming corrupted or deleted, anonymised data will be stored on NEA's secure server in an area only accessible by authorised project staff. Both the files and the server will require a password. Codes or pseudonyms are used to protect participants' identities where appropriate.

Scope

In Scope

- All deliverables/ outputs outlined in stages 1 through 4.
- Analysis of the potential impacts of the tested technologies on energy consumption.
- Estimated impacts of implementing the technologies at scale on the gas network (through data aggregation only).
- Understanding of consumer perceptions and potential barriers to adoption of the technologies.
- Creation of data platform, data repository and website.

Out of Scope

- Analysis of demand using NGN side data.
- Any installation or testing of technologies in customer homes (in scope for SIF submission).
- Selection of technologies that require major structural changes to the CEV properties.
- Technical benchmarking of technologies installed at CEV.

Objective(s)

1. Create energy research infrastructure to support the scope of this project and future innovation projects.

2. Identify and trial energy-saving technologies across the customer energy village test infrastructure. Note the selection of technologies / solutions to install will be driven through NEA and Newcastle university assessment, with NGN supporting.

3. Engage research participants [consumers from NEA customer base] to understand barriers and concerns associated with low-carbon technologies

4. Estimate potential impact on each CEV home energy profiles and demand for the gas network. This will be based on consumer reported information.

5. Identify potential carbon reductions derived from applying tested technologies in the CEV infrastructure either in isolation or in combination

6. Support scaling up of project findings with proof-of-concept report, and wide dissemination of project findings

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

The ability to engage with the transition to net-zero is not something that customers universally possess. An individual may be limited by their 1) capacity to engage, 2) the opportunity to participate, or 3) their willingness to take the risk, as explored by CSE (2018):

1. A customer requires the intellectual capability to understand the benefits of the solution being offered, the financial capabilities to purchase the solution being offered, and the technical capability to use the solution appropriately. Without these three things, they will not have the capacity to engage or participate.

2. A customer requires the opportunity to participate, be that a service provider offering them the opportunity, or if there is a need for their participation on the system they are connected to.

3. Often with innovation comes risk and uncertainty. A customer, particularly one with additional needs, both non-financial and financial, may not have the same appetite for risk, technical or financial, and therefore may be unwilling to participate.

Low-income and/ or vulnerable households, often considered the 'hard to reach, can often be left behind due to one, or a combination of, the above points being true. The adoption process may not be directly relevant to these households, as the decision is made for them at the first stage based on the barriers to entry they face. It is for this reason that the majority of those who are currently engaged with the journey to net-zero and may already be using low-carbon technologies in their homes are not those who would benefit the most from the potential bill savings derived from these technologies. The decarbonisation agenda must therefore address this, ensuring that nobody is left behind or disadvantaged due to unfair access requirements or increased levels of risk.

This project seeks to identify the opportunities to mitigate risk levels and identify possible recommendations for policymakers to ensure that all energy customers can participate in the future energy system transition. In doing so, the project aims align with the following RIIO-GD2 requirements:

- Support the delivery of an environmentally sustainable network, including playing a full role in heat decarbonisation; and

- Provide an overall package that drives efficient delivery whilst being flexible to meet future needs.

In addition, the following outcomes of the Consumer Vulnerability Strategy are expected to be met:

- CVS: Outcome 4A: We want all consumers (particularly those in vulnerable situations) to have access to affordable energy and suitable services. We want products and services to be designed to meet the needs of a wide range of consumers (including the most vulnerable)

- CVS: Outcome 4B: We expect suppliers and networks to demonstrate practical innovative measures to support consumers in vulnerable situations; and

- CVS: Outcome 5A: We want to achieve greater understanding and consistency across essential services markets for more joined up action to improve the experience of consumers in vulnerable situations.

Success Criteria

Stage 1: Construct the Customer Energy Village [CEV] Research and innovation infrastructure.

· Deliverable: Build five properties consisting of nine homes in line with the existing design developed by Arup in partnership with Napper Architects.

Stage 2: Selection of Energy Efficiency measures

· Deliverable: secure a maximum of 12 technologies to install at CEV [noting some technology solutions secured prior to build phase], to then undertake analysis and research.

Stage 3: Initiation and participant recruitment

· Deliverable: Recruit up to 400 households to core sample on completion of the pre-screening survey, split equally between vulnerable and non-vulnerable

Stage 3: Fieldwork

· Deliverable: Comprehensive engagement of all research participants at varying levels, to include 30 in-depth interviews, two additional research surveys, and four focus groups

Stage 4: The outputs

- Deliverable: Production of 'proof of concept' report to present key findings.
- Deliverable: Production of academic papers
- Deliverable: Development of e-learning training module

Stage 4: Stakeholder engagement and dissemination

- Deliverable: Stakeholder dissemination event held to share findings and discussion potential next steps.

