



Department for  
Energy Security  
& Net Zero



Triple Point  
**HEAT NETWORKS**  
INVESTMENT MANAGEMENT

# Green Heat Network Fund

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Market Transformation Commitment Guidance  
for Applicants

Version: 5.0



# OGL

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# 1. Market Transformation Commitments

## 1.1 Market Transformation Commitment (MTC) Requirements

For the last 10 years we have seen a strong and clear growth of heat networks but to deliver on the [Heat and Buildings Strategy](#) and the [Net Zero Strategy](#), it is clear that this growth rate needs to improve dramatically over the coming decade. Action is needed now if we are going to reach net-zero in a timely and cost-effective manner.

We need the sector's supply chain capacity and capability to grow to an annual installation rate of greater than ten times the current activity. Lessons learnt from other sectors show that without parallel action in the manufacturing market, investment in UK infrastructure may instead lead to a greater reliance on imports and little

improvement in the overall UK supply chain offer and leaving the UK at risk of supply chain weakness and loss of value.

Therefore, the Market Transformation Commitments (MTCs) set out in this document seek to capture how the GHNF investment benefits the whole market.

As part of the MTCs, applicants to GHNF must show what actions they can take, as part of their projects, to enable growth within the supply chain that will provide a lasting benefit to the wider market through supplying early and quality information about projects coming to the market.

## 1.2 The Market Transformation Commitment process

The market transformation commitments, as set out in this document, along with what and how they will be achieved (action plans), will form part of the GHNF application process and will be assessed alongside other areas of the application form. These commitments will then become part of the grant funding agreement and their delivery will form part of the GHNF monitoring regime.

To encourage best practice and transparency in the sector, the MTC

action plans produced from this process will be published. This in effect sets a minimum bar of information sharing but we expect applicants and hopefully the wider industry to highlight their activities more widely to encourage collaboration. The application stage MTCs (Proposed Action Plans) will be assessed, and then monitored, through the following questions and methodologies.

Question	Type
<b>PROJECT SUMMARY</b>	
A Short project description	Description
B Project Milestones	Data
C Current procurement status	Data
D Breakdown of project outline costs	Data
<b>INFRASTRUCTURE</b>	
1 Contracting strategy and procurement process	Commitment
2 Strategy for community engagement	Commitment
3 Low carbon footprint in supply chain	Approach
4 Reliability and resilience for energy system	Commitment
5 Investment and growth in project's local economy	Approach
<b>SKILLS</b>	
6 Addressing the supply chain skills gap	Approach
7 Project recruitment and hiring strategy	Commitment
8 UK apprenticeships, trainees, and scholarships	Data & Description
9 Number of new jobs: Local, UK, and Rest of the world	Data & Description
<b>INNOVATION</b>	
10 Investment in UK R&D	Data & Description
11 Continuous improvement	Approach

### 1.3 Assessment and project size

There are three different types of market transformation commitment application questions, and these will be assessed in different ways. Further the approach to these questions varies with the scale of

projects, as outlined below. For more detail on the assessment process see Section 5.5 'Application Assessment' in the main guidance document for applicants.

Commitment	<p>These questions will require projects to state their agreement to deliver on the guidance provided by the Department of Energy Security and Net Zero within this document. These are actions that we believe all projects can take to bring about change in the heat network market. Projects must make all reasonable endeavours to meet these commitments and they will form part of the monitoring and reporting regime. If projects are unable to deliver on an aspect of a commitment, then they must inform the Department through their monthly reporting. <b>These questions form part of the application gated metrics.</b></p>
Data	<p>Through GHNF we aim to improve our knowledge of the heat network sector, of the jobs required to deliver individual projects and the investment in skills and R&amp;D. The data provided for these questions (along with a brief description) will help us to deliver for the heat network sector in the future and provide more targeted support and regulation. These numbers will not be marked on scale, and no more points are available for higher numbers of jobs, investment etc. These numbers should reflect, as accurately as possible, a real world understanding of the applicants to GHNF and their projects. <b>These questions form part of the application gated metrics.</b></p>
Approach	<p>These questions are a chance for applicants to tell the Department what they are doing to deliver on the objectives of the market transformation commitments. We know that projects are often best placed to say what interventions are needed to deliver better infrastructure, skills, and innovation and we want to learn from them. These questions will be competitively marked, with points awarded for a greater scale and quality of the planned intervention. <b>These questions will be assessed as part of the deliverability assessment and scores will form part of the adjustment metrics.</b></p>

The GHNF is committed to proportionality and recognises that smaller projects may not have the same resource available as larger projects to deliver market transformation. Those large projects can also leverage more activity from the supply chain, so are rightly expected to deliver more from their action plans. We have therefore split market transformation applications by project size, defined by capex. Small projects are defined as those below £7.5m, medium projects are those that are £7.5m or over but less than £15m,

and large projects are defined as £15m or over.

