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Department for Energy Security & Net Zero

Part of the Net Zero Innovation Portfolio

Stream 2: Wave 2 – Competition Webinar

The event will start shortly

9 November 2023

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Today we will cover…

- Overview of heat pump policy context
- Overview of the Heat Pump Ready programme
- Stream 3 participation activities
- Stream 2 – Wave 2 Eligibility
- Stream 2 – Wave 2 Assessment criteria
- Stream 2 – Wave 2 Funding allocation progress
- Overview of Heat Pump Ready Stream 2 – Wave 1 projects
- How to submit your application
- Commercial aspects
- Timeline and next steps

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House Keeping

- Got a question?
  - Please use the Question tab on the Live Event
  - Any questions we don't have time for, will be included within the Q&A response, published online
- This webinar is **not** being recorded
  - A copy of the slides and the Q&A responses will be provided online, on the gov.uk website alongside the Wave 2 Competition Guidance
- Break
  - We will aim to pause for a (very!) short break ~11:30am

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Policy Context

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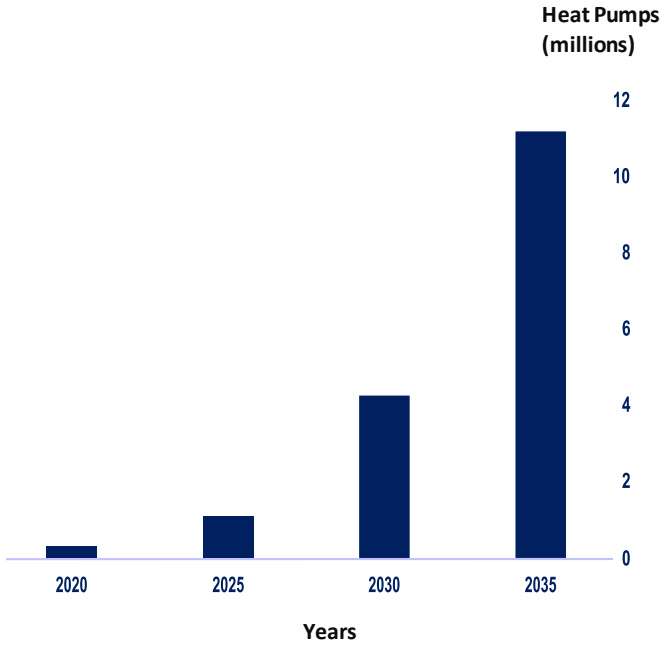
Targets and Criteria for Success

- Increasing demand by reducing costs and providing financial support
- Increasing demand through regulation
- Building manufacturing and supply chain capability
- Making it easier for consumers to choose and install heat pumps



Illustrative Cumulative Heat Pump Deployment (High Electrification Scenario)

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Current Policies

- **Boiler Upgrade Scheme** – funding upfront cost of domestic heat pumps up to **£7500**
- **Zero-rated VAT** for energy saving materials
- **£30m Heat Pump Investment Accelerator Competition supports** new UK manufacturing capacity, leveraging **£270m** private investment and supporting thousands of new jobs.
- New **Low Carbon Heating Technician Apprenticeship** launched in September to bring more new entrants to the heat pump sector
- **£5m Heat Training Grant** launched in July 2023 will help upskill existing heating engineers - supporting up to **10,000** new heat pump and heat network trainees in England to **2025**
- **Future Homes Standard** to build demand in new-build homes

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How can innovation help us get there?

REDUCING RUNNING COSTS[1]

- **55%** of total lifetime costs of a heat pump are running costs.
- Making heat pumps cheaper to run than gas boilers could increase uptake by **7%**.
- Combining this with reduced installation costs could increase uptake by **30%**.

SIMPLIFYING INSTALLATION

- To allow for heat pumps to be installed in a distress purchase situation
- To reduce disruption and improve the consumer proposition
- To reduce error rates or labour costs

IMPROVING HOME SUITABILITY

- Solutions to make it easier to install heat pumps in homes that are complex to decarbonise
- Form factor innovation for heat pumps or thermal stores
- Heat pumps systems for high density buildings

REDUCING UPFRONT COSTS

- Simplified manufacturing processes
- Higher efficiency heat exchangers or evaporators
- Low GWP refrigerants with higher efficiencies or lower costs

1. Nesta (2023) *Heat Pump User Survey Report*

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Questions?

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Heat Pump Ready Programme

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Heat Pump Ready Programme

- The Heat Pump Ready programme (HPR) forms part of the UK Governments £1bn Net Zero Innovation Portfolio (NZIP) under the Built Innovation theme.
- Heat Pump Ready provides up to £60m of funding to projects, which collectively are aiming to:

Reduce lifetime costs

Develop approaches to **engage with homeowners** and other key players

Inform future heat pump **policy and regulation**

Stimulate solutions to mitigate the impact of domestic heat pumps on the electricity system

Strengthen partnerships within the UK's heat pump sector

Improve the consumer experience

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Objectives of Heat Pump Ready

1) Develop innovative coordinated methodologies to achieve high-density heat pump deployment

2) Support innovative tools and technologies which overcome barriers to heat pump deployment

3) Foster collaboration and learning across the Heat Pump Ready programme and wide heat pump and associated sectors

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Innovative coordinated methodologies to achieve high-density heat pump deployment

The **Solutions for High-Density Heat Pump Deployment Projects (Stream 1)** aim to support the design and trial of innovative, optimised solutions which deliver more cost-effective and high-density domestic heat pump roll out.

This stream focuses on:

- **Developing and trialling solutions** which take a 'joined up' approach to heat pump deployment, working across the heat pump landscape.
- **Developing an enhanced 'consumer journey'** as part of the solution – i.e. using the cluster projects to develop effective consumer engagement for all stages of roll out.
- **Understanding the network impacts of high-density heat pump deployment:** through the engagement with Distribution Network Operators (DNOs) in parallel to the high-density deployment provides the opportunity to understand the role of flexibility with multiple heat pump installations in their project location.

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Innovative coordinated methodologies to achieve high-density heat pump deployment

Phase 1: Feasibility Study Locations

Urban	Rural	Urban with Rural
Newcastle	Teignbridge	Perth & Kinross
Sunderland	Fenland	Cherwell
Leeds		Bridgend
Oxford		
Greenwich		
Bristol		

Projects led by:

Power Circle Delivering Local Energy

Leeds City Council

E.ON

EDF

City Science endless possibilities

BURO HAPPOLD

utilita

SAMSUNG

elementenergy

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Innovative coordinated methodologies to achieve high-density heat pump deployment

Phase 2: Feasibility Study Locations

Urban	Rural	Urban with Rural
Oxford	Fenland	Cherwell
Bristol		

SAMSUNG

BRISTOL CITY COUNCIL

CITY SCIENCE
endless possibilities

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Support innovative tools and technologies which overcome barriers to heat pump deployment

24 funded projects in Stream 2 to date, across the following 5 challenge areas:

1. Reduce lifetime cost and increasing performance of domestic heat pumps

2. Minimise home disruption whilst providing high quality installation

3. Financial models to support heat pump deployment

4. Improving the customer journey

5. Smart and flexible home energy system

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Support innovative tools and technologies which overcome barriers to heat pump deployment

- 24 projects were successful in receiving funding through Heat Pump Ready.
- Projects are of varying duration, with all projects due to complete by March 2025

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Foster collaboration and learning across the Heat Pump Ready programme and wider sector

Promote collaboration between projects

Evaluate the impacts of projects and the lessons learned

Disseminate the learnings to the wider sector to drive innovation

More details available on page 21 of Competition Guidance

CARBON TRUST Ipsos technopolis group

Learning & Dissemination Activities

Heat Pump Ready Projects are involved in:

Collaboration

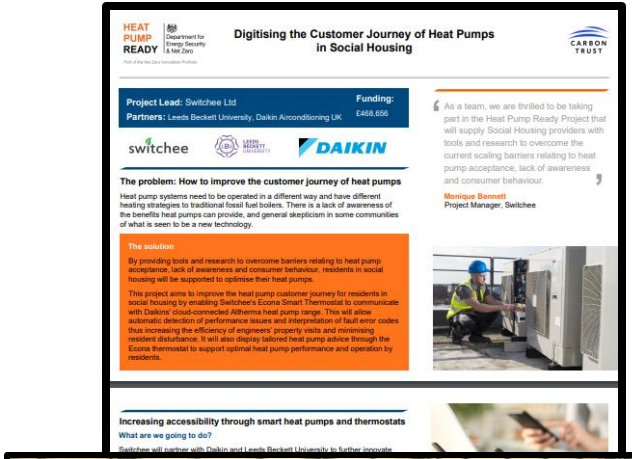
- Quarterly learning workshops to share knowledge and experiences
- Face to face events to meet peers and learn with others
- Other learning opportunities e.g site visits and webinars

Evaluation

- An impact evaluation of each project

Dissemination

- A case study of each project outlining the impact and learning
- Potential involvement in thematic video case studies
- Presence at relevant trade shows as part of HPR cohort
  - E.g. InstallerSHOW, Futurebuild
- Contribute to dissemination of learnings:
  - A series of podcasts with Betatalk
  - Blogs and webinars through content partners such as Elemental
  - LinkedIn bitesize learning posts



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Stream 2 – Wave 2: Eligibility

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Stream 2 – Wave 2: Overview

More details available on page 12 of Competition Guidance

- Up to £10m of grant funding is available in total
- Applicants are expected to demonstrate their proposal falls into one of four Challenge Categories:

1. Improving the ease of heat pump deployment in homes that are **'complex to decarbonise'** by addressing physical, material, locational, technological, regulatory, or social challenges.

2. Developing innovative solutions to enable heat pumps to be deployed in **'distress purchase'** situations when a new home heating system is required urgently.

3. Improving performance and/or reducing costs of domestic heat pumps with **low-GWP refrigerants** (i.e. below 150 GWP), while ensuring safety.

4. **Reducing the lifetime costs or improving the overall lifetime performance** of domestic heat pumps or improving the domestic consumer experience of using and living with a heat pump.

Note: The Department reserves the right to reallocate applications to a different category where appropriate.

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Types of Innovation Activity

More details available on page 16 of Competition Guidance

- Aim of the funding is to development of technology and tools which are expected to be nearing commercialisation by the end of their projects.
- For hardware projects:
  - Start TRL: 5 to 7
  - End TRL: 7 to 9
- For software projects:
  - Start phase: Discovery/Alpha
  - End phase: Live

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Definition of research

More details available on page 15 of Competition Guidance

Industrial Research involves the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for **bringing about a significant improvement in existing** products, processes or services. This would include digital products, processes or services, in any technology, industry or sector.

It comprises the creation of components parts of complex systems and may include:

- the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems;
- the construction of pilot lines, when necessary for the industrial research and notably for generic technology validation.

Experimental Development involves acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of **developing new or improved** products, processes or services. This includes digital products, processes or services, in any technology, industry or sector - further examples are provided in the Competition Guidance.

Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.

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Project Status

More details available on page 17 of Competition Guidance

- The Department is unable to fund retrospective work on projects.
- Relevant retrospective work will, however, be considered in the assessment process (as part of Assessment Criterion 2a, applicants are asked to provide information about work already carried out to develop the proposed process, technology or product.
- The Department cannot fund the development of processes, technology or products which are already at commercial design stage at the start of the project, or which are already commercially or widely deployed in the UK or internationally.

