SIF Alpha Round 2 Project Registration

Date of Submission

Project Reference Number

10086429

Initial Project Details

Project Title

Heat Risers

Project Contact

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Challenge Area

Accelerating decarbonisation of major energy demands.

Strategy Theme

Net zero and the energy system transition

Lead Sector

Electricity Distribution

Other Related Sectors

Electricity Distribution

Project Start Date

01/10/2023

Project Duration (Months)

6

Lead Funding Licensee

UKPN - London Power Networks Plc

Funding Mechanism

SIF Alpha - Round 2

Technology Areas

Asset Management

Heat Pumps

Commercial

LV & 11kV Networks

Stakeholder Engagement

Substations

Project Summary

Heat Risers investigates an underexplored but significant barrier to heat decarbonisation which is currently driving an unjust energy transition. Multiple occupancy buildings make up a quarter of dwellings in UK Power Networks' areas. That's more than one million households in need of a sustainable, cost-effective pathway to a low carbon home.

This project offers a whole systems opportunity to overcome specific connection barriers that obscure the path to full heat decarbonisation in these buildings and lead to a situation where some tenants are left with no choice but to remain on fossil-fuel heating systems due to building infrastructure limitations.

Add Preceding Project(s)

10086429 - Heat Risers

Add Third Party Collaborator(s)

baringa

Royal Borough of Greenwich

Project Budget

£544,201.00

SIF Funding

£489,735.00

Project Approaches and Desired Outcomes

Problem statement

Our Discovery Phase research has revealed that the anticipated barriers to decarbonising heat in multiple occupancy buildings (MOBs) are material. Upfront cost is already a significant barrier, and atypical electrical connection costs for these building types exacerbate this challenge.

We estimate that on a per household basis, these connection costs can add ~30% to upfront costs when the internal building electric network (IBEN) upgrades, often necessary for MOBs, are stacked on top of any distribution network upgrade costs. This raises consumer fairness issues, as MOB residents could be left behind as projects to decarbonise these building types are not started or abandoned due to the higher costs.

The Discovery Phase highlighted that the costs and benefits of installing different types of heat solutions in MOBs are nuanced. Where distribution network upgrades are required and/or existing heat sources and on-site systems are in place, there can be a case for centralised plant based heat network solutions. However, in many buildings (~80-90%) the most likely economic answer is to upgrade the IBEN to enable customers to decarbonise when they choose.

The roles, responsibilities and funding routes required to enable this are currently unclear. No one party wants to pay for the upgrades necessary to enable decarbonised heating. Building owners are reticent to pay, and customers who are not yet ready to decarbonise are unlikely to accept these costs to enable their neighbours' installs.

Solving this challenge may require involvement by different parties, new boundaries of responsibility, and novel funding routes. We are therefore updating our proposals to develop a decision-making framework that can determine the optimal solution on a building-by-building basis – considering all connection costs, the range of potential heat technology options, and building and customer-specific factors.

We will work with industry stakeholders to investigate and test the route to market for all MOB solutions where relevant, consider funding options, as well as roles and responsibilities in both social and private housing sectors. We will consider investments in IBEN upgrades, and additionally will consider coordinated heat pump or heat network solutions in situations where this is determined to be the optimal approach.

The project continues to meet Challenge 4: Accelerating decarbonisation of major energy demands. The scale of the issue across electricity and gas networks in general, reinforces the requirement for solutions that can overcome barriers to the decarbonisation of heat in MOBs. Gas networks face similar challenges, where the internal building gas networks need hydrogen-ready upgrades that would come at significant cost. For buildings with more than six floors, hydrogen is unsuitable and hence electrification is the only heat decarbonisation option.

The project also continues to be relevant for Challenge 1: Supporting a just energy transition. There is a real risk that certain customers will be left behind, including those in social housing, those classified as fuel poor and unfairly disadvantaged occupiers who will not be able to decarbonise their heating due to the building type they live in.