This total also includes any previous projects funded through GHNF to ensure we leverage greater market transformation activity from applicants with multiple projects. For example, an organisation applying for a £10m project (capex) after a previously successful £10m project, would complete the market transformation commitment application as a large project, i.e., completing all questions. This also applies to the GHNF transition scheme.

## 2. Guidance for market transformation commitment questions

This section aims to provide applicants with the detail of what is required for each of the market transformation commitment questions, and how each will help deliver a transformed UK heat network market.

### 2.1 Infrastructure

The heat networks that will be built under GHNF are likely to provide heat for many decades to come and as such will be an important step on our path to achieving net zero. Not only are we going to have to focus on what we're building to deliver net zero, but also on how they are built and by whom. Heat network projects are also a considerable investment in communities and are an opportunity to leverage greater social and economic market benefits. Through the application and delivery process, we can ensure that the public funds invested are used to effectively capitalise on the delivery of the Heat Network through the achievement of wider benefits for the local energy systems, economies, and communities. Overall, this project seeks to present heat networks as an attractive

investment for the delivery of low and zero carbon heat in the UK.

The following guidance and recommended approach to procurement are based on the public sector procurement principles, procedures and best practice and apply to all funding applicants regardless of whether they are from the public or private sector. Specifically, all contract opportunities must seek to achieve effective competition through a process that is fair and transparent and provides equal opportunity to all potential bidders.

This guidance is based on the Public Contracts Regulations 2015 (as amended) and so the Department reserve the right to update this guidance as and when these Regulations, or any

resultant policy, are updated in UK legislation. This is to ensure that the expenditure of this funding is optimised both through process and the achievement of indirect benefits.

These objectives are currently to be achieved through the application of the following activities and processes.

### *Overall Aspirations*

We expect that through this Market Transformation Commitment, open procurement processes will become the industry standard.

This in turn will serve to:

minimise supply chain risks by developing a wider and therefore more

robust pipeline of suppliers to deliver future heat network projects

- Remove current barriers to market entry;
- Enable all technically competent and cost-effective suppliers to bid for and potentially win contracts;

support a move towards more transparent and competitive pricing amongst suppliers which in turn should reduce the cost of low carbon heat technologies, and therefore minimise the cost to consumers; and

To facilitate innovative product design and delivery methodologies.

### 2.1.1 Contracting strategy and procurement process

If we are to accelerate delivery of heat network projects, we need to increase capacity in the market, encourage innovation in delivery methodologies, and reduce design and capital costs. To achieve this, we need to increase the number of suppliers so as to increase delivery capacity and resilience, provide more competition and increase the likelihood of innovative delivery approaches being identified.

In support of these aims, we are looking to promote the delivery of Heat Networks in a way that encourages new entrants into the market and gives them

- early sight of what is going to be procured,
- details of when such procurements are going to take place

This is to help ensure that there really is an equal opportunity for new entrants to compete with established firms, through the application of an open and transparent procurement process and the utilisation of standardised procurement documents that include fair and acceptable contract terms.

To achieve this, applicants will be required to facilitate meaningful pre-market engagement, use the standardised contract templates provided (<https://tp-heatnetworks.org/heat-contract-templates/>). This is to ensure that the contract terms used are fair and accessible, and that suppliers are identified, and contracts are awarded through an open procurement process. The expectation around each of these activities is set out below.



### *Meaningful pre-engagement*

As part of working to grow the available supply chain and encourage existing suppliers to participate in heat network projects, the heat network scheme, the services, and the material requirements need to be widely promoted and then more specifically, each project and its specific challenges need to be promoted.

### *Scheme Promotions*

We welcome successful applicants to GHNF working together to find ways to promote the opportunities that this funding can create. Specifically, we are looking for applicants to run scheme-level events:

- to inform the market of supply chain requirements;
- to link up organisations who can collaborate to deliver work;
- to help organisations access growth funding
- to update manufacturers of future demand; and
- to find ways to work with training and skill organisations to grow the workforce

These events should ideally be run online so as to minimise supplier time commitments and therefore maximise attendance and participation in the event. Should an in-person event be utilised, it should also be accessible through an online option so as to be inclusive.