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Match-funding

More details available on page 17 of Competition Guidance

- In line with subsidy control principles, only a portion of the total eligible project costs can be funded by the Department grant funding
- Applicants will need to provide private sector funding to cover the balance of the eligible costs.
- This match-funding may come from a company's own resources or external private sector investors but it may not include funding attributable to any public authority (in the UK or elsewhere).
- Before the grant letter is issued, the applicant must demonstrate a credible plan to raise the match-funding required for the whole lifetime of the project.

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Maximum subsidy level

More details available on page 32 of Competition Guidance

Type of Innovation Activity	Organisation Size	Maximum amount of public subsidy as a percentage of total eligible project costs
Industrial Research – Single Companies	Small	70%
	Medium	60%
	Large	50%
Industrial Research – Collaborations: can be Business to Business where at least one Business is an SME; or Business and Research Organisation(s).	Small	80%
	Medium	75%
	Large	65%
Experimental Development – Single Companies	Small	45%
	Medium	35%
	Large	25%
Experimental Development – Collaborations: can be Business to Business where at least one Business is an SME; or Business and Research Organisation(s).	Small	60%
	Medium	50%
	Large	40%

Note: that these maximum subsidy levels are applicable to individual project team members, not to the project overall.

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Additionality

More details available on page 17 of Competition Guidance

- Projects can only be funded where evidence can be provided that the innovation would not be taken forwards (or would be taken forwards at a much slower rate) without public sector funding.

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Project Location

More details available on page 17 of Competition Guidance

- Any funded project activity must take place in the UK and any subsidy recipients must intend to exploit the results of the project activity in or from the UK.
- Enterprises do not need to be registered in the UK to be eligible, providing the project or activity is carried out in the UK and that they intend to exploit the results in or from the UK.
- Where an enterprise is not based in the UK or carries out activity in other countries as well as the UK, they must provide written assurances that they intend to exploit the results of the project or activity in or from the UK as part of the application process.

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Grant Size

More details available on page 17 of Competition Guidance

- The total expected grant size for a single project must be between a **minimum of £200,000 and a maximum of £1.5m**.
- Details of grant intensity limits (indicating the level of private sector match funding that would be required) are set out in Section 8.
- Since the Department is seeking to maximise the impact of government funding, projects looking for public funding intensities that are lower than the applicable maximum are likely to score higher in the appraisal process.

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Terms & Conditions

More details available on page 18 of Competition Guidance

- Applicants must agree to the specific published Terms and Conditions to be eligible for innovation funding.

- Details of the relevant Terms and Conditions can be found on the Competition web-page: https://www.gov.uk/government/publications/heat-pump-ready-programme-stream-2-wave-2-opportunities

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Project Duration & Timescales

More details available on page 18 of Competition Guidance

- Project activity must be at least 6 months duration.
- Projects should start by April 2024 and all project work must be completed by 31 March 2025. Any spend on projects after 31 March 2025 will be at the project's own expense.

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Project Team Composition

More details available on page 18 of Competition Guidance

- Projects must be delivered by individual, private sector businesses **(sole applicants)** or by a consortium of project partners led by a private sector business **(consortium applicants).** Private sector businesses of any size are eligible for funding in this Competition.
- **Sole applicants:** Any sole applicant must be a private sector business registered with Companies House with the necessary skills, experience and capacity to effectively lead the proposed project.
- **Consortium applicants:**

Consortium projects must be led by a private sector business registered with Companies House with the necessary skills, experience and capacity to effectively lead the proposed project.
A single project application must be submitted to the Department by the lead consortium partner.

Apart from the lead consortium partner, the other project team members in a consortium can be:

- private sector businesses; or
- academic, research, public, third sector or community organisations working as part of a project consortium with private sector organisations.

The eligible project costs incurred by all non-business partners, carrying out non-economic work (e.g. Universities, Research and Technology Organisations (RTOs), public sector, third sector and community organisations) in a consortium must be **less than 30% of the total eligible project costs**.

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Multiple Applications

More details available on page 20 of Competition Guidance

- Individual or lead organisations or consortia are permitted to submit **no more than two applications** to the Competition.
- An individual or lead organisation is identified at parent company level in cases where the parent company has significant (majority) control of the subsidiary company, i.e. if a company is more than 50% owned by its parent company, the parent and subsidiary are treated as the same company and are regarded as a single organisation for the purpose of any applications to the Competition.
- Applicants are not permitted to apply with the same project under more than one category.
- An individual or lead organisation is only permitted to submit more than one application to a single category if there is a significant difference between the scope of the projects.

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Eligible Costs

More details available on page 88 of Competition Guidance

Summary of eligible costs are as the following:

- Personnel costs to the extent employed on the project.
- Costs of instruments and equipment to the extent and for the period used for the project.
- Costs for buildings and land, to the extent and for the duration period used for the project.
- Costs of contractual research, knowledge and patents bought or licensed from outside sources at arm's length conditions, as well as costs of consultancy and equivalent services used exclusively for the project;
- Additional overheads and other operating expenses, including costs of materials, supplies and similar products, incurred directly as a result of the project.
- Travel & Subsistence associated with the delivery of the project & Stream 3 participation (policy provided within the Competition Guidance)

Note: for elements of eligible costs, only the depreciation costs corresponding to the life of the project will be eligible – please see full details within the Competition Guidance.

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Stream 2 – Wave 2: Assessment Criteria

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Scoring

More details available on page 66 of Competition Guidance

Scoring Guidance Score	Description
1	Not Satisfactory: There is no evidence to very little evidence that the question has been satisfactorily answered and major omissions are evident.
2	Partially Satisfactory: There is little evidence that the question has been satisfactorily answered and some omissions are evident. Much more clarification is needed.
3	Satisfactory: There is reasonable evidence that the question has been satisfactorily addressed but some omissions are still evident and further clarification is needed.
4	Good: The question has been well addressed with a good evidence base, with only minor omissions or lack of clarity
5	Excellent: There is clear evidence that the question has been completely addressed in all aspects, with question answered clearly, concisely with a strong evidence base.

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Weighting & minimum scores

More details available on page 45 of Competition Guidance

Criteria	Weighting	Minimum Score
Criterion 1: Business Proposition (20%)		
1a Business proposition – market opportunities and challenges	10%	3 out of 5
1b Business proposition – commercial exploitation of innovation	10%	3 out of 5
Criterion 2: Innovation Impact (15%)		
2a Innovation – status of technology/tool	7.5%	3 out of 5
2b Innovation – impact of innovation in terms of cost and performance	7.5%	3 out of 5
Criterion 3: Net Zero and Energy Security Impact (20%)		
3a Net Zero and Energy Security Impact – Supporting 600,000 heat pumps being deployed per year by 2028 and overall climate targets	15%	3 out of 5
3b Net Zero and Energy Security Impact – Working with end-users and the supply chain	5%	3 out of 5
Criterion 4: Deliverability (25%)		
4a Deliverability – Project Plans	15%	4 out of 5
4b Deliverability – Project Management Structure	5%	4 out of 5
4c Deliverability – Project success factors and risk management	5%	4 out of 5
Criterion 5: Project Financing (15%)		
5a Project Financing – Project costs	7.5%	4 out of 5
5b Project Financing - Justification for Public Funding	7.5%	4 out of 5
Criterion 6: Social Value (5%)		
Social value	5%	3 out of 5

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How to use the guidance

- Section 11 of the Competition Guidance provides information to support your response to the questions set out in the application form.
- Please refer to this throughout your application.

Criterion 1a	Business proposition – market opportunities and challenges
Weighting	10% (minimum moderated, unweighted score of 3 or more from 5 required to be eligible for funding)
Guidance (Maximum 1000 words)	This criterion will be used to assess the market opportunities and challenges which the innovation project addresses. **What are the business opportunities/market problems that this innovation and project address?** • Describe the first addressable market for your innovation, including the size of this market. • Describe the specific market sub-sectors that will be the initial target markets for your innovation in the first three years of commercialisation. • Describe the problem that your innovation overcomes for this target market(s) and the customer value proposition. • Describe the competing solutions/technologies to your innovation.

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Assessment Criteria (1)

Criterion	Question
1a	What are the business opportunities/market problems that this innovation and project address?
1b	How will the outcomes for the project be commercially exploited?
2a	What is the current status of your technology/software and what has been completed or proven to date?
2b	What is the expected impact of the innovation activity in terms of cost & performance?
3a	What impact will the innovation have on supporting 600,000 heat pumps being deployed per year by 2028? How will the innovation impact carbon targets and/or security of supply and over what timescale?
3b	How will the project work with end users/ the supply chain to codesign the technology/tool?

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Assessment Criteria (2)

Criterion	Question
4a	What are the project work packages, milestones, deliverables and dependencies and project delivery plan?
4b	What is your proposed project management structure and how will roles and responsibilities be divided between the lead organisation, any consortia members, subcontractors, and key stakeholders?
4c	What are the project success factors, target outcomes and risks?
5a	What are the anticipated project costs?
5b	Please provide a summary of your funding and spending history on the innovation to date and explain why public funding is needed to develop the proposed innovation.
6	How will the project contribute towards achieving the Government social value policy objective of: Increasing supply chain resilience and capacity ?

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Assessment Criteria: Criterion 7

More details available on page 65 of Competition Guidance

- No weighting applies for this criterion.
- The Moderated Scores for Criterion 7 will be converted to a Scaling Factor.

Question: How does your proposed innovation differ from innovations already being supported through the HPR Programme?

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Applying Criterion 7's Scale Factor

More details available on page 46 of Competition Guidance

- Score is allocated following the Scoring Guidance Score which applies to all questions.
- Score is then converted to a scale factor

Criterion 7 Moderated Score	Scaling Factor
1	0.6
2	0.7
3	0.8
4	0.9
5	1.0

Final Score = Total Weighted Moderated Score for Criterion 1 to 6 x Scaling Factor for Criterion 7

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Understanding the impact of score

More details available on page 46 of Competition Guidance

From Criterion 1 to 6

Total Weighted Moderated Score	65	65	95	95	75	75
Criterion 7: Additionality Score	2	5	1	5	2	3
Scale Factor applied	0.7	1	0.6	1	0.7	0.9
Final Score	45.5%	65%	57%	95%	52.5%	60%

Criterion 7 Moderated Score	Scaling Factor
1	0.6
2	0.7
3	0.8
4	0.9
5	1.0

Final Score = Total Weighted Moderated Score for Criterion 1 to 6 x Scaling Factor for Criterion 7

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Stream 2 – Wave 2: Funding allocation

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Funding allocation

More details available on page 68 of Competition Guidance

- After assessment and moderation, each project will be allocated a Final Score
- The Final Score will be used to prepare a ranked list of projects.
- Projects across all four Challenge Categories will be placed on the same ranked list, with their position on the list based on their Final Score.
- The Department will review the ranked list of projects that are eligible to be funded against the total available budget
- If the budget is over-subscribed, it may limit the funding available through the Competition to only one project submitted by any single organisation or consortium.
- Grant funding will be allocated to projects in the order of the ranked list, until the available funding for the Competition has been allocated or until there are no further projects eligible for funding.