Project Partners and External Funding

During Stage 1: Construction the partners will be the North East Local Enterprise Partnership, Ove Arup, napper Architects and Wainwrights. They will drive the construction phase which is majority funded by the UK Governments Getting Building fund to a value of £1.86M.

During stages 2 to 4: our partners are the Energy innovation Centre, National Energy Action and Newcastle University. Both National Energy Action and Newcastle university will each provide an estimated £15k in in kind support for the project.

Note: the design of the Customer Energy Village now complete] also attracted part funding from the North East Local Enterprise Partnership, Local Growth fund to a value of £100K.

Potential for New Learning

On one hand, this project aims to create new knowledge and insights, when it comes to energy technology adoption and consumer behaviour, considering the special circumstances of vulnerable customers. As producing knowledge is only the first step to learning, we will aim to produce a varied set of deliverables that will be disseminated to each stakeholder group accordingly. More specifically, we expect to produce a proof-of-concept report which aims to inform relevant policy and future roll-out opportunities, and an accompanying e-learning training module to share relevant insights with other frontline delivery organisations.

Any installed energy efficiency technology at the CEV will alter the energy use profiles of the homes (positively or negatively) and this information will be captured and analysed to estimate what means in terms of any reduction in consumption and to understand the profiles of energy use once efficiency measure are in operation [as a comparator to those properties acting as a baseline]. The output[s] of this work will inform future research to further energy efficiency as a key enabler of a fair transition.

Finally, we will contribute to academic literature and knowledge surrounding technology adoption and sustainability. Such knowledge and insights will be useful for energy companies and operators (informing policies and consumer-oriented strategies), supporting organisations (underpinning support schemes), the public and academics (e.g. we expect to use the materials in class in the form of reading sources and case studies).

Scale of Project

In order to accelerate pathways to decarbonisation a versatile infrastructure system is required to unlock the more challenging areas of research that directly impact customers lives and their ability to transition to net zero. Stage 1 of this project will secure that infrastructure, which is majority funded by the UK Governments Getting Building fund to a value of £1.86M.

Stages 2 through 4 cover the initial research necessary to understand the challenges of decarbonisation and energy efficiency through the eyes of the customer. The work will engage with the supply chain and work with the SME community to better understand what technologies are available now and in the near future, that may offer benefit to customers. This project will undertake early-stage exploration of energy efficiency measures, what benefits they deliver, what views customers have of such technology and will work with customers to understand what prevent such benefits from being realised.

At this stage it is felt this level of activity is appropriate to improve our understanding of what might be possible and to inform further work in future.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL6 Large Scale

Geographical Area

This project will be undertaken at the NGN InTEGReL facility in Gateshead which is the centre for whole systems innovation and research and site of the Customer Energy Village construction.

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

This project has experienced significant challenges that has been documented on project progress reports, submitted over the last 2 years. The principal challenge has been commercial with significant external factors creating delays and cost pressure. Most significantly was the inflationary increase in the price of steel and other relevant materials resulting from the impact of COVID-19 and the UKRAINE/RUSSIA war. Additionally, the need to construct the build of the properties via old techniques and materials also led to delay and disruptions. This was associated with sourcing and retention of bricklayers suitably skilled in the old construction techniques. This was highlighted as a risk, however, was greater than forecast. An essential strategic change was also required relating to data management to ensure that the solution had fit for purpose (both now and in future) data systems and processes, this saw initial forecasts costs relating to this discrete element to double. Cost increases also resulted from essential commercial instructions made to the contractor to accelerate the work. Consequent to the above, there were corresponding contract administration, supervision and staff cost increases due to the prolonged completion of the project. External costs: £1,332,021 Internal costs: £323,253 Total NIA Project Expenditure: £1,665,274

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:

This project, in identifying energy efficiency measure, in identifying barrier to adoption, also looks to understand what the future impact of energy need would be were these technologies and solutions be adopted more widely. In understanding how energy needs can be reduced, the project points to the energy systems transition where the prevailing view suggests supplies of hydrogen will be constrained. In reducing energy needs today, we enable a more rapid transition to low carbon solutions tomorrow.

We better inform the strategic planning and pathways to net zero by defining the customer requirements more acutely. This project is designed to act as an enabler for the wider energy systems transition activities to provide a better understanding of consumer needs and how quickly such consumers may be able to transition to a net zero solution.

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

This project aims to understand what energy efficiency measures can provide real world energy saving benefit to customers. The research undertaken by National Energy Action and Newcastle University will explore, through engagement, with customers across the 'can pay and can't pay' spectrum to identify the range of blockers that may exist which prevents rapid and widespread adoption to technologies and solutions which would lead to direct reductions in a customer's energy bill today alongside associated carbon reductions. This project has a direct focus into the issues faced by vulnerable consumers.