It is expected that these events will be interactive discussion between all attendees and will serve to assist suppliers with planning works to maximise available resources efficiently

but also to inform the procuring body of enhanced options before the tendering approach is finalised.

These events should be advertised through the portal [heat network exchange](#)

In addition, a potential partner who can assist in organising such events is listed below; however, this is an optional suggestion and not a mandated method for achieving the above objectives.

[Built Environment Networking | Property, Construction, Building Sector Events \(built-environment-networking.com\)](#)

### *Individual Project Promotions*

These events should be project focused and seek to inform the market of a pending opportunity. It should cover the specific resource and delivery requirements and, through interactive participation, seek to optimise competition and efficient delivery.

Each project should hold at least one open-day or equivalent event for each of their main tenders. The event is a chance to outline the project's likely procurement and contracting strategy, including timescales.

The event should be organised and function as follows:

- The pre-engagement event should ideally occur at least 4 weeks before the tender goes live; this is to enable suppliers time to plan and collaborate as needed; however, this may be reduced where a recent scheme event has been held or project deadlines are prohibitive. The event may also allow changes to be made to the procurement

- based on feedback to make it more inclusive.
- The event should be advertised widely; ideally including:
    - Using an industry relevant networking event organiser;
    - Advertisement on the portal [heat network exchange](#);
    - Advertisement through multiple methods such as social media, Contracts Finder, Find a Tender, commercial e-tendering portals, organisational websites and industry press magazines is recommended
  - The event should serve to:
    - Set out the GHNF objectives by way of a presentation;
    - Detail the project's specific requirements; and
    - Allow organisations to network, for example regarding collaboration opportunities, training, and funding requirements, as well as supply and demand discussions.

Applicants are required to share the event slides, a transcript of the Q&As and clarifications and any process edits resulting from engagement event, with all prospective bidders as part of the procurement process.

Applicants are advised to share with potential bidders and with the GHNF, a

draft contracting strategy in advance of the event. This should set out high level process objectives and timescales as well as providing a draft specification.

Applicants/ Suppliers are encouraged to use these events for the benefit of the project and not just as a box ticking exercise. The aim should be to incorporate the market's knowledge and feedback into the design of the pending procurement so as to optimise both the procurement outcome and the delivery of the works.

*Data from either of these event types; date, purpose, attendees, resource challenges, product lead times and demand and any other data that may help inform future funding, is to be shared with the Department.*

### *Fair contracting terms and standardisation*

As part of encouraging new entrants and SME participation in these projects, applicants are expected to use one of the documents from the suite of draft contract templates that we have produced previously to reduce legal costs and improve transparency in the sector <https://tp-heatnetworks.org/heat-contract-templates/>.

Applicants may amend these pre-competition, or negotiate as part of the procurement process, the terms and conditions as follows:

- Pre-competition, for both public and private sectors
- Reduce the threshold of any commercial or practical contract obligations (in the favour of the suppliers) to enable SMEs to

participate and to ensure effective competition

The Private Sector may

- Negotiate the final delivery requirements with the successful tenderer where doing so would benefit BOTH the procured supplier and the project outcome

The Public Sector may only negotiate

- where permissible under the Public Contracts Regulation 2015 (as amended); and
- the amendments to the terms and conditions will improve the outcome of the project

If a project does not use these contracts, or, if they are amended or negotiated, then the applicant will need to explain why as part of their monitoring and reporting process.

Ultimately, the tendering body and tenderers need to ensure that fair contracting terms are used in their GHNF-funded project; this requirement is based on previous experience that as some terms have been seen to have stifled competition within the sector and presented a significant barrier to new entrants.

In addition, to further facilitate participation from SMEs, applicants are encouraged to share their procurement templates with the GHNF. This is to support working towards a standardised suite of templates that can be used across both the private and public sector for all open procurement processes.

*Applicants are required to share any feedback received during the tendering period from suppliers regarding the suite*

*of draft contracts; this is of particular importance if the feedback is that as a result of the contract terms, a supplier cannot/ will not participate in the procurement.*

#### *Open procurement*

All projects, public and private sector, are expected to follow an open procurement route as far as reasonably practical so as to support new entrants and supply chain growth in the delivery of these works

An open procurement process involves and requires the following:

Advertising the opportunity widely and publicly; but at very least,

- If in the private sector - advertise the opportunity on Contracts Finder where the value exceeds £100,000;
- If in the public sector - advertise in accordance with the Public Contracts Regulations 2015 and any relevant internal/constitution requirements for advertising contract opportunities

Allow a reasonable and proportionate amount of time for subcontractors to return tenders

Within the suite of tender documents, set out a clear and transparent evaluation requirement around both quality and price that enables equal access and effective competition

This commitment will form part of monitoring and reporting, and the Department will need to be informed of areas where they cannot follow open procurement.