Note: The Department reserves the right not to award any grants in the Competition or to award less than the stated budget for the Competition

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Funded Stream 2 Projects

Alex Hobley

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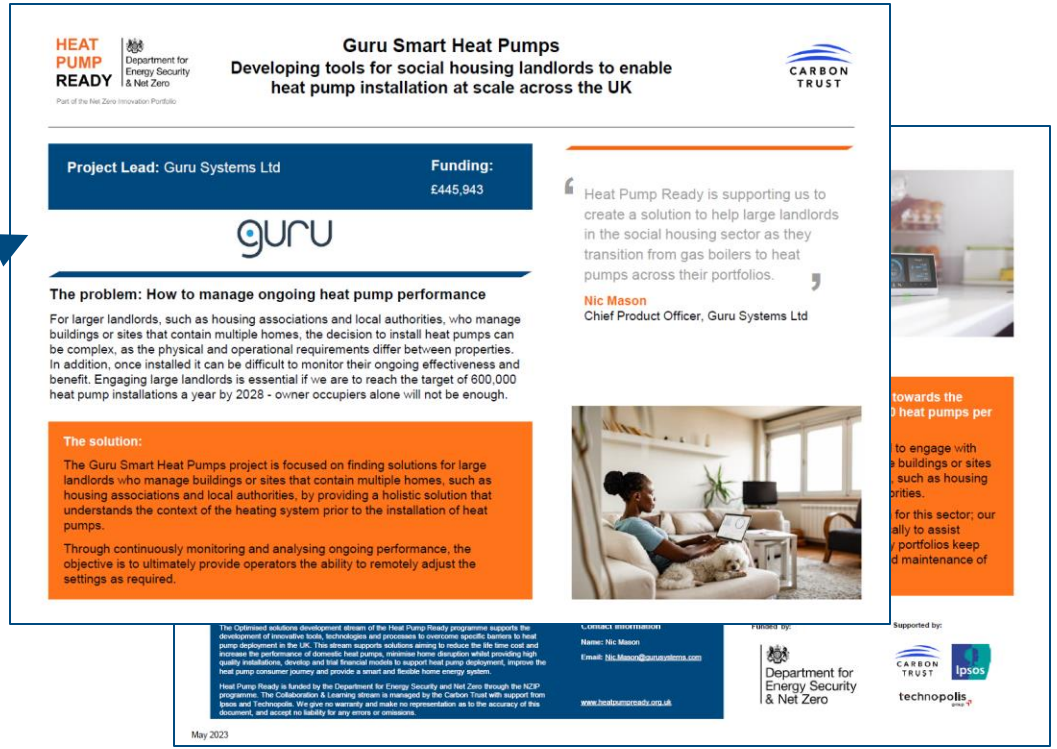
Where to find more information

- Annex 1 of competition guidance & Heat Pump Ready website

Lead Organisation and Link to Project Description on HPR Programme website	Project Title	Project Summary
Stream 1 – Wave 1 Category 1:	**Reduce the lifetime cost and increase the performance of domestic heat pumps**	
Guru Systems Ltd https://www.heatpumpready.org.uk/projects/optimised-solutions-development/guru-smart-heat-pumps-developing-tools-for-social-housing-landlords-to-enable-heat-pump-installation-at-scale-across-the-uk/	Guru Smart Heat Pumps: developing tools for social housing landlords to enable heat pump installation at scale across the UK	This modular mobile app & web platform will verify heat pump system outcomes and store heat pump settings for future maintenance, also providing a training resource for new heat pump engineers.



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Department for Energy Security & Net Zero
Part of the Net Zero Innovation Portfolio

Guru Smart Heat Pumps
Developing tools for social housing landlords to enable heat pump installation at scale across the UK

CARBON TRUST

Project Lead: Guru Systems Ltd

Funding: £445,943

guru

The problem: How to manage ongoing heat pump performance

For larger landlords, such as housing associations and local authorities, who manage buildings or sites that contain multiple homes, the decision to install heat pumps can be complex, as the physical and operational requirements differ between properties. In addition, once installed it can be difficult to monitor their ongoing effectiveness and benefit. Engaging large landlords is essential if we are to reach the target of 600,000 heat pump installations a year by 2028 - owner occupiers alone will not be enough.

The solution:

The Guru Smart Heat Pumps project is focused on finding solutions for large landlords who manage buildings or sites that contain multiple homes, such as housing associations and local authorities, by providing a holistic solution that understands the context of the heating system prior to the installation of heat pumps.

Through continuously monitoring and analysing ongoing performance, the objective is to ultimately provide operators the ability to remotely adjust the settings as required.

"Heat Pump Ready is supporting us to create a solution to help large landlords in the social housing sector as they transition from gas boilers to heat pumps across their portfolios."

Nic Mason
Chief Product Officer, Guru Systems Ltd

The Optimised solutions development stream of the Heat Pump Ready programme supports the development of innovative tools, technologies and processes to overcome specific barriers to heat pump deployment in the UK. This stream supports solutions aiming to reduce the life time cost and increase the performance of domestic heat pumps, minimise home disruption whilst providing high quality installations, develop and trial financial models to support heat pump deployment, improve the heat pump consumer journey and provide a smart and flexible home energy system.

Heat Pump Ready is funded by the Department for Energy Security and Net Zero through the NZIP programme. The Collaboration & Learning stream is managed by the Carbon Trust with support from Ipsos and Technopolis. We give no warranty and make no representation as to the accuracy of this document, and accept no liability for any errors or omissions.

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www.heatpumpready.org.uk

Funded by:
Department for Energy Security & Net Zero

Supported by:
CARBON TRUST
Ipsos
technopolis

May 2023

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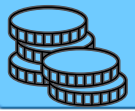
Support innovative tools and technologies which overcome barriers to heat pump deployment

24 funded projects in Stream 2 to date, across the following 5 challenge areas:

1. Reduce lifetime cost and increasing performance of domestic heat pumps

2. Minimise home disruption whilst providing high quality installation



3. Financial models to support heat pump deployment

4. Improving the customer journey

5. Smart and flexible home energy system

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1. Reduce lifetime cost and increasing performance of domestic heat pumps

- ICAX Ltd - Heat Pump Manufacturing Automation for Scale and Cost
- Ventive Ltd - Modular Heat Pumps for Cell Based Microfactory Assembly
- Mixergy Ltd - Making Efficient Systems around Heat-pumps (MESH)
- Kensa Heat Pumps Ltd - Highly Flexible Storage Heat Pump (HFSHP)
- Guru Systems Ltd - Smart Heat Pumps: developing tools for social housing landlords to enable heat pump installation at scale across the UK

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2. Minimise home disruption whilst providing high quality installation

- Build Test Solutions - MEASURED: The role of measured building performance in heat pump specification, system design and management
- Hoare Lea - Right sizing heat pumps
- Q-Bot Ltd - Free Heat Pump Home Survey and Design Tool
- RJ Barwick Ltd - Archetypal Heat Pump Retrofit for 175,000 Non-Trads
- Heatly - Total Heatpump Installation Solution (THIS)

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3. Financial models to support heat pump deployment

- City Science Corporation Limited - Advanced Modelling for Heat as a Service
- Energiesprong UK Ltd - Integrated Comfort and Billing Service
- Home Infrastructure Technology Limited (Add to my mortgage) - Green Homeowner Loans
- Parity Projects Ltd - Performance

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4. Improving the customer journey

- EDF – Catalyst; accelerating the heat pump journey
- Green Energy Options (geo) - AI Smart Heat Pathway
- Hildebrand Technology Ltd - Glow Heat Pump Community
- Switchee Ltd - Digitising the Customer Journey of Heat Pumps in Social Housing
- The MCS Service Company Limited - EST MCS Heat Pump Consumer Journey
- VIA Analytics Limited - Heat Pathway

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5. Smart and flexible home energy system

- GenGame Ltd - Total Home Optimisation Management (THOM)
- Thermoelectric Conversion Systems Ltd - Two stage heat pump with greywater energy recovery
- Wondrwall Limited - Wondrwall: Intelligent air-sourcing to net zero

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Stream 2 – Wave 2: How to apply

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Smart Survey

You can find the link to the application form in the following places:

- Heat Pump Ready Stream 2 – Wave 2 webpage
- Stream 2 – Wave 2 Competition Guidance p.37

Stage 1: Application

Bidders are asked to submit a competition application form, with supporting information by **14:00 GMT, 8 January 2024**. The notes below explain the details of the application process:

How to apply to Stream 2 – Wave 2 Competition: The Department will be hosting an online event for guidance on how to apply for the Stream 2 – Wave 2 Competition on Thursday 9 November. Please complete this form to sign up to the event.

Questions about the Competition: If you have any questions on the competition process after reading these guidance notes, please submit them to heatinnovation@beis.gov.uk by **14:00 GMT, 27 November 2023**. Depending on the number of questions received, we expect to publish these questions and our responses to them periodically from 6 November until 7 December 2023 - we will publish all the questions received and responses to them by close 7 December 2023. You will find the list of published Q&A on the following webpage: https://www.gov.uk/government/publications/heat-pump-ready-programme-stream-2-wave-2-opportunities

All applicants should take these replies into consideration when preparing their own applications and we will evaluate applications on the assumption that they have done so.

Submission of Application: The full application for the competition must be submitted online by the deadline: **14:00 GMT, 8 January 2024**. The online application form will be closed for submissions after this time.

GOV.UK

Home > Environment > Energy infrastructure > Low carbon technologies

Notice

Apply for Heat Pump Ready Programme: Stream 2 – Wave 2 opportunities

Documents

Heat Pump Ready Programme Stream 2 – Wave 2: competition guidance

PDF, 1020 KB, 113 pages

Apply to the Heat Pump Ready competition Stream 2 Wave 2

https://www.smartsurvey.co.uk/s/PP822M/

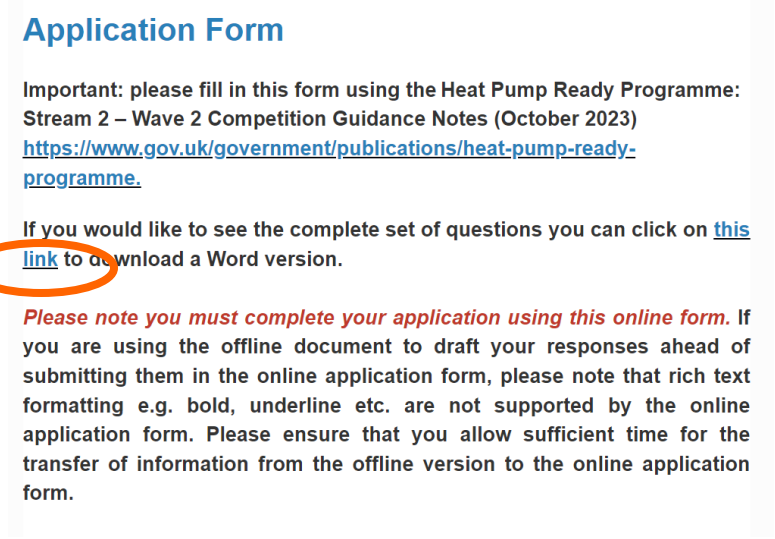
HEAT PUMP READY

Smart Survey

All applications must be submitted via Smart Survey

- You do not have to complete your application all in one go, you do have the option to save your application and return to it at a later date.
- Saved applications are not considered as submitted – make sure you complete and submit your application, right to the end of the survey!