The key beneficiaries of this innovation will be:

- Building occupiers – for whom Discovery has underlined significant fairness challenges, and often a considerable burden of hitherto 'hidden' connection costs.
- Building owners and managers (private and social) – for whom Discovery has underlined the fragmentation of the route to market and lack of guidance, support, and funding.
- DNOs – for whom Discovery has underlined the workload that could be driven through an uncoordinated heat decarbonisation roll-out and the potential savings of coordinated solutions.

Innovation justification

Heat Risers will further explore a significant barrier to heat decarbonisation which is currently driving an unjust transition. MOBs make up ~25% of dwellings in UK Power Networks' (UKPN) areas, which according to their Distributed Future Energy Scenarios

(DFES), could equate to one million homes. This project offers an opportunity to overcome specific connection barriers that obscure the path to full heat dercarbonisation in these buildings and lead to a situation where some tenants are forced to remain on fossil-fuel heating systems due to building infrastructure limitations. Therfore, Heat Risers primarily addresses Challenge 4: Accelerating decarbonisation of major energy demands.

High connection costs under the counterfactual approach, where individual heat pumps have previously been rolled out to each dwelling in an uncoordinated manner, are currently leading to abandoned heat decarbonisation projects, often before they've started. The Project Partners have pooled their knowledge during the Discovery Phase to understand MOB stakeholder perspectives across different tenure types.

For occupiers, the connection costs for different buildings will depend on the condition of the building that customers happen to live in, and buildings are becoming constrained after early adopters have installed heat pumps, inhibiting further uptake. Our work has emphasised the importance of addressing the variable electrical connection cost burden for distributed and centralised heating solutions.

For building owners and managers, there is a high level of complexity that makes the returns of heat decarbonisation projects risky for private investors. These complexities are driven by the variability of building factors, lack of clarity on responsibilities, the burden of IBEN upgrade costs, and the fragmentation of market offerings and funding.

For DNOs, the current fragmented approach has a high administrative burden and has underlined the need for appropriate solutions to be deployed in the right circumstances to drive significantly lower network costs. Consideration of how to monetise the savings to incentivise and reward deployment of the right solutions is also needed.

Discovery demonstrated that a one-size-fits-all approach is not appropriate for MOBs given the diversity of characteristics and local network constraints. For example, two purpose-built high-rise buildings may have very different requirements depending on current fuel type, state of riser and lateral systems, ownership structure and network headroom. Hence, subsequent phases aim to develop and test a decision-making framework, recommend new funding and incentive mechanisms, and boundaries of responsibility. During Alpha, we will also explore the value of providing a self-serve planning tool for building owners and managers to give a clearer view of how to decarbonise their portfolio of buildings.

Whilst industry has previously developed guidance to support the design and installation of heat pumps in MOBs, no framework exists to lead stakeholders towards full decarbonisation. For example, CIBSE AM16 (2021) 'Heat pump installations for multi-unit residential buildings.' has not considered IBEN constraints at point of installation; it only highlights that load reduction and storage utilisation could offset some connection costs.

It will be difficult to tackle this challenge without SIF funding due to the complexity of the issues face. To build an evidence base to guide decision-making and test the framework and solutions designed in Alpha, the Beta Phase aims to fully decarbonise the heating systems of selected MOBs within Greenwich, which would exceed the size of an NIA demonstration project.

Heat Risers focuses on the use of technologies that already exist (TRL9 and IRL7) and aims to increase the commercial readiness of the heat technologies in MOBs through unlocking solutions to electrical connection cost barriers. The current CRL3 will be worked up to CRL4 in Alpha where market analysis will produce a clear value proposition and Beta will aim to achieve CRL5-6.

Impact and benefits (not scored)

Financial - future reductions in the cost of operating the network

Financial - cost savings per annum on energy bills for consumers

Environmental - carbon reduction – indirect CO2 savings per annum

New to market – products

New to market – processes

New to market - services

Impacts and benefits description

The key benefit of Heat Risers is avoiding a blocker in the roll-out of decarbonised heat solutions into MOBs. The most significant and highest confidence direct benefit is therefore in enabling carbon reduction through avoiding delay. The means to avoid this delay is uncertain but options have been identified in the Discovery Phase, for further investigation.