*Applicants will be required to provide tender participation data and any feedback received during the tendering period from suppliers with regards the project requirements and more*

*specifically, the above expectations; this is of particular importance if the feedback is that a supplier cannot/ will not participate in the procurement.*

### 2.1.2 Strategy for community engagement

Heat Networks take time to develop and often require long term customer engagement to make them a success. As a minimum, projects commit to follow the Department [stakeholder engagement in heat networks guidance](#)<sup>1</sup>. This guidance can support projects to engage with the correct stakeholders at different stages of a project, and ultimately improve deliverability.

Engaging with customers and the local community can be a challenging aspect of a project but one that is vital for success. As part of this commitment applicants also agree to share their strategy for community engagement, along with lessons learned, with the sector to improve knowledge of what works in community engagement. Ultimately this knowledge will benefit the whole sector as heat networks will be

viewed more positively by potential customers.

These community engagement strategies should include

- a description of those to be engaged and any particular concerns or challenges,
- the planned methods of engagement,
- any novel approaches tested,
- plan for ongoing engagement/engaging concerns, and
- lessons learned and application to other projects.

A Community Engagement case study is provided at the end of this document as an example for applicants.

### 2.1.3 Low carbon footprint in the supply chain

To reach net-zero it will be essential for projects to understand their embodied carbon in production and transport to enable them to reduce it over time. The Green Heat Network Fund is stimulating the provision of low and zero carbon heat, but we need to drive down the carbon intensity of the design and build stage at the same time. We therefore need to understand carbon impacts from

the supply chain choices and make decisions that lower the carbon contribution from each project and its wider supply chain. The information flowing across the industry from this commitment will enable better decisions and approaches in the future.

Projects answering this question must highlight how they are going to analyse

<sup>1</sup> If this link does not work, search for "Stakeholder engagement in heat networks: a guide for project managers"

the embodied carbon of at least one major component of their supply chain or one activity of their project and provide the embodied carbon data to the Department as part of their reporting. They do not need to do this work before applying to the GHNF but should plan to work on it during the project. Embodied carbon means all the CO<sub>2</sub> (and other greenhouse gases) emitted in producing, transporting and installing materials. This includes direct (scope 1) and indirect (scopes 2 & 3) emissions. It is estimated from the energy used to extract and transport raw materials as well as emissions from manufacturing processes. This calculation should not include operational emissions.

In the report of the analysis provided to the Department, applicants should include detail of the method used to calculate embodied carbon, the component(s) or activity(ies) that are analysed, the data produced, and what impact this analysis had on their current and future projects.

Further detail to support projects in this analysis is provided below.

### *Conversion factors*

The Department publishes annual updates to the [Government conversion factors for company reporting of greenhouse gas emissions](#). The government conversion factors for greenhouse gas reporting are for use by UK and international organisations to report on greenhouse gas emissions. These can be used to convert materials used and activities undertaken for a heat network project into carbon emissions. These can be used to calculate the emissions associated with transport, raw materials, refrigerants, waste disposal

and many other aspects of a project. The figures provided represent average emissions and can be used in conjunction with project-specific numbers for the production and transport of specific components.

### *Environmental Product Declarations (EPDs)*

An Environmental Product Declaration (EPD) is an independently verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of products in a credible way. Applicants can use product EPDs to calculate the embodied carbon of the whole, or aspects of the heat network. The figures provided in EPDs can also be used in place of the average conversion factors provided above. EPDs can also inform the project's procurement approach by comparing between the embodied carbon of different products. This can help to drive down the overall embodied carbon of the network. At the time of writing this guidance there were few if any EPDs available for specific heat network products. However it is hoped and expected that this will change in the near future.

Where EPDs have been used in an embodied carbon analysis these should be shared with the Department to support the analysis provided. Suppliers may choose to create them if enough projects request them.