- Word version of the application is available to download solely to aid your drafting
- Word versions of the application form will not be accepted



Application Form

Important: please fill in this form using the Heat Pump Ready Programme: Stream 2 – Wave 2 Competition Guidance Notes (October 2023) https://www.gov.uk/government/publications/heat-pump-ready-programme.

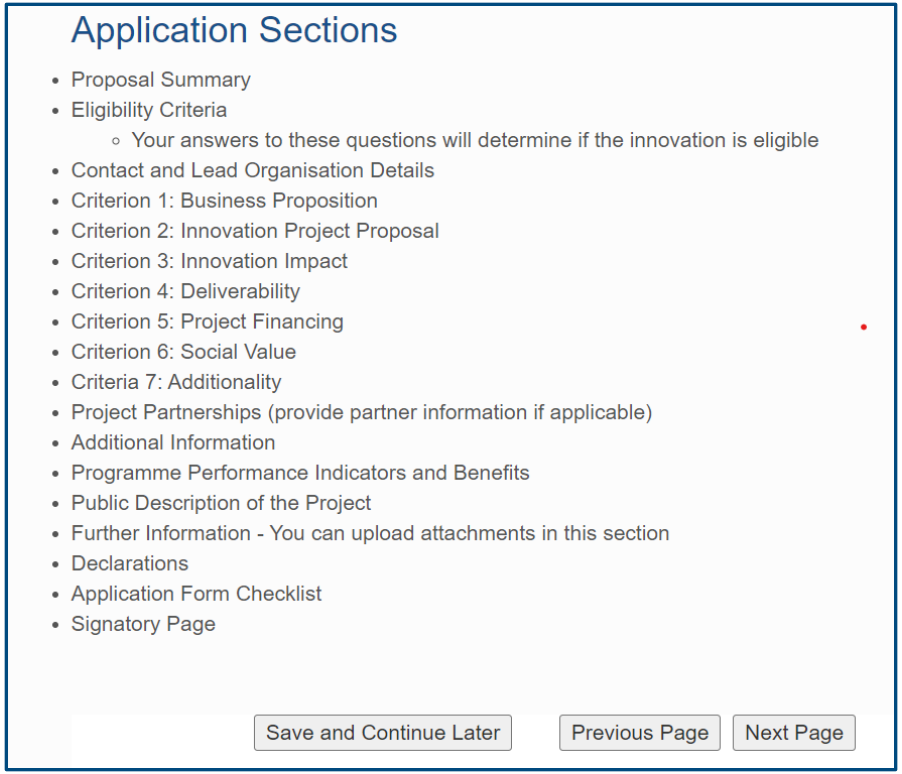
If you would like to see the complete set of questions you can click on this link to download a Word version.

Please note you must complete your application using this online form. If you are using the offline document to draft your responses ahead of submitting them in the online application form, please note that rich text formatting e.g. bold, underline etc. are not supported by the online application form. Please ensure that you allow sufficient time for the transfer of information from the offline version to the online application form.

HEAT PUMP READY

Smart Survey Sections

- The application form is broken down into a series of sections which align with details in the Stream 2- Wave 2 Competition Guidance.
- Please refer to the Stream 2- Wave 2 Competition Guidance as you are completing your application form
- All questions in the survey must be complete and in the correct format to allow you to progress with the survey



HEAT PUMP READY

Uploading supporting material

There are 3 types of attachments allowable as part of your submission.

Upload file:

- Some Assessment Criteria require a template to be completed and uploaded.

Referenced Figures:

- Please note these attachments must be figures referenced in the text of your application **ONLY.** Any additional text submitted as part of the reference figures will **not** be assessed.

Supporting Information:

- Additional background material can be submitted as supporting information, however your application should be standalone without the additional supporting information and supporting information may not be reviewed by assessors.

Criteria 4c: Deliverability: Project Success factors and risk management

What are the project success factors, target outcomes and risks?

Please refer to Section 11 of the Heat Pump Ready Stream 2 – Wave 2 Competition Guidance for guidance on what is required within your response to the following question.

As well as providing the text below you must complete this Risk Register template; download it, complete it and then upload the Risk Register in the next question to support your answer.

Please upload the completed Risk Register to support your answer for 4c. *

Choose File

Guidance – Additional Attachments:

Referenced Figures (will be assessed)
The applicant's response must be entered in the text box(es) below where provided. Applicants who wish to support their responses with figures where prompted (e.g. illustrations/PFDs/graphs/charts/schematics) may attach these as part of the **Referenced Figures** single attachment (max. 25MB allowance provided) in the **Further Information** section of this application form. Applicants must clearly label the figures in the attachment and reference the figures in their response within the text box to ensure they are assessed. Any further text submitted within the **Referenced Figures** single attachment will not be assessed.

Supporting Information
Additional letters of support or other **supporting information** can also be submitted in the **Further Information** section before you submit your online application form, where they add background/ supporting information (this could include but not limited to relevant papers, assumptions/ calculations to back up the assertions made in the application) to the application. However, the assessment will be based on the information directly written in the online application; you should not assume that any additional information will be cross-referenced or reviewed as part of the selection process. Applicants may upload up to 4 such attachments (max. 25MB per attachment).

HEAT PUMP READY

Templates to Complete

- Attached documents to be uploaded as part of the application:

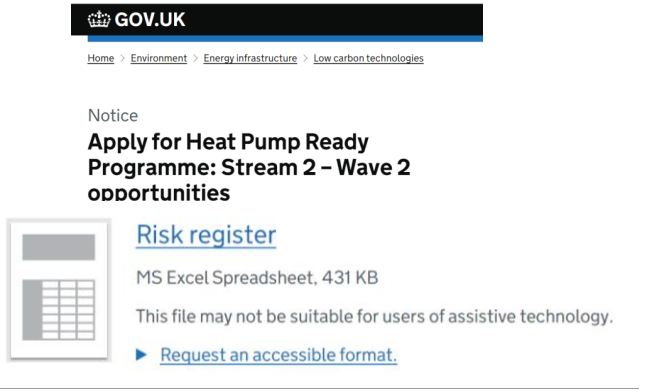
Templates have been provided which can be found on the Stream 2 – Wave 2 webpage

	Yes	No
Organogram	☐	☐
CV package	☐	☐
Stream 2 – Wave 2 Gantt Chart or Outline Project Plan	☐	☐
Stream 2 – Wave 2 Key Work Packages	☐	☐
Stream 2 – Wave 2 Risk Register	☐	☐
Stream 2 – Wave 2 Project Cost Breakdown / Finance Form	☐	☐
Declarations (6 in total)	☐	☐
Attached supporting documentation (optional) *Clearly referenced*	☐	☐

HEAT PUMP READY

Risk Table

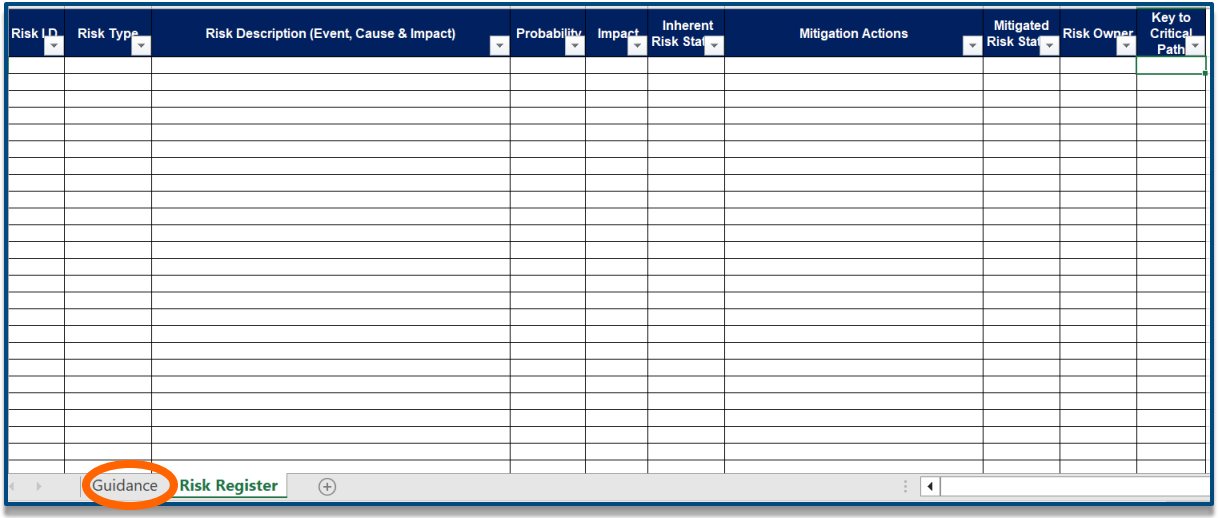
- The Risk Register can be found on the Stream 2 – Wave 2 webpage.
- A completed Risk Register should be uploaded as part of your response to Criteria 4c – review the competition guidance for what is required. This includes:



Describe main risks, and then rate as Crisis, Critical, Moderate, Marginal or Negligible for impact and Very unlikely, Unlikely, Possible, Likely and Very Likely for probability.

Describe whether each identified risk can be accepted, transferred or mitigated.

Assign the residual risk to the project as Red/Amber/Green.

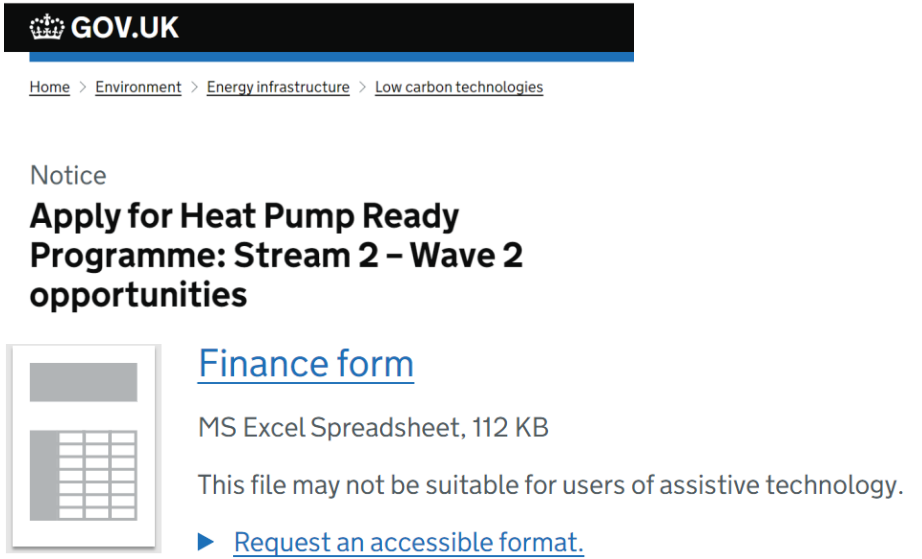


There is a Guidance tab to support completing the risk register including, risk status.

HEAT PUMP READY

Finance Form

- The Finance Form can be found on the Stream 2 – Wave 2 webpage.
- A completed Finance Form should be uploaded as part of your response to Criteria 5a. Guidance on completing the competition application and finance form can be found in Section 13 of the competition guidance.
- You should only **submit one** project cost breakdown form for the project, which should combine the costs of all project partners.