One option may be to remove the burden of up-front costs from customers for internal building network upgrades, and the risk of sunk costs for heat pumps which then get replaced with whole building solutions. This could result in cost savings for consumers, but costs would still need to be bourne by another party. Another option could be increased uptake of whole-building solutions, which in some cases are lower cost per household.

These considerations are set out in the Alpha Bid CBA. Carbon benefits below are therefore a confident size of prize based on solving a delay, and not a reduced cost benefit. Cost reduction benefits are stated as a "what-if" examples of whole-building solutions to be refined in Alpha.

Environmental – carbon reduction – indirect CO2 savings per annum against (£233m by 2050)

The Discovery Phase identified one million gas boilers across MOB dwellings in UKPN's areas may fail to decarbonise or remain on fossil fuel heating for longer, resulting in a carbon cost of £233m by 2050 using the Government's green book carbon accounting method. Unlocking this delay could therefore avoid this carbon cost. This is the baseline solution presented in the CBA Alpha Bid template.

Financial – cost savings per annum on energy bills for consumers (Up to £176m by 2050)

Central solutions are preferable for certain ownership characteristics; social housing for instance is more suited to heat networks. Social housing is more likely to be surrounded by other buildings, which can all be owned by one party, enabling a large heat demand which is how heat networks become most cost effective. Option 1 and 2 in the CBA illustrate scenarios of social housing properties moved to heat network solutions instead of individual heat pumps, and offsetting IBEN upgrades costs and related substation interventions. Option 2 (the high connection costs scenario) suggests an NPV benefit potential of £176 million by 2050 across UKPN's area.

Financial – future reductions in the cost of operating the network (£6m by 2050)

Heat Risers is focusing on avoiding a blocker to rolling out decarbonised heat solutions, and so would lead to the same network load as the counterfactual. In some cases, whole building solutions can lead to a lower aggregate load than individual heat pumps, but the impact is expected to be limited. For example, if all social housing moved to heat networks, we estimate a benefit of just £6m by 2050 to the network through reduced peak load.

There is a potential incremental benefit in situations where substation reinforcement can be avoided by moving to whole building solutions, but this is currently not quantified with confidence due to data scarcity. In addition, there will be administrative savings to DNOs and building owners through a more coordinated planning approach and route-to-market for MOB solutions, but again due to the lack of data existing in this area we will need to investigate further in the Alpha phase.

New to market – products, processes, and services

The project will deliver a decision-making framework that determines the optimal low-carbon heat solution on a building-by-building basis, considering all costs. This approach will be of benefit to building occupiers, owners, managers, and DNOs, and may result in new market offerings, funding mechanisms, and support services to reduce the up-front and ongoing cost burden on consumers.

Teams and resources

Each of the Discovery Phase Partners have played a valuable role in providing insights and shaping recommendations, and will continue to be involved in the Alpha Phase.

UKPN will take a leading role in project management, informing and developing the MOB solution decision-making framework, designing the Beta Phase plan, as well as supporting the route to market assessment and cost benefit assessment.

UKPN has unique insight into the connection challenges, engineering solutions, and costs associated with heat pumps in MOBs, and front-line engineers will be needed to advise on the options for the decision-making framework. UKPN's Regulation team will provide expert input to shaping options for the roles and responsibilities and funding routes for addressing internal building networks, and participate in engagement with Ofgem.

They will also be able to leverage skills and experience from their innovation project managers to guide the project and develop plans and site selection for the Beta phase.

Baringa Partners will take a leading role driving stakeholder engagement, developing the decision-making framework, the route to market proposals including potential customer propositions, testing the need for a self-serve planning tool, and conducting the cost benefit assessment.

Baringa is a leading management consultancy firm specialising in the energy industry and in particular the energy transition. As the lead partner driving the Discovery Phase they have shaped the understanding of the challenges and potential solutions for Heat Risers to date, and have a vision for how to drive this project forward. They bring a wealth of experience in home decarbonisation propositions, building modelling for heat, energy networks, regulation and policy, and can bring a broad range of expertise to bear on this project from 2,000 specialists.

Baringa will be well-placed to facilitate the development of the decision-making framework and route to market proposals given their ability to think creatively from a neutral standpoint, and balance complex needs across multiple stakeholders.