### *Carbon calculators*

Calculators can be used to support an analysis of embodied or whole life carbon. These are often made for construction projects so may be suited to certain built components of a heat

network but not cover the embodied carbon in manufactured components (such as heat pumps and HIUs). Calculators can be used alongside both EPDs and the published conversion factors. Below is a non-exhaustive list of carbon calculators. Other more suitable calculators could be available, and applicants are encouraged to search for the calculator that is most suitable to their project and components to be calculated.

- [Environment Agency Carbon Calculator for Construction](#) - MS Excel-based downloadable tool

*Project components*

As part of this commitment, the GHNF aims to learn as much as possible about the embodied carbon of different aspects of a heat network project. Applicants are therefore asked to consider the depth of their analysis and compare multiple options/suppliers for the component where possible. We

with a focus on construction site energy use

- [The Highways Agency Carbon Calculator for Construction](#) - MS Excel-based downloadable tool
- [eTool](#) - web-based tool; this and the following examples are mainly used for building analysis but may be useful for heat networks
- [FCBS Carbon calculator](#) - downloadable software
- [H/B:ERT tool](#) - Revit-based tool
- [one click LCA](#) - downloadable software

would also like projects to coordinate with the GHNF to ensure that a range of components or activities are analysed each funding round. A non-exhaustive list of possible project components and activities to analyse is provided below, and these will be updated as we gain more insight over the life of the GHNF.

Component	What is covered
Piping works	All pipework laid in the project including into properties
Energy centre	The embodied carbon of all energy centre components, including construction and maintenance works
HIUs	Embodied carbon of all HIUs in the project, data likely to come from supplier EPDs and installation works
Trenching	All carbon associated with excavation and filling trenchworks, including an estimate of need to dig again in future
Maintenance work	Estimated over the lifespan of the project and a breakdown of where this maintenance work is

Component	What is covered
Drilling	Works for drilling of geothermal, ground source heat pumps for example
Heat technologies	This covers heat pumps and other heat source technologies. This must cover the global warming potential of refrigerants
Water treatment	Carbon associated with treatment, pumping etc.
Personnel travel	Transport emissions
Site offices	Temporary office energy use and embodied carbon that can be associated with this project
Procurement	How procurement can take into consideration embodied carbon

### 2.1.4 Reliability and resilience for the energy system

Ensuring that the UK’s energy system remains reliable and resilient as we decarbonise our economy is vital. The transition to a smarter and more flexible energy system is an opportunity, and heat networks are particularly well placed to support this transition and capitalise on its benefits.

Heat networks can support in a number of ways.

- **Utilising waste heat sources** - improves efficiency and reduces the demands on the other energy networks (the gas and electricity grids)
- **Coupling with renewable energy** - heat networks can access other and higher efficiency renewable energy sources (e.g., solar thermal) which can reduce the demand on energy networks.

- **Storing heat to use in peak times** - by storing heat produced at non-peak times and using it at times of high demand, heat networks can alleviate the peak demand on electricity and gas networks when they are most strained and likely to suffer reliability and resilience issues.
- **Variable heat tariffs** - encourage a reduction in peak demand and incentivise the use of storage. This can lower the cost of heat delivered and incentivise better peak load management.

Applicants commit to consider the resilience of the electricity and gas grids and reliability of heat delivered in the design of heat networks supported by GHNF. This includes considering the accumulated benefit of their projects for the grid, for those with multiple projects. Projects are already expected to be CP1

compliant but may pay particular attention to Annex I.

Applicants also commit to share evidence of their design's impact on the resilience of the electricity grid with the Department, including the diversified peak demand against a counterfactual. This should also include how you are planning to control the heat network to maximise benefit to the electricity grid.

### 2.1.5 Investment and growth in the project's local economy

Build Back Better: our plan for growth has been put forward by Government to stimulate UK investment, and the Green Heat Network Fund has an important role to play in re-energising the economy, lowering UK carbon emissions, and stimulating value and jobs for the UK. In this commitment we are expecting applicants to identify ways in which their project can work to deliver the objectives of the plan. In particular through engagement with the local supply chain we see opportunities to stimulate investment and jobs in the local economy.

The jobs, skills, and investment needs of communities varies across the country and the benefit that heat network projects can bring can be tailored to meet those needs. In this commitment we are asking applicants to highlight how their project, and the activities discussed as part of the market transformation commitment action plan, can deliver value locally.