HEAT PUMP READY

Finance Form – Guidance Tab

- This provides guidance on completing the finance spreadsheet.

When completing the spreadsheet:

1. Each section of **all** of the tabs within this sheet must be completed - anything that remains outstanding will be highlighted in the summary tab.

2. Any ineligible costs entered into this sheet will be removed by the Department prior to issuing grant award letter. For guidance on cost eligibility please refer to the Stream 2 - Wave 2 Competition Guidance which can be found at the following webpage: https://www.gov.uk/government/publications/heat-pump-ready-programme-stream-2-wave-2-opportunities

3. Drop down options have been added in some places in order to simplify completion of the sheet along with formulas to simplify administration and to collate figures on the summary tab.

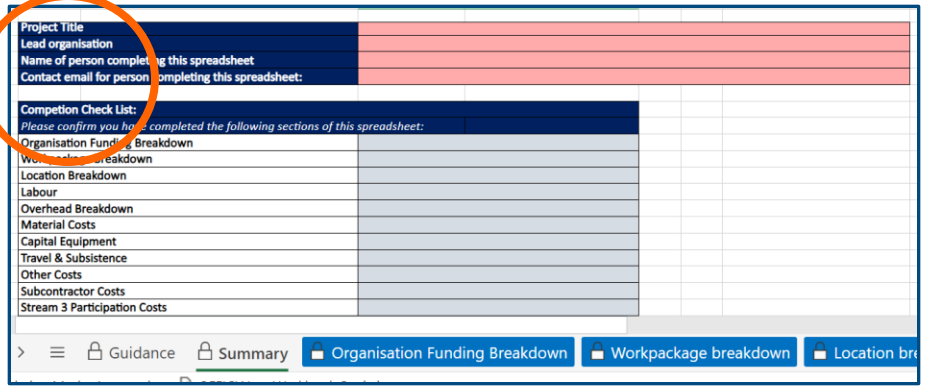
4. **Costs submitted into this spreadsheet are final**. Project teams will **not** be provided with the opportunity to amend costs prior to grant award.

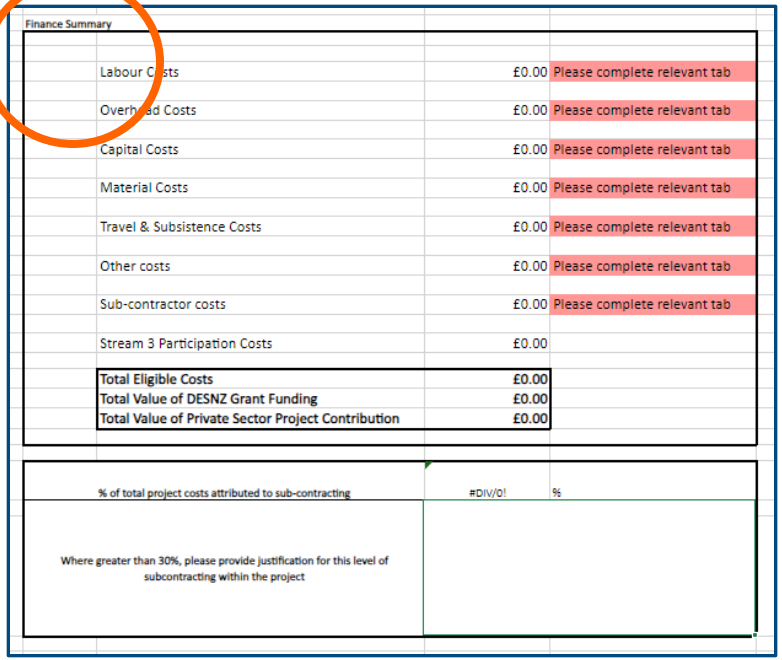
5. All costs should be entered **excluding VAT**.

HEAT PUMP READY

Finance Form – Summary Tab

- Please complete the relevant sections at the top of the tab. These include project title, lead organisation, name of person completing the spreadsheet and contact details.
- Complete the check list by using the drop-down option to confirm that you have completed all the required sections - anything that remains outstanding will be highlighted in the summary tab.





- The finance summary will automatically be completed using the information provided in the spreadsheet.

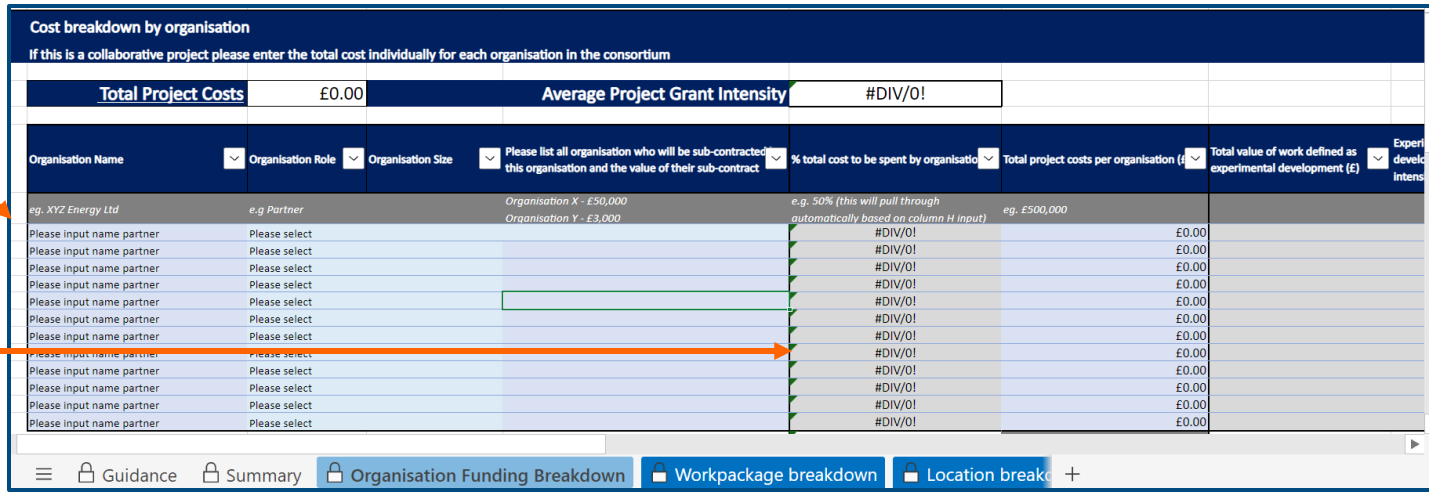
HEAT PUMP READY

Finance Form – Organisation Funding Breakdown Tab

- You are **required** to complete this tab to demonstrate the cost breakdown by organisation
- If this is a collaborative project, you will need to enter the **total cost individually for each organisation in the consortium.**

The blue sections e.g., organisation name requires completion.

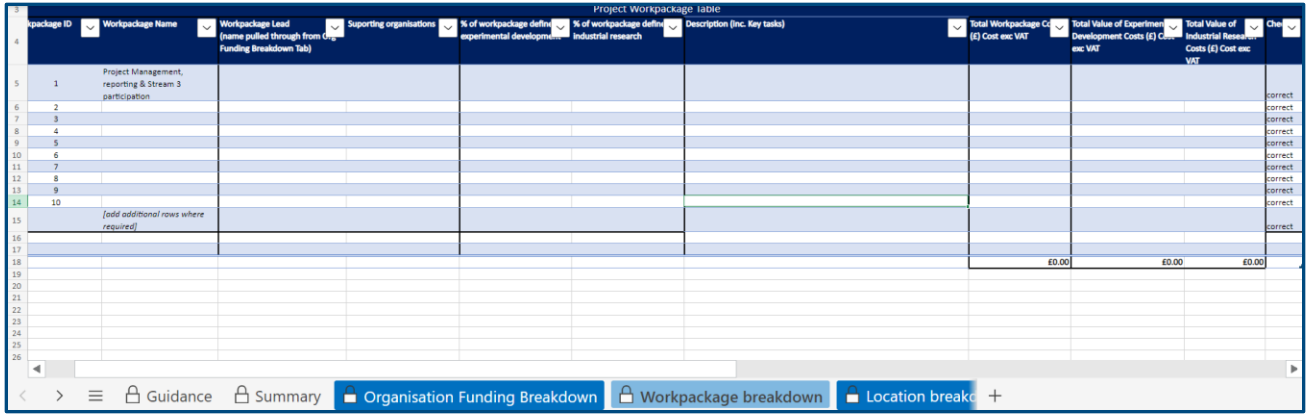
The grey sections will complete automatically based on the information provided e.g. % total costs to be spent by organisation



HEAT PUMP READY

Finance Form – Workpackage Breakdown Tab

- You are **required** to complete this tab.
- This will demonstrate the total value of Work package costs, total value of Experimental Development costs and total value of Industrial Research costs.
- Information provided in this tab form part of your response to Assessment Criteria 4a

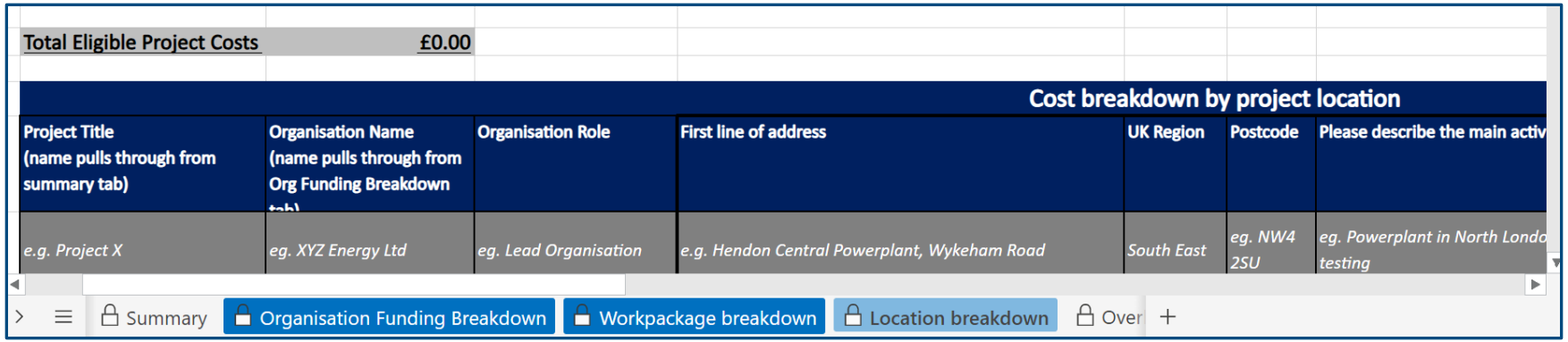


The Check List column should show as correct

HEAT PUMP READY

Finance Form – Location Breakdown Tab

- It is a requirement for the Department to report on how much the Department spend is being allocated to each UK region.
- This needs to be completed for the Lead Organisation and other project partners.
- If more than one location, please provide an estimate of the total eligible project costs at each location.