DG Cities and The Royal Borough of Greenwich (RBG) will take a leading role in driving stakeholder engagement, developing route to market proposals and identifying potential sites for Beta Phase demonstrations. They bring deep specific insight from many low-carbon heat projects in MOBs within their borough, as well as specific insight on the challenges and opportunities with social housing. They will also enable the project to gain access to potential trial sites for Beta Phase, drawing on the range of prior projects in the borough.

Passiv UK – will take a supporting and advisory role across a range of work packages including stakeholder engagement, the decision-making framework, and the route to market assessment. As a technical heat systems consultancy with a broad perspective of heat solutions in the market – including a technical expertise in heat networks (as they are working on Heatropolis, another SIF project). PassivUK brings a wealth of knowledge to support the development of analysis and proposals, as well as a range of relationships across the heat value chain with stakeholders that can provide additional insight to shape proposals.

A key enabler for the Alpha Phase will be the ability to access a diverse range of case studies and data relating to building types, and their individual features which drive the suitability and costs of various heat technologies. We will access this data through UKPN connection teams and their connecting customers, as well as through project partners RBG, DG Cities, and PassivUK.

In developing proposals for the decision-making framework and route to market, we will engage with industry stakeholders including Ofgem and potentially wider DNOs via the ENA. These stakeholders will be incorporated into our engagement approach and coordinated via UKPN’s existing relationships.

Project Plans and Milestones

Project management and delivery

Six work packages (WP) are proposed for the Alpha Phase with clear ownership and accountabilities set out in the accompanying Gantt chart and project management template:

· WP1: Project Management (UKPN) – managing end-to-end delivery.

· WP2: Stakeholder Engagement (Baringa, RBG/DG Cities) – running a broad stakeholder engagement programme to reach a full cross-section of the stakeholders involved in the route to market for MOB solutions across both social and private housing.

· WP3: MOB Solution Decision-Making Framework (Baringa, UKPN) – working with building stakeholders, supply chain actors, and DNOs to develop solution options for different building types, and developing a framework for assessing the unique features of MOB and determining the optimal decarbonisation solution.

· WP4 - MOB Solution Route to Market (Baringa, UKPN) - building on Discovery work to develop an end-to-end journey for heat decarbonisation, capturing the key stages, entities involved across tenure types and building segments, and barriers and enablers to assess and deploy optimal solutions.

· WP5: Cost Benefit Assessment Refresh (Baringa) – refreshing the CBA to support WP3 as well as refine assumptions for the Beta Phase.

· WP6: Design the Beta Phase (UKPN) – selecting a relevant building type(s) to apply the framework from Alpha to conduct a trial. Identify real-world trial locations and associated heat technology options.

Project management will be led by UKPN using standard best practice methods and tools, including fortnightly management meetings and status reporting, more frequent stand-ups as required for design sprints, a RAID log, and a stakeholder governance schedule aligned with project timelines.

Interdependencies between work packages are:

· WP2 stakeholder engagement is needed to gather insight and inform the other work packages, whilst seeking alignment on the coordinated solutions rationale.

· WP3 will need to progress to confirm the building segments and solution options, to provide a framing for WP4: MOB Solution Route to Market to align against. WP3 will also need to feed in to WP5 by providing updated data on building interventions, network interventions, and solution options.

· WP4 is interdependent with WP6 – for example, where WP4 determines potential enablers (e.g. a funded IBEN upgrade) WP5 will consider whether propositions such as advertising heat pump installs alongside this upgrade may serve to drive consumer engagement and uptake.

· WP6 occurs toward the end of the project and will require significant progress in all other workstreams before commencing.

Key risks and mitigation strategies are set out in the risk register. We will manage risks and issues using a RAID log, refreshed for fortnightly project meetings. Key risks in the Alpha Phase are:

· If we cannot access the necessary real-world data regarding the building stock and potential solutions, we may not be able to develop a workable decision-making framework.

· If the landscape of customer, building and tenure segments is too fragmented and complex, we may not be able to develop route to market proposals that are suitable across the full breadth of the market.