## 2.2 Skills

While there is a growing heat network market in the UK, supported by government investment, there is a risk

### Resources

- Ofgem [Transitioning to a net zero energy system: smart systems and flexibility plan 2021](#)
- The Department of Energy, Security and Net Zero [Optimisation of heat networks: Issues for project sponsors to consider](#)
- CIBSE [CP1 Heat Networks Code of Practice for the UK](#)

In their response, applicants should provide a description of the local economic strategy, including evidence and/or outcomes of ongoing, planned or completed engagement with local institutions, and research into local needs with measurable action plan to address them. This can include local authorities, mayoral combined authorities, local enterprise partnerships and local industrial strategies. Responses should highlight how their project contributes to this strategy, working in partnership with local institutions to invest in local priorities to support the local economy and improve quality of life.

Applicants can use other aspects of the market transformation commitment application as evidence but must highlight how deliverables highlighted contribute to the project's local economy.

that the UK heat network supply chain may not attain the capability and capacity needed at a pace that keeps up with



market growth. These commitments will support the heat network supply chain to invest in skills so that skills shortages are minimised. They will also improve our knowledge of jobs and skills in the sector

### 2.2.1 Addressing the supply chain skills gap

The [heat networks skills review](#) highlighted clear skills gaps in the industry, while also pointing towards skills needs that are likely to become more important as the sector evolves. Existing gaps will become more acute as the industry grows and are likely to compromise the UK's ability to meet our net zero ambitions. Projects play an important role in building both the skills capability and capacity in the supply chain through their setting of expectations, collaboration with local bodies and procurement strategies.

Applicants are required to highlight areas of existing skills shortages and to consider how they can address them locally within their project and support

and support future skills delivery. Investment in skills to address the current skills shortages should, in the future, allow further deployment of low carbon heat.

the delivery of national skills training. Applicants are encouraged to collaborate to deliver economies of scale and provide training opportunities nationally as well as locally. This proposal can include detail on how to deliver the skills for new jobs and apprenticeships which are collected in other areas of the market transformation commitment application.

Data to support novel or project/region-specific skills gaps will enhance an application. Applicants can support their answers by highlighting the qualification level of skills and jobs to be delivered. Applicants are encouraged to share information on their skills plans to drive uptake and reach of their projects.

### 2.2.2 Project recruitment and hiring strategy

The skills gaps facing the industry is exacerbated by a limited recruitment pool and fierce competition for skills. We need to attract a more diverse pool of talent to the sector if we are to draw on the resources of the whole country. To attract the most talented workers and increase its diversity to better reflect society as a whole, the sector will need to change its recruitment and hiring strategy, among other things. Hiring for projects should be based on merit on the basis of fair and open competition, as defined by the [civil service commission](#).

- **Merit** means the appointment of the best available person judged

against the published criteria for the role. No one should be appointed to a role unless they are competent to do it and the appointment must be offered to the person who would do it best.

- **Fair** means there must be no bias in the assessment of candidates. Selection processes must be objective, impartial, and applied consistently.
- **Open competition** means that appointment opportunities must be advertised publicly. Potential candidates must be given reasonable access to information

about the role and its requirements, and about the selection process. In open competitions anyone who wishes must be allowed to apply.

To support the project's local economy, applicants should consider also promoting the opportunities as part of

### 2.2.3 UK apprenticeships, trainees, scholarships, and sandwich year placement

The heat network skills review noted that heat network specific knowledge is generally developed through on-the-job training. It also highlighted that there are weaknesses in both the supply of new entrants to the sector and in progression opportunities. Movement upward in the sector, tends to be solely through experience of complete projects. As such, apprenticeships and other on-the-job training opportunities can support in addressing the skills gap and attracting new entrants.

For completing the apprenticeships table, please count the number of

### 2.2.4 Number of new jobs: local, UK and the rest of the world

By estimating and recording job numbers, projects will support the growth of the heat network sector and the upskilling of the workforce. Creating an understanding of how heat network investment supports job creation will enable the targeting of future interventions and training opportunities. Heat network projects will draw on both local, national, and global supply chains, so it is important that we understand the locations of new jobs.

It is understood that estimating numbers of new jobs at an early stage of the planned works is not an exact science;

their community engagement and Social Value strategies.

All project sponsors are expected to follow this guidance for filling job vacancies associated with this GHNf-funded project as far as reasonably practicable.

apprenticeships and/or trainee positions for UK, and non-UK, workers that last 6 months or longer. For the number of scholarships, and sandwich year placements, these should be positions sponsored at UK education institutions for 1 year or longer. Please also record the number of apprenticeships and trainee positions to be converted into long-term employment opportunities of 2 years or more.