Total Eligible Project Costs	£0.00

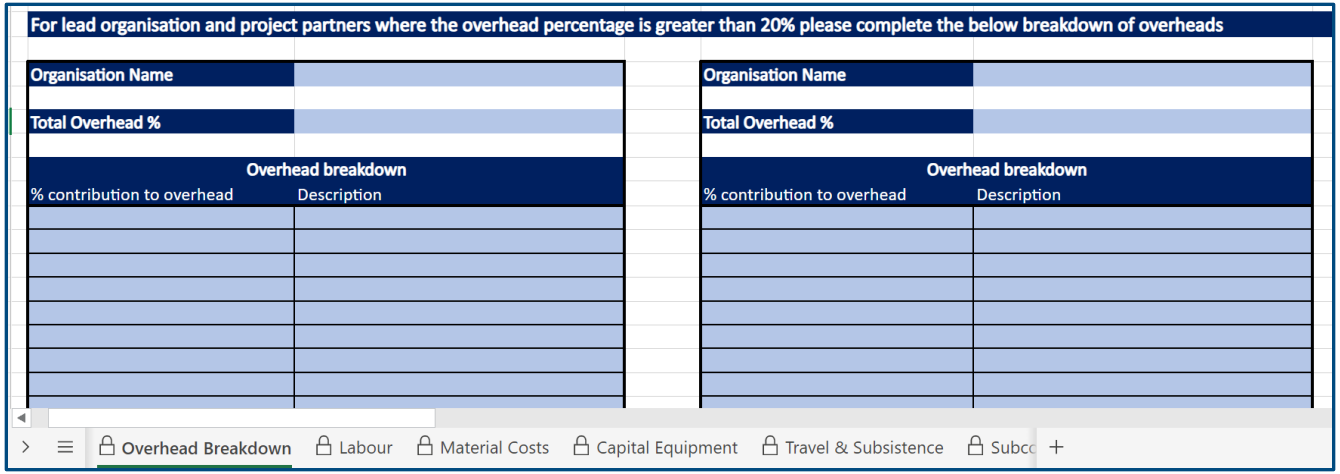
Cost breakdown by project location						
Project Title (name pulls through from summary tab)	Organisation Name (name pulls through from Org Funding Breakdown tab)	Organisation Role	First line of address	UK Region	Postcode	Please describe the main activ
e.g. Project X	*eg. XYZ Energy Ltd*	*eg. Lead Organisation*	*e.g. Hendon Central Powerplant, Wykeham Road*	*South East*	*eg. NW4 2SU*	*eg. Powerplant in North Londo testing*

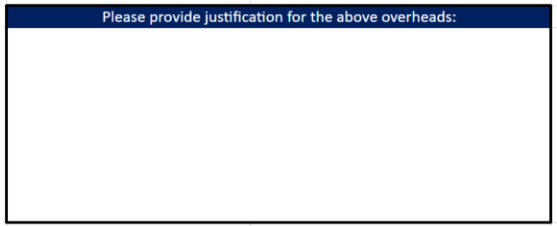
Summary | Organisation Funding Breakdown | Workpackage breakdown | Location breakdown | Over

HEAT PUMP READY

Finance Form – Overhead Breakdown Tab

- This tab should **only** be completed by those with a lead organisation or project partner(s) which have an overhead percentage **greater than 20% of labour costs.**





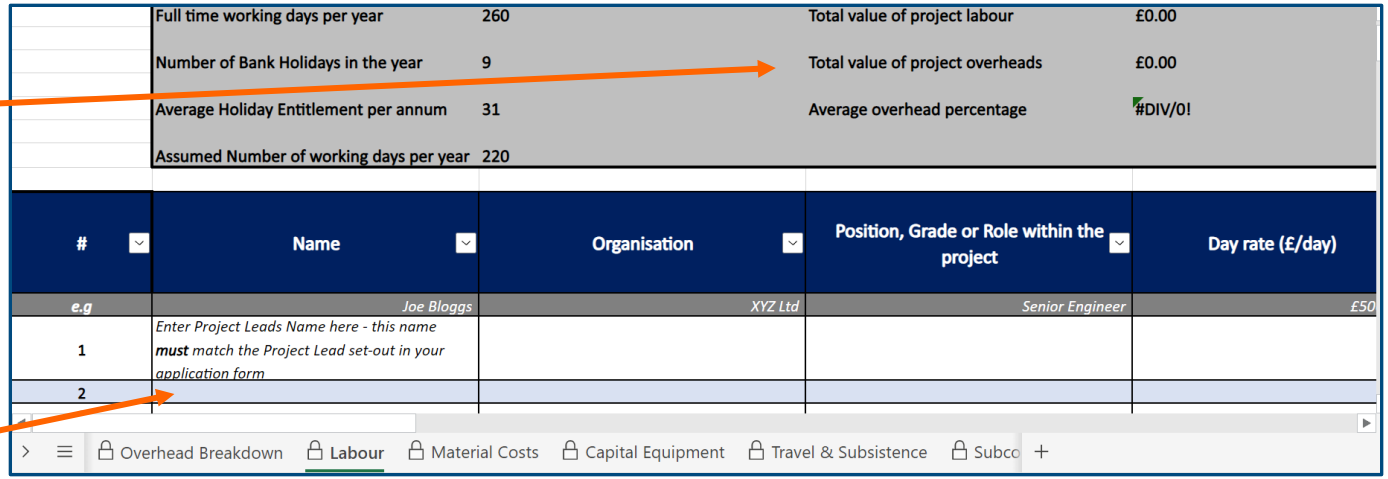
- **Justification is required** for each overhead breakdown. This should be provided in this box.

Finance Form – Labour costs

- You are **required** to complete this tab.
- This will demonstrate the labour costs associated to your project, including day rates, number of days spent on the project, overhead costs and total project labour costs

The grey sections will complete automatically based on the information provided

The blue and white sections requires completion.



	Full time working days per year	260	Total value of project labour	£0.00
	Number of Bank Holidays in the year	9	Total value of project overheads	£0.00
	Average Holiday Entitlement per annum	31	Average overhead percentage	#DIV/0!
	Assumed Number of working days per year	220		

#	Name	Organisation	Position, Grade or Role within the project	Day rate (£/day)
e.g	*Joe Bloggs*	*XYZ Ltd*	*Senior Engineer*	*£50*
1	*Enter Project Leads Name here - this name **must** match the Project Lead set-out in your application form*			
2				

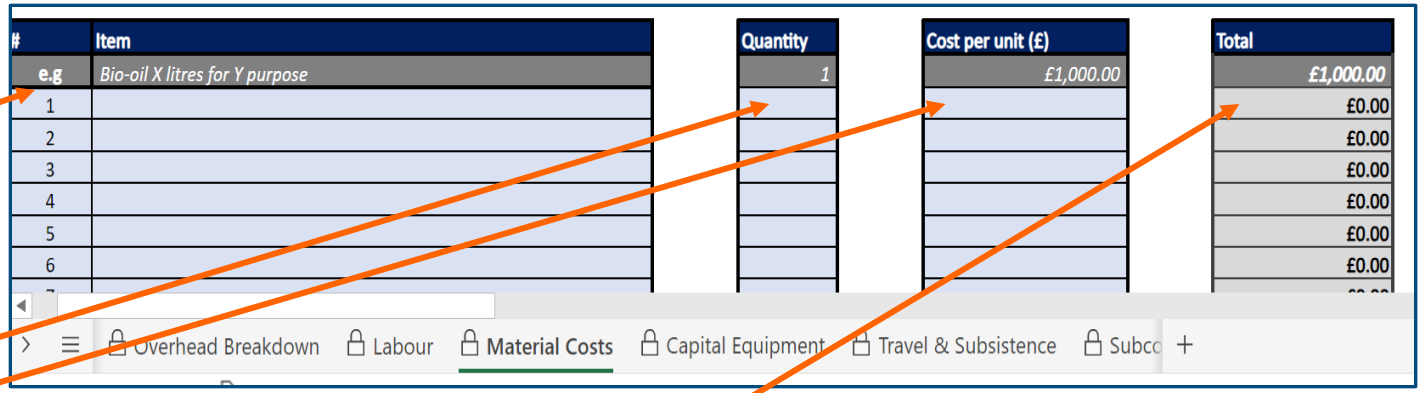
Overhead Breakdown | Labour | Material Costs | Capital Equipment | Travel & Subsistence | Subco

HEAT PUMP READY

Finance Form – Material Costs

- This tab should provide a breakdown of the material you expect to consume during the project
- Material Costs = The costs associated with the procurement of item e.g. equipment, tools, raw materials that only contribute to the project use and benefit within project duration.

Each material item should be listed here



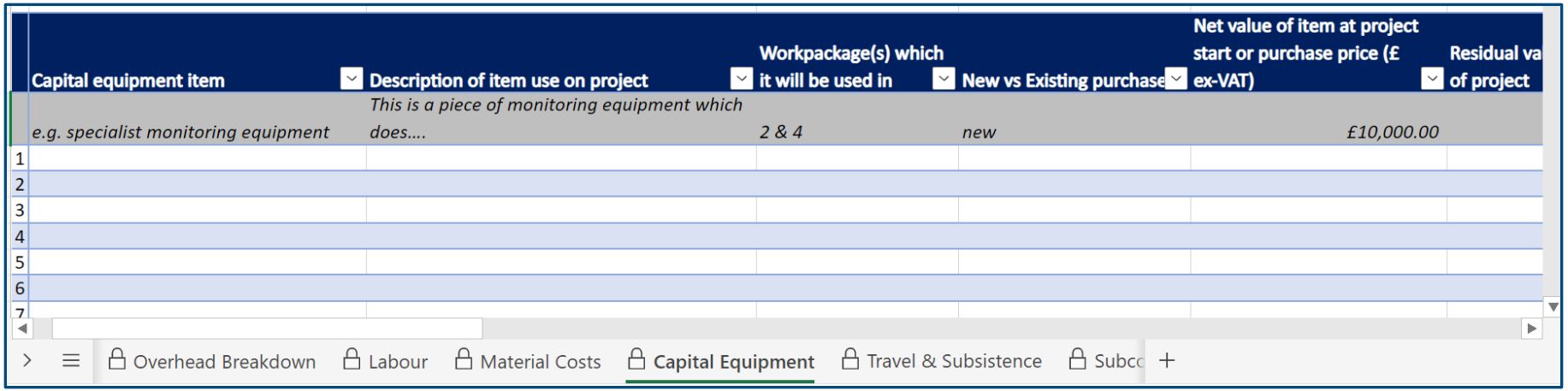
Quantity and Cost per unity of that item should be provided here

Total costs will be calculated automatically and shown here

HEAT PUMP READY

Finance Form – Capital Equipment Tab

- This tab should provide a breakdown of the capital equipment you expect during the project
- Capital Costs = One-off expenditure for significant fixed assets that will be of use or benefit for the project throughout its duration, as well as after the project has concluded.