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)

Please provide a calculation of the expected benefits the Solution

The benefits of this work include:

· Deliverable: Production of 'proof of concept' report to present key findings - This will articulate the learning discovered during this project.

· Deliverable: Production of academic papers – peer reviewed and shared through academic circles to expand knowledge and interest in this area of research.

· Deliverable: Development of e-learning training module – a shared set of training material for industry and wider stakeholders to understand the research, where the challenges were found and suggested way to progress energy efficiency in future.

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

The findings from the energy efficiency research will be documented in a report to be shared openly. The consumer base is derived

from National Energy Actions consumer portfolio and has national relevance. All findings from this research will have national relevance and can be applied / adopted by all aspects of the energy industry [and wider into water industry vulnerability issues] and policy makers alike.

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

This project is undertaking research to identify energy efficiency measures and the challenges of adoption across the customer base. It is not possible to estimate at this stage the outcomes of that research. Moreover, the saving when applied at a national level would be highly variable based on the energy saving technology adopted, [highly dependent of the technology, the application, property type, ability to pay etc.] and also what policy position the UK government may put in place to enable such transitional change.

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

As described across the scope, National Energy Action and Newcastle University will be undertaking investigation and analysis of key technologies which could reduce a consumers energy bill [and therefore reduce carbon and stress on the gas infrastructure]. They will develop understanding of barriers to adoption and propose routes through these barriers to support a consumer drive to lower energy bills. The project will deliver the following which aid dissemination and adoption across the wider network licensee base:

1. Proof of concept report to outline next steps for testing in real homes

2. 1-2 academic papers around the themes of Factors that influence to adoption and Consumer Behaviours

3. Training module made available to relevant frontline delivery organisations to share insights and knowledge

4. Well attended report launch (held in person should restrictions allow) with senior stakeholders invited.

Other network Licensees will have open access to this reported information, can attend the launch event and moreover they can also contact both National Energy Action and Newcastle university directly to have one to one discussion to support development of the learning and adoption into their own organisations.

Given the natura of this research, it is highly advantageous to promote the findings and see wide acceptance of the findings and adoption of strategies to promote energy saving measures to drive long term decarbonisation of our industry.

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.

This project is unique in creating new open research infrastructure which is nationally and internationally relevant. It is aiming to unlock the challenges of consumer adoption of energy efficiency measures which has not been achieved today and which is an essential first step towards the net zero target of 2050 and a key enabling factor in the transition to low carbon heat. It is working with the SME community to understand new technologies not yet having market traction, alongside other technologies that are more established but yet somehow fail to develop the customer base required to drive down energy bills, and lower demand on utility infrastructure.

The project detail has been shared with ENA, GDN's and DNOs in line with ENIP and RIIO-2 NIA governance requirements

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

Yes. This project creates a new research and innovation infrastructure that can be leveraged for future innovation and research to minimise longer term costs for that work. It drives better understanding of what energy efficiency measures can make a difference to both consumers bills, carbon emissions and the amount of energy networks have to convey to satisfy demand. In driving a reduction in energy need we drive down cost, improve efficiency and resilience of networks and support the future energy systems transition to low carbon solutions.

Relevant Foreground IPR

This project and the resultant outcomes/deliverables will conform to the default treatment of IPR as set out under the agreed NIA Governance (where the default requirements address two types of IPR: Background IPR and Foreground IPR).

Data Access Details

All of the measured information from the customer energy village will be available on request to maintain an open approach to sharing. Information related to the customer conversations will be subject to protections in accordance with current legislation and will be managed by National Energy Action.

For all data access requests, please follow the guidance set out in Northern Gas Networks Innovation Data Sharing Policy. https://www.northerngasnetworks.co.uk/ngn-you/the-future/our-funding/

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

This project is majority funded by the UK Governments Getting building fund to create the research infrastructure and the NIA contribution funding the research by national energy Action and Newcastle university. The scale of this ambition and level of risk associated with such renders this beyond network BAU allowances and as such correctly qualifies as RIIO-GD2 innovation.

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

This project is complex, consisting of research infrastructure build, uncertainty over energy efficiency technologies, uncertainties linked to customer input, unknowns relating to how energy efficiency measures may perform and whether the outputs will actually deliver the opportunities to reduce consumer energy bills / demand. This research requires specialist input from research teams at National Energy Action and Newcastle university to investigate the challenges, including technical and articulate the financial, commercial and societal benefits and opportunities to derive down consumer bills and in doing so reduce carbon emissions and the energy throughput required of networks.

This project sits firmly within the NIA criteria of driving new innovative research and innovation focused on benefits to the consumer both now and long term and delivers new insights into the energy systems transition to better inform future pathways to net zero.

This project has been approved by a senior member of staff

- [x] Yes