Please also provide as much detail as you can on the different apprenticeships and training opportunities created as part of this project.

the aim is to encourage schemes to consider this, and to form a basis to compare the outcomes of the scheme. There is no judgement or scoring associated with whether the estimates are high or low.

The guidance below should be followed when completing the jobs table in the GHNf application.

This data collected here should cover direct jobs expected to be hired as part of this project (e.g., developers and their contractors) including operation and maintenance. If data on indirect jobs is

available then this should be shared with the Department, including the method used to arrive at the figures, but not included in the table.

For recording purposes please use the following definitions

- **New Job** means a new the position that last at least 2 years. The role can be part-time or full-time.
- **Local job** means those which are within a 50km radius of the project
- **National Job** means those created within the UK but outside of the local definition
- **Rest of World** means direct jobs (employees or direct hires) created or maintained by suppliers operating in countries other than the UK as registered companies or with an operating license, expressed as Full Time Equivalent positions
- **One Full Time Equivalent (FTE)** means the amount of work from an individual working full time (more than 30 hours per week) for one year. Employee numbers should be expressed on an FTE years basis by applying the following multipliers to employees in each situation:
  - Employees/hires working a standard 5-day week (i.e., more than 30 hours per week): x1.0
  - As above, working less than 30 hours per week: x0.5
  - Working more than 30 hours per week on a seasonal basis (c 6 months per year): x0.5

- Part time working (less than 30 hours per week) on a seasonal basis (c 6 months per year): x0.25

... and then multiplying by the number of years that each position will be active in connection with the Project.

The different classifications of jobs are defined by qualification level which are defined [here](#):

- **Professional:** L6/7/8 and member of professional body
- **Technician:** L4/5 and  $\geq 2$  years relevant work experience, or L6/7/8 but not member of professional body
- **Basic Skill:** L2/3/and  $\leq 2$  years relevant work experience

This should then be converted to FTE years in the table depending on the role. Some projects in support of GHNF funding may be expanding through the use of contractors. These roles can also be counted as new jobs, provided they also last at least 2 years.

Apprenticeships can be counted towards new jobs but should also be recorded in the apprenticeships table (apprenticeships, trainees, scholarships, and sandwich year placements). Apprenticeships can be claimed as new jobs provided, they are either at least 2 years in length, or the apprenticeships will be shorter than 2 years, but the applicant confirms that they plan to retain some of the personnel at the end of the training scheme. Applicants should update GHNF when these new positions are confirmed.

Please also provide as much detail as you can on the different types of jobs created as part of this project.

## 2.3 Innovation

The deployment of more efficient equipment, faster/better installation methods, and new types of procurement and contracting strategies which reduce the cost of developing future heat networks. Innovation will support less established suppliers, helping to bring cost reduction to the supply of low and

zero carbon heat. To create the forward-looking and self-sustaining heat network market of the future, projects will need to learn from past mistakes and successes and introduce new solutions to make the UK a world leader in low carbon heat deployment.

### 2.3.1 Investment in UK R&D

The Green Heat Network Fund is supporting a transition to low and zero carbon solutions. Many of these solutions will benefit from further R&D to bring forward the most suitable, future low-cost low carbon heat solution. We wish to see projects linking up and collaborating with existing R&D activities and investment to enable applied learning.

The activities undertaken need not be first-of-a-kind research but can be innovation new to an organisation.

Applicants should complete the table (R&D table) with activities that will be undertaken by both the heat network developer and their suppliers. This should include the expected outcome of the R&D activity and relevant metrics and KPIs used to measure success. The activities highlighted will not be marked as part of the GHNf deliverability assessment but can support an application as part of the innovation evidence note.

### 2.3.2 Continuous improvement

The provision of low and zero carbon heat is a significant challenge for the UK's net zero carbon target. It is vital that lessons learnt from previous heat networks and wider sector endeavours are embedded into new projects. The knowledge, insight, and experience that is gained from these endeavours will identify further need for new technologies, approaches, and investment models that will be shared across the industry. This will reduce costs and enable heat networks to become a more attractive investment. To create a self-sustaining and forward-thinking heat network market, lessons learned need to

be shared across the industry and new technologies and business models brought into the market.

In this question, applicants are required to show how they will use lessons learned from past endeavours (by them or otherwise) to inform their current project. This can include lessons learned in other areas of their action plan, e.g., how embodied carbon will be reduced in future. Applicants should also include how they plan to disseminate lessons learned from their GHNf-funded projects, including what has not worked. This can include lessons learned from

another aspect of the market transformation commitments.