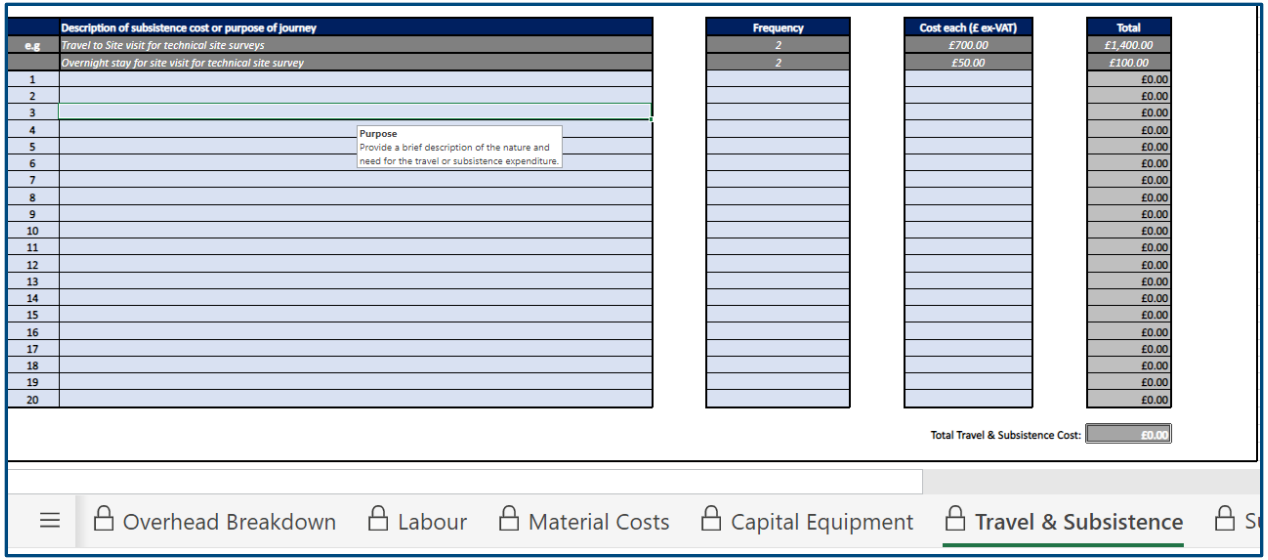
	Capital equipment item	Description of item use on project	Workpackage(s) which it will be used in	New vs Existing purchase	Net value of item at project start or purchase price (£ ex-VAT)	Residual va of project
	e.g. specialist monitoring equipment	*This is a piece of monitoring equipment which does....*	*2 & 4*	*new*	*£10,000.00*	
1						
2						
3						
4						
5						
6						
7						

Overhead Breakdown | Labour | Material Costs | Capital Equipment | Travel & Subsistence | Subcc

HEAT PUMP READY

Finance Form – Travel and Subsistence Tab

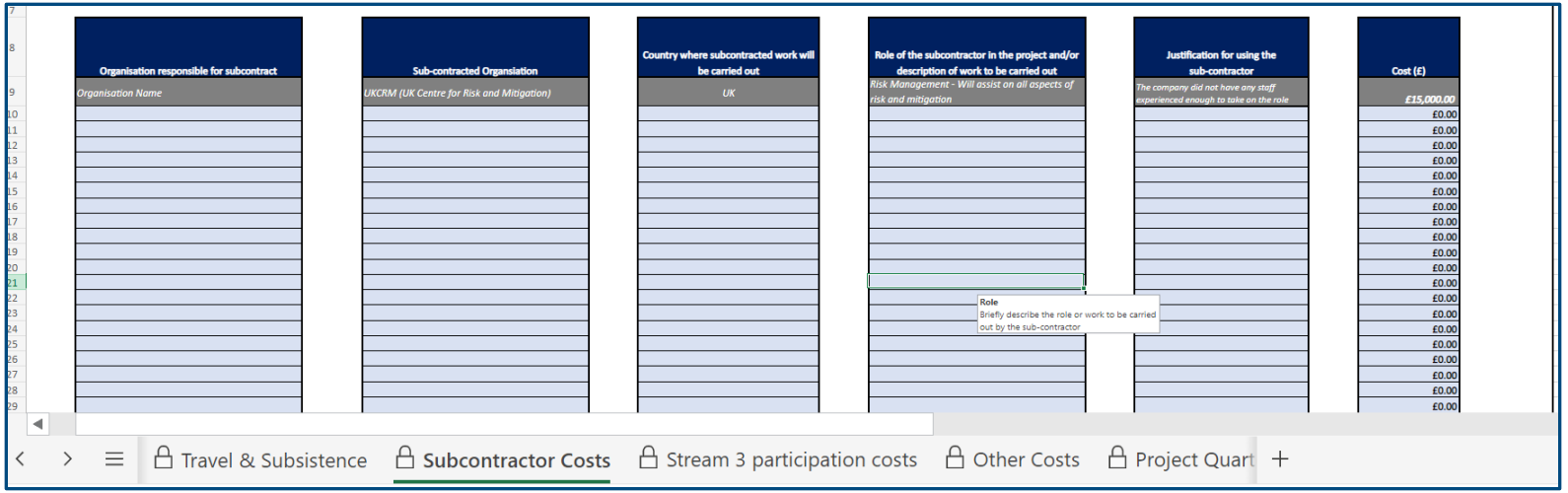
- You are **required** to complete this tab.
- This will provide a breakdown of the travel and subsistence costs you expect during the project
- Projects must adhere to the Department's Travel Policy as detailed within the Stream 2 – Wave 2 guidance.



HEAT PUMP READY

Finance Form – Sub-Contractor Cost Tab

- This tab should provide details of any subcontract costs that you expect to incur during the project.
- This covers work to be delivered by companies which are not part of the formal project consortium
- All sections require completion, including justification for using the subcontract and the cost associated.



HEAT PUMP READY

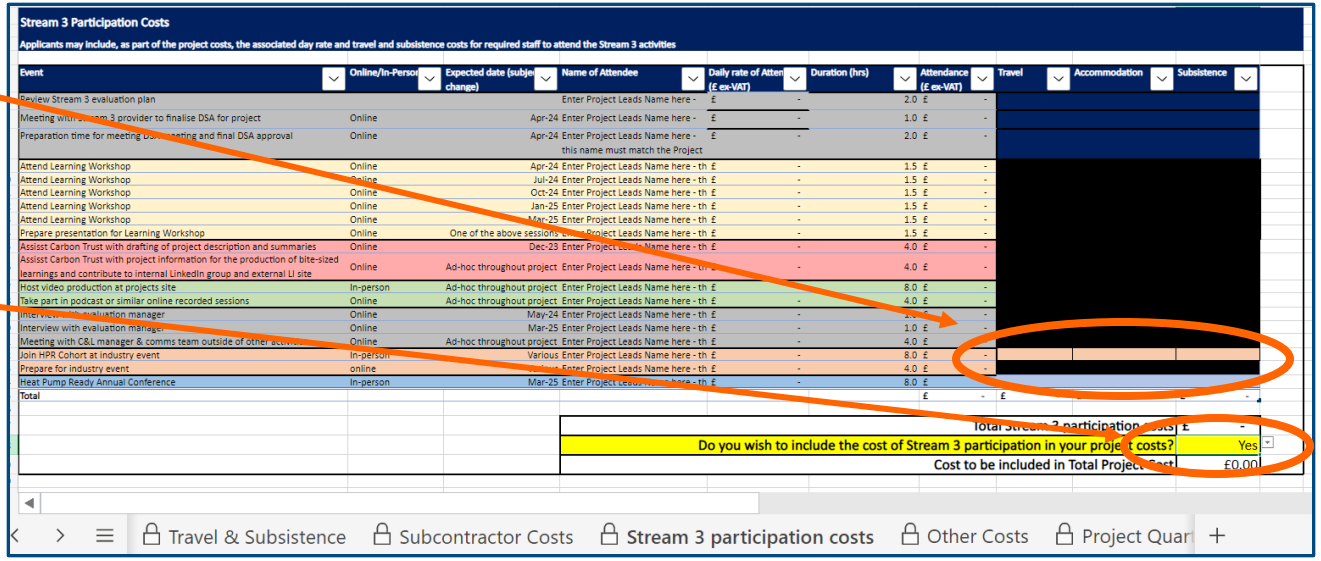
Finance Form – Stream 3 participation costs

- This tab will provide details of the costs associated to participating in Stream 3. Further details can be found in the Stream 2 – Wave 2 competition guidance.

These sections need completing, including Travel, Accommodation and Subsistence

Please select if you wish to include Stream 3 costs in your application.

The other sections within the spreadsheet will complete automatically based on the information provided within the spreadsheet



HEAT PUMP READY

Finance Form – Other Costs Tab

- This tab should provide details of any other costs that do not fit within the other cost headings.
- A description and justification for the cost is required.
- You only need to complete this if it is applicable.

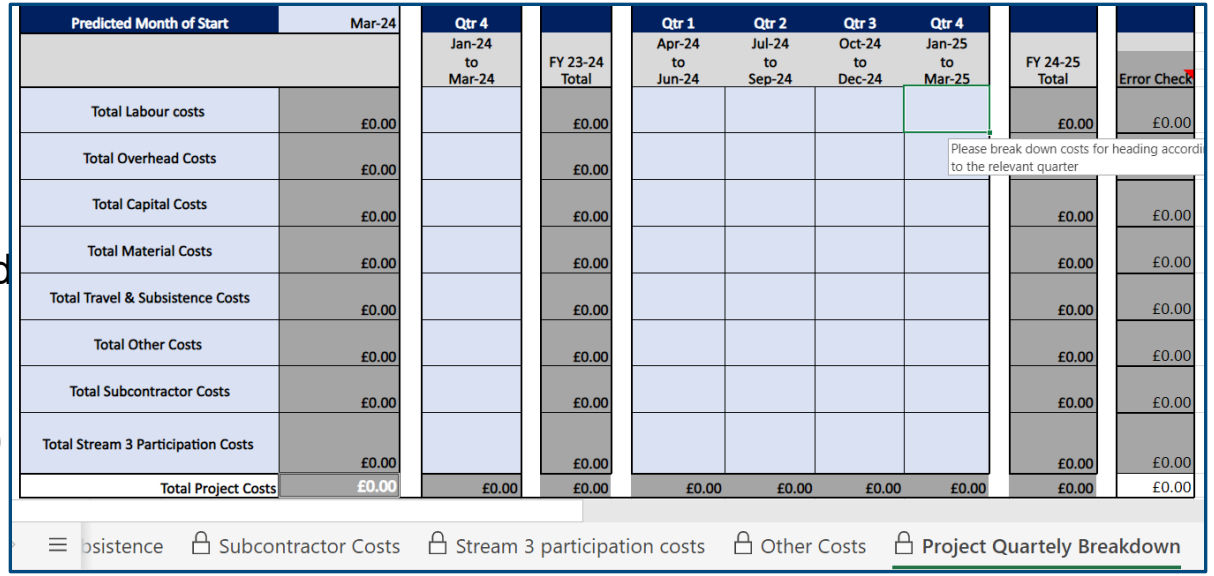
	Description of the cost	Justification for the cost
e.g	*Service charge for lab equipment*	*X equipment is needed to measure Y for Z WP.*
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Travel & Subsistence | Subcontractor Costs | Stream 3 participation costs | **Other Costs** | Project Quart

HEAT PUMP READY

Finance Form – Project Quarterly Breakdown Tab

- This tab should provide a quarterly breakdown for your project.
- The Quarter columns (sections in blue) will need completing with the associated costs.
- The other sections within the spreadsheet (sections in grey) will complete automatically based on the information provided within the spreadsheet