· If proposed changes to roles and responsibilities are not deemed feasible by relevant bodies, we may not be able to

generate alignment through the Alpha Phase.

Two key checkpoints will serve to mitigate risks associated with the dependencies between workstreams:

1. Month two – To ensure interim findings from WP3 can sufficiently inform WP4 and WP5

2. Month four – To ensure progress of WP3 and 4 is sufficient to enable planning to start on the Beta phase trial in WP6.

Key outputs and dissemination

The proposed objectives of the Alpha Phase are to:

- Conduct broad stakeholder engagement to develop a draft decision-making framework that can identify the optimal solution for heat decarbonisation on a building-by-building basis, considering all electrical connection costs, the range of potential heat technology options, and building and customer-specific factors.

- Investigate the route to market for MOB solutions, considering funding options as well as roles and responsibilities across parties in both social and private housing sectors, working with industry stakeholders (e.g. Ofgem and DNOs) as well as market participants to:

- Address IBEN upgrades ahead of need to enable future heat-pump installations

- Stimulate customer uptake of coordinated heat-pump roll-out programmes

- Invest in whole-building solutions in situations where this is determined to be the optimal answer.

- Investigate the potential for a customer-facing tool to support building stakeholders in planning for electrified heat connections, based on the decision making framework, and accessing the services and funding required

- Develop the approach to a Beta Phase demonstrator to test the decision-making framework, refine our understanding of the route to market, and develop the evidence base that may be required for related policy decisions.

The proposed outputs by Work Package of the key design workstreams of the Alpha Phase are:

WP2: Stakeholder Engagement will run a broad stakeholder engagement programme to reach a full cross-section of the stakeholders involved in the route to market for MOB solutions.

- Stakeholder engagement list and schedule

- Stakeholder engagement materials

- Engagement outputs, consumer insights, and data

- List of barriers, including behavioural, and associated enablers

- Alignment on proposals

WP3: MOB Solution Decision Making Framework will create a more detailed categorisation of building types and solutions, as well as the approach to applying a decision-making framework.

- Building segmentation incorporating building-specific design factors

- Solution specifications and mapping by building type

- DNO network process map and intervention triggers/costs
- Decision making framework and assessment process

WP4: MOB Solution Route to Market will focus on the end-to-end journey of building decarbonisation using the outputs from WP2 and WP3 to identify barriers and enablers.

- End-to-end journey of building decarbonisation (incl. variations by tenure / building type)
- Identification of barriers and development of proposals for enablers

WP5: Cost/Benefit Assessment Refresh will re-fresh the CBA to support WP3 and test the case for Beta Phase solutions.

- Cost benefit analysis of options

WP6: Design the Beta Phase will develop the plan for Beta, aiming to select relevant building types that use the framework developed in Alpha to conduct a real-world trial.

- Beta Phase plan including trial locations and associated heat technology options
- Commitment from Beta Phase partners including building stakeholder and technology providers

The project will engage with the Net Zero Buildings: Clean Heat Directorate in the Department for Energy Security & Net Zero (DESNZ) to discuss and disseminate findings.

Details of all Alpha Phase projects awarded will be uploaded to the Smarter Networks Portal and feature on the UKPN innovation website with specific project learnings being disseminated at the IUK Show & Tell events. In addition, UKPN will host an in-person event in London to disseminate the learnings and key outputs of all successfully awarded Alpha Phase projects to a wider audience. UKPN will share project successes and discoveries via its social media channels with the possibility of publishing external press media where appropriate.

Commercials

Intellectual property rights, procurement and contracting (not scored)

The parties agree to adopt the default IPR arrangements for this project as set out in Section 9 of the SIF Governance Framework.

The partners recognise that knowledge transfer is one of the key aims of the SIF, and that the benefits of this project will be maximised by the ability of other licencees to be able to learn from the Project so as to create improved outcomes or reduce costs for consumers. The partners do not anticipate that the Alpha Phase (or any potential subsequent phases) will result in the creation of IPR that cannot be freely disseminated, and have no expectation of creating income streams or royalties from IPR outside of participation in a competitive marketplace for services that may be informed or stimulated via the outcomes of the project.