**Applied learnings:** Applicants are encouraged to highlight learnings from as wide a range of sources as possible. Lessons learned can come from an organisation’s previous projects, previous projects of other organisations, the international heat network sector, and other industries both in the UK and internationally. Particular attention should be given to how these applied learnings will help the current project achieve success, the impact on the wider UK heat network sector and how lessons learned from this project will be applied in future.

**New technologies:** The technologies highlighted do not need to be new to the

UK heat network sector but can be new to the organisation(s) involved in this GHNF project. Applicants should highlight how the new technologies used will support the delivery of low carbon heat and improve the efficiency of the network. Where possible, applicants should also highlight any overlaps with analyses of embodied carbon for these technologies.

**Business processes and methods:** As with technologies, new business processes and methods used in this project need only be new to the organisation(s) involved and not the heat network sector as a whole. Applicants should highlight how these new processes will help the project to achieve success and the impact on the heat network sector.

## 3. Case study - Strategy for community engagement

### 3.1 Lancaster West Estate, Kensington & Chelsea

#### Understanding the Community

Notting Dale Ward and Lancaster West Estate are situated in Zone 2, West London. Lancaster West was built in the 1970s and is home to around 3,000 residents. The Estate is undergoing a major refurbishment programme to create 21<sup>st</sup>C social housing and net-zero carbon neighbourhood. An extensive Resident Co-Design programme is in progress, actively involving residents in the design and decision-making. Lancaster West Estate is a highly diverse community comprising of young families, older residents (+65 years) and over 20 ethnicities. Most residents (80%) are council tenants.

The Notting Dale Heat Network project complements the 'fabric first' refurbishment programme. A 100% renewable energy heat network that will replace two communal gas boilers and 126 gas boilers installed in individual homes. The Heat Network will put residents first, rely solely on renewable heat sources, and provide affordable heating and hot water whilst tackling fuel poverty. The project has benefitted from HNIP funding

#### Methods and Resourcing

A dedicated Heat Network Team, including a community engagement manager work closely with the Refurbishment and Engagement Teams at Lancaster West. Introducing the heat network concept and raising awareness of the project have enabled discussions with residents on the technology, heating

costs, and the transition to new metering systems.

The Resident Co-Design process has used a wide range of engagement methods, including Community Fun Days, Pop-Ups, Vox Pops, online webinars, leaflets, surveys, and social media. Resident focus groups have been held to help shape a Customer Service Guarantee and Resident Price Promise. Over 200 residents and 25% of Lancaster West Estate having been actively engaged so far.

#### What have we learned from Resident Co-Design?

Resident-Co-Design takes longer but has strengthened the Notting Dale Heat Network project. A heat network is not simply a large engineering and infrastructure project. It will have customers who don't have the ability to switch supplier. 'People on the ground' are the most valuable resource when talking about heating, which can be an emotive and technically complex subject. Sharing resources with the wider refurbishment team made in-person communications and outreach to the whole Estate possible. By keeping the wider internal team informed of the heat network, other opportunities for resident feedback also emerged through the Council's drive for excellent customer service.

The diverse population and housing stock at Lancaster West Estate results in different resident expectations of heating

and its costs. The Notting Dale Heat Network means something different to each household. Acknowledging this and being open about the challenges it poses is important. To do this, comments and opinions were tracked by tenure, to understand which proposals work and which don't for each group. This was particularly helpful when it came to tariff setting, as the existing heating costs varied across tenure and size of home.

Understanding a place, can help inform the project tone, language and content communicated. This was particularly important at Lancaster West given the impact of the Grenfell Tower tragedy. Residents wanted to see objective information, pros & cons, and FAQs. This style of information makes the project more accessible and personal. At various stages in the engagement, residents were invited to participate in focus groups. These groups were advertised as a forum for discussing and testing the finer details of the heat network for those residents who were interested. Topics

included the business model and tariff setting. Recruitment to this group was successful, but participation dwindled. In response, the team is using more creative, interactive, and visual means of communicating these important subjects.



## 4. Document Change Control

June 2022

- Contact information updated throughout.
- Correction of typos.
- Expansion on points already included in the previous iteration to provide clarity.
- Clarification on when activities should be considered specifically in relation to low carbon footprint in the supply chain.

August 2022

- Addition of BEIS LWE Case study.

October 2022

- Minor wording change to BEIS LWE Case study.

May 2023

- Update of BEIS to the Department of Energy Security and Net Zero.





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