Predicted Month of Start	Mar-24	Qtr 4 Jan-24 to Mar-24	FY 23-24 Total	Qtr 1 Apr-24 to Jun-24	Qtr 2 Jul-24 to Sep-24	Qtr 3 Oct-24 to Dec-24	Qtr 4 Jan-25 to Mar-25	FY 24-25 Total	Error Check
Total Labour costs	£0.00		£0.00					£0.00	£0.00
Total Overhead Costs	£0.00		£0.00						
Total Capital Costs	£0.00		£0.00					£0.00	£0.00
Total Material Costs	£0.00		£0.00					£0.00	£0.00
Total Travel & Subsistence Costs	£0.00		£0.00					£0.00	£0.00
Total Other Costs	£0.00		£0.00					£0.00	£0.00
Total Subcontractor Costs	£0.00		£0.00					£0.00	£0.00
Total Stream 3 Participation Costs	£0.00		£0.00					£0.00	£0.00
Total Project Costs	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

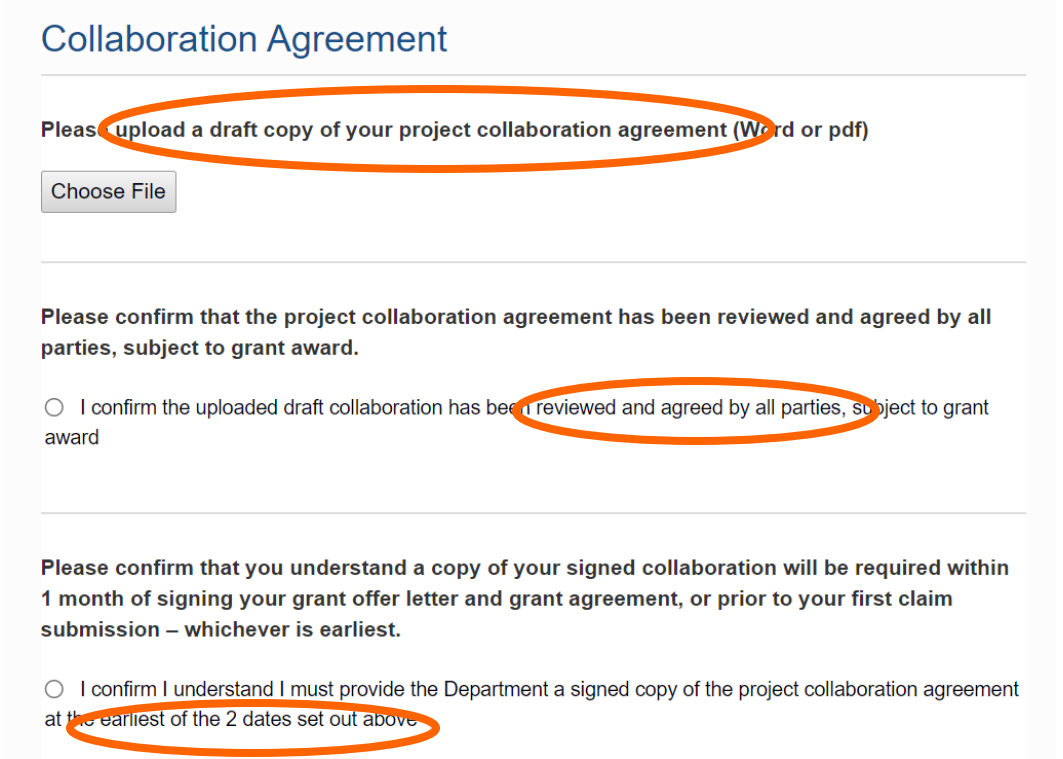
Please break down costs for heading accordi
to the relevant quarter

sistence | Subcontractor Costs | Stream 3 participation costs | Other Costs | Project Quartely Breakdown

HEAT PUMP READY

Draft Collaboration

- Asked to submit a draft collaboration agreement as part of your application
- This must have been reviewed and agreed in principle by all collaboration partners, subject to the grant being awarded
- A signed version of the project collaboration must be submitted to the Department within 1 month or before the first project claim – whichever is soonest



Collaboration Agreement

Please upload a draft copy of your project collaboration agreement (Word or pdf)

Choose File

Please confirm that the project collaboration agreement has been reviewed and agreed by all parties, subject to grant award.

○ I confirm the uploaded draft collaboration has been reviewed and agreed by all parties, subject to grant award

Please confirm that you understand a copy of your signed collaboration will be required within 1 month of signing your grant offer letter and grant agreement, or prior to your first claim submission – whichever is earliest.

○ I confirm I understand I must provide the Department a signed copy of the project collaboration agreement at the earliest of the 2 dates set out above

HEAT PUMP READY

Competition Q&A process

Questions

- Questions about the Competition: If you have any questions on the competition process, please submit them to heatinnovation@beis.gov.uk by **14:00 GMT, 27 November 2023**.

Responses

- Depending on the number of questions received, we expect to publish these questions and our responses to them periodically from **6 November until 7 December 2023.**

Published

- We will publish all the questions received and responses to them by close **7 December 2023.**
- You will find the list of **published Q&A** on the following webpage: https://www.gov.uk/government/publications/heat-pump-ready-programme-stream-2-wave-2-opportunities

All applicants should take these replies into consideration when preparing their own applications and we will evaluate applications on the assumption that they have done so.

HEAT PUMP READY

Technical Support

- Deadline for Stream 2 – Wave 2 questions is **14:00, 27th November 2023**. Submit your questions to heatinnovation@beis.gov.uk. After this deadline, only technical questions regarding submission of applications will be considered for response.
- Any technical issues to the application form or uploading documents will be updated on the list of published Q&A. This can be found on the following webpage: https://www.gov.uk/government/publications/heat-pump-ready-programme-stream-2-wave-2-opportunities
- Applicants are advised to familiarise themselves with the Smart Survey system ahead of the deadline.
- Applicants should not rely on technical support in submitting their application form close to the deadline.
- **Reminder – all applications must be submitted via Smart Survey, no submissions will be accepted via email or word document**

HEAT
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READY

Questions?

HEAT
PUMP
READY

Stream 2 – Wave 2: Commercial Aspects

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Conflict of Interest

- Streams 1 & 2 – Organisations awarded funding under these streams may apply but must declare & mitigate any CoI
- Stream 3 - potential for an actual or perceived conflict if supplier is to apply
- DESNZ reserves the right to exclude any proposals where the bidder has an actual or perceived conflict of interest that cannot be mitigated to the satisfaction of DESNZ.
- You need to declare any previous applications when you apply.

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Existing HPR funded organisations

- If you have an ongoing project under one of the existing HPR streams, you may not apply for 'top up funding'.
- Stream 2 Wave 2 is for new, distinct projects.
- We will, however, consider further innovation on a HPR project. Projects must evidence that they have completed their initial project, and the further innovation is a new development.

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VAT

- This is a grant programme, and as such VAT is not an eligible expenditure.
- Specifically, input VAT reclaimable by the grant recipient from HMRC is a non-eligible expenditure - as stated in the Ts&Cs under clause 5.3.

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Organisation Due Diligence

- DESNZ will carry out due diligence on successful projects.
- This will incorporate 2 sections: financial checks and commercial checks. Mainly this constitutes analysis of Dunn and Bradstreet report and an in-depth review of the Finance Form respectively.
- After that DESNZ will provide the successful project with a list of questions and/or requests for information. We will arrange a meeting for successful applicants to provide and explain this information.

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Ts&Cs

- Applicants must agree to the Terms and Conditions (published alongside the competition guidance).
- The Terms and Conditions are standard for DESNZ grants and will not be altered.
- If you do not agree with the Terms and Conditions, do not apply under the assumption that these can be negotiated – as they are non-negotiable.

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Questions?

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Next Steps

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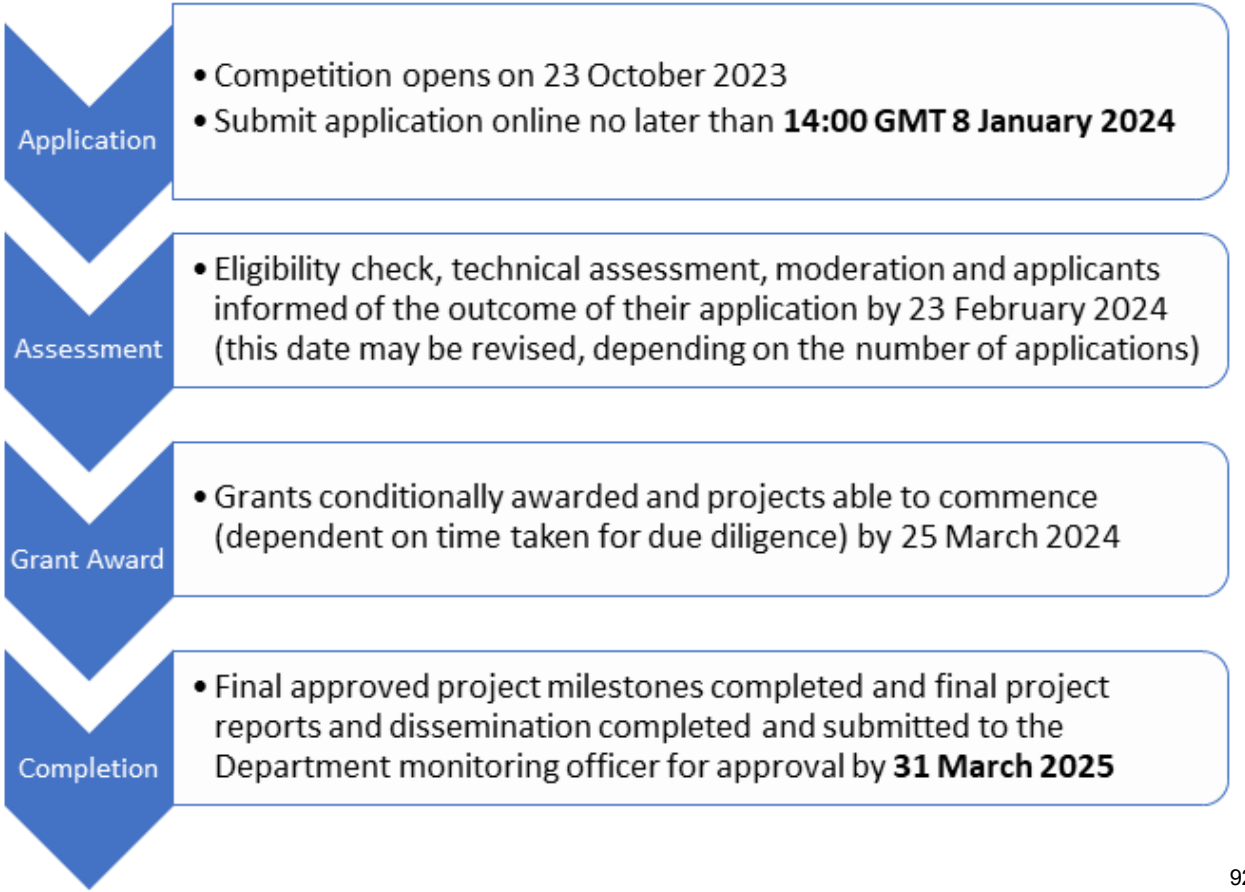
Timeline

The indicative timeline of key dates for *Stream 2 - Wave 2: Developing Tools and Technology* Competition.

Please note that all dates are subject to change.



Find out more about Heat Pump Ready:

Website: www.heatpumpready.org.uk

Email: heatinnovation@beis.gov.uk

HEAT PUMP READY

Department for Energy Security & Net Zero