We do not anticipate any subcontracting arrangements, tenders, or procurement to be run by any partner during the Alpha Phase.

Commercialisation, route to market and business as usual

Heat Risers is not working to support any particular market participant in developing a proprietary approach or technology. Whilst PassivUK will gain learning and develop their solutions alongside this project, they are already active in the market and will not gain significant advantage from participation in a trial.

Heat Risers will provide insight to all building stakeholders regarding options and approaches to decarbonise MOBs and may lead to new services and market arrangements to support the roll-out of these solutions for customers. All outputs will be available to all participants.

Maintaining competitive markets

Any connections services, incentives, or funding support developed through this project will be made available to all market participants, to maximise the uptake of heat solutions, and all data and insights developed will be made freely available through project knowledge dissemination.

If successful, a key outcome of the project will be to ensure network constraints are less likely to prohibit residents of MOBs from the uptake of heat solutions. The project will also seek to enable a reduced costfor MOB occupiers and assess other considerations that might drive uptake such as payment terms and ease and convenience of the different solutions. These factors should ensure that fewer customers are excluded from participating in a competitive market for heat solutions.

BAU adoption

To ensure solutions are adopted into BAU practices, we will work with the relevant UKPN teams throughout design and testing. This will include network planners, to ensure insight regarding heat technologies can be adopted into planning policies, and the connections teams and the DSO, to co-develop services and incentives to be offered to service providers, as well as the Regulation team. The relevant teams will be involved in any Beta Phase to ensure awareness of project outcomes and prepare uptake of practices in BAU.

Implementation of the MOB heat solutions will be the responsibility of active market participants, as today.

Customer adoption

The end-customers targeted by this project are residents of MOBs – including owner-occupied, private rental, mixed occupancy and social housing – as well as their building owners or managers. The value proposed to consumers lies in better access to low carbon heating technology at lower upfront cost, leading to lower energy bills. Beneficiaries of improved DNO services and the

insight generated will be the service providers (e.g. installers, suppliers) that will offer solutions to these customers

Funding strategy

There are several funding and incentive questions to be addressed in the Alpha Phase, including:

a) Could a model be agreed in which funding could be released and/or favourable payment terms be devised to support customers with the cost of internal building network upgrades?

b) If coordinated MOB solutions can offset network reinforcement costs for the DNO vs. the installation of individual heat pumps, or reduce the administrative burden of repeated visits to the same property, could the DNO reduce costs by providing incentives for the MOB solution?

It is envisaged that – if models can be demonstrated effective – funding might be enabled via central or local government according to policy and the action of the decision-making framework.

Roll-out of decarbonised heat solutions to customers would be funded by customers themselves, or local authorities (in the case of social housing), as today.

Policy, standards and regulations (not scored)

A number of regulatory enablers may need to be established to enable an accelerated delivery of coordinated or whole-building solutions in multi-occupancy buildings in the future – e.g.

· Reviewing ownership of internal building networks and rising mains: Practices vary across DNOs and whilst this trial is unlikely to answer the question of ownership directly, it may provide some clarity around the impact of ownership variation and any need for changes to enable improvements for consumers.

· Establishing funding and incentive arrangements: A variety of approaches may be required for different housing segments. This may include public sector funding, market mechanisms to share the benefits of energy system savings, and regulations to enable private finance to support delivery as part of a wider customer proposition.

· Clarifying roles and responsibilities: We anticipate that the accountability for decarbonising existing MOBs and the required timescales will not be well understood or consistent regionally. Policy and regulatory change may be required to clarify roles and responsibilities across the different customer segments.

· Incentivising efficiency: There is a need to develop appropriate incentive frameworks for permanent demand reduction and/or reduced connections burden. In particular, the opportunities to secure ongoing revenues associated with deploying more efficient technologies – which have ongoing benefits for the network – appears to be lacking.

· Consumer choice vs centralised decision-making: There is a potential tension in balancing customer choice and equity with the need to drive faster and/or less disruptive solutions through more centralised solutions. This trial will highlight some of those tensions and provide evidence as to the balance of costs and benefits and just transition concerns of the contrasting approaches.

The regulatory barriers and the enablers required will be explored through WP3: MOB solution decision-making framework and WP4: MOB solution route to market.

At this stage we are not aware of any specific derogations that would be required to proceed with a demonstration or trial of the technologies within the scope of this proposal.

Value for money

Heat Risers aims to unlock £233m of at-risk carbon reduction by 2050 through addressing blockers to deploying low carbon heat solutions in MOBs.

The project will also drive cost reductions for consumers and the energy system, but due to data scarcity in this unresearched area estimates from Discovery are uncertain. A key benefit is to deliver a new approach for consumers in MOBs, reduce costs for all, and avoid fairness issues that are emerging when projects are abandoned due to costs of building network upgrades.

This challenge must be resolved otherwise the decarbonisation of MOBs is likely to remain blocked in most instances. The Alpha phase will be a design stage in which we will need to build clarity in a segment of the market that is fragmented and under-served. In developing resource estimates we have balanced a need for efficiency with the need for stakeholder confidence that the proposed decision-making framework and route-to-market enablers are robust.

The project team has the skills, prior knowledge, and stakeholder relationships to ensure that this project can be delivered quickly, efficiently, and to quality. The costs are based on experience of running multiple similar scale projects. The partners are aware of the methodologies they will follow and are confident an efficient cost has been proposed.

Total project costs

Total Project Costs: £544,201

Total Contribution: £54,466 (10%)

Total SIF Funding requested: £489,735

UK Power Networks

Total Costs: £82,105

Labour: £80,105

Other: £2,000

Contribution: £8,211 (10%)

Total SIF Funding Request: £73,894

DG Cities

Total Costs: £50,050

Labour: £50,050

Contribution: £5,050 (10%)

Total SIF Funding Request: £45,000

Royal Borough of Greenwich

Total Costs: £17,750

Labour: £17,750

Contribution: £1,775 (10%)

Total SIF Funding Request: £15,975

Baringa Partners

Total Costs: £369,810

Labour: £369,810

Contribution: £36,981 (10%)

Total SIF Funding Request: £332,829

PassivUK

Total Costs: £24,486

Labour: £24,486

Contribution: £2,449 (10%)

Total SIF Funding Request: £22,037

Baringa are a specialist energy consultancy with deep commercial and market expertise. They advise government, regulators, and networks on Net Zero challenges, and work for a wide range of market participants building customer propositions and business models for Green Homes.

We are aware that consulting rates will appear high compared to other rates. However, we believe they represent value for money for this phase because:

· At Alpha phase a key focus of the work is design. We expect in any Beta phase trial the focus will shift to delivery and there will be less need for specialist consultancy skills.

· Baringa's costs are based on their UKPN Framework Contractor ratecard, which has been determined through an ODEU-compliant procurement process run by UKPN, have been challenged competitively, and represent fair market value for the services required in this project. These are specialist skills that most industry and market participants do not retain in-house and turn to providers such as Baringa when needed.

· Baringa have proposed to invest 20% of their costs – expressed as a 10% discount to their rate card, and a further 10% Benefit In Kind contribution – which is double the % contribution of all other project partners. They are prepared to do this because the work itself is meaningful, exciting for their people, and deepens their relationship with UKPN and UKRI in the longer term.

· Baringa will bring informal access to a wide pool of experts and experience at no cost.

The combination of Benefit In Kind contributions across partners totals 10%, with each investing a proportion of their days (with Baringa discounting their ratecard a further 10%).

There are no sub-contractor costs in the Alpha phase, nor other innovation funding. Partners will leverage their own facilities (e.g. offices / IT).

Associated Innovation Projects

○ Yes (Please remember to upload all required documentation)

- ◉ No

Supporting documents

File Upload

Heat Risers - Show and Tell (alpha phase).pptx - 5.4 MB
Heat Risers - End of Alpha Phase Project Review Meeting final.pptx - 10.3 MB
Heat Risers Mid-Project Review Meeting Final v1.pdf - 887.4 KB
SIF Alpha Round 2 Project Registration 2024-01-23 3_17 - 80.9 KB

Documents uploaded where applicable?

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