



Department for
Business, Energy
& Industrial Strategy

LOW CARBON HEATING TECHNOLOGY INNOVATION FUNDS

Guidance Notes

October 2017

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BEIS Low Carbon Heating Technology Innovation Fund – Rules and Guidance

1 Overview

The objective of the Low Carbon Heating Technology Innovation Fund is to support, through capital grants provided by the Department for Business, Energy and Industrial Strategy (BEIS), the development and demonstration of innovative technologies and processes for **producing better ways of providing low carbon heat in existing buildings**.

The Innovation Fund will consider proposals for low carbon heating systems which provide space and/or water heating in any type of existing UK building. The innovation could be a technology, or a process (a way of combining technologies to deliver better low carbon heating), or a tool (e.g. software and/or hardware to reduce the complexity of installation), or some combination of these.

We mainly expect *gas-driven* systems (e.g. gas heat-pumps), *hybrid* systems (e.g. combining gas and electric heating) and *electrical systems* (e.g. electric heat-pumps, radiative heating) to be supported, though renewable systems (particularly innovations which incorporate *solar thermal* in the overall heating system) are in scope.

Biomass systems and heat networks are *out-of-scope*. Activities to support the *deployment* of low carbon heating technologies which are *not innovative* (e.g. assistance with taking a market ready technology from an overseas market to the UK market) are *out-of-scope*.

Companies can apply for up to £2 million and will be required to provide a significant level of matched funding (see Section 5 for details of grant intensity). Only one proposal per applicant may be submitted.

During the application process, applicants will be expected to demonstrate a robust, evidence-based case for funding, which will include:

- Wide scale applicability in existing UK buildings
- Potential to reach widespread market deployment by 2025
- Feasibility and coherence of the business plan
- Reduction in upfront and / or lifetime costs of provision of low carbon heating
- Ability to integrate into low carbon heating systems

BEIS will fund project proposals which meet the EU definition of Industrial Research and Experimental Development. Funding levels will vary according to the conditions as set out in Section 5.

2 Fund Context and Objectives

The Low Carbon Heating Technology Innovation Fund is funded by the BEIS Energy Innovation Programme (2016-2021). The aim of the BEIS Innovation Programme is to reduce the UK's carbon emissions and the cost of decarbonisation by accelerating the commercialisation of innovative clean energy technologies and processes into the mid-2020s.

This Innovation Fund is interested in proposals for innovative technologies and processes to produce better ways of providing low carbon heat in existing buildings - as long as the selected innovations are not yet widely used commercially (in the UK or elsewhere).

The specific objectives for this Innovation Fund are to:

- Reduce, through innovation, the cost of installing and running low carbon heating systems in existing buildings
- Bring forward to market new and improved heating technologies more quickly than would have happened in the absence of Government intervention

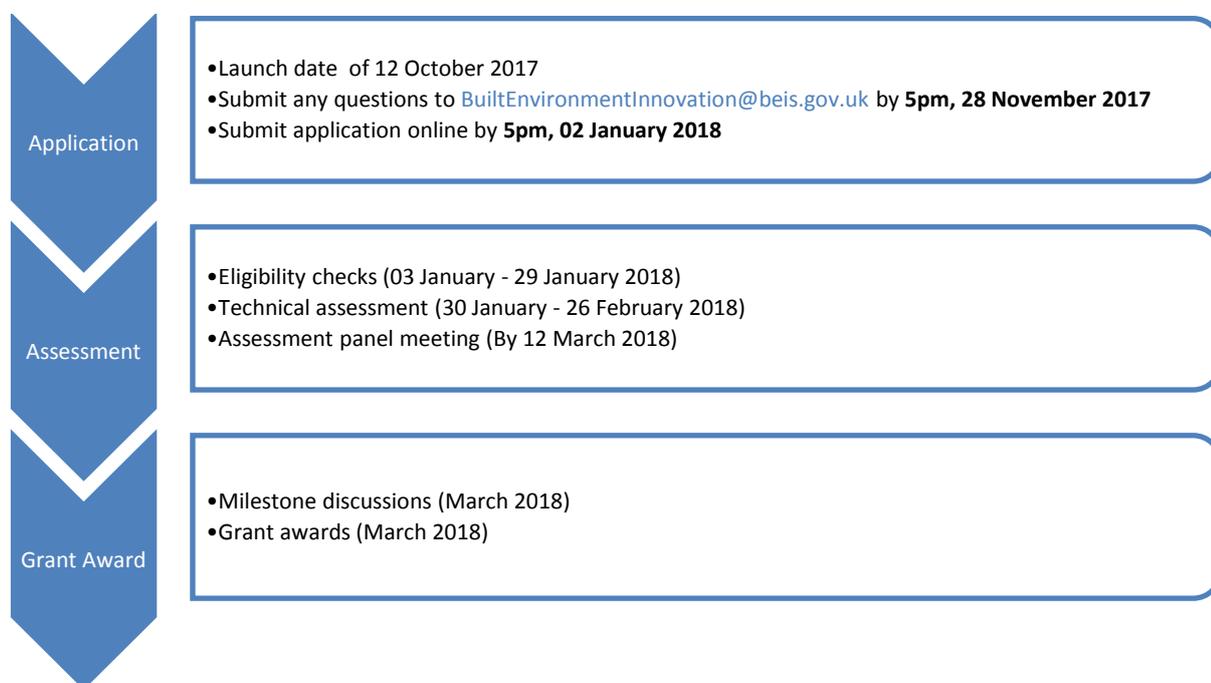
With secondary objectives to:

- Improve the performance of heating systems (compared to existing systems)
- Avoid unintended consequences, e.g. heating system failure, poor performance
- Enhance the consumer acceptability of measures

3 Fund Timetable, Application and Assessment Process

The following dates are applicable to the Low Carbon Heating Technology Innovation Fund:

Timings:



As outlined in the diagram above, the process will be undertaken in three key stages: application, assessment and grant award.

3.1 Application

- **Apply online** at <https://beis-low-carbon-heating-frontend.cloudapps.digital/>
- **Questions about the Low Carbon Heating Technology Innovation Fund:** If you have read the guidance notes and still have questions, you may address queries to the following email address: BuiltEnvironmentInnovation@beis.gov.uk. Questions must be received by 5pm, 28 November 2017. Questions and answers will be published on the GOV.UK page by 05 December 2017.

- **Submission process and deadline:** The [online application](#) form must be submitted in full by 5pm, 02 January 2018.
- **Submission content:** Each proposal must include the following documents:
 - Completed online application form
 - Completed and uploaded finance form
 - Completed and uploaded project Gantt chart or outline project plan

You should endeavour to answer all of the questions on the application in full. Incomplete applications and any containing incorrect information will very likely be rejected although BEIS may, at its discretion, request clarification or additional data before making a final decision.

Any applications or supporting documentation received after the application deadline will not be considered.

3.2 Assessment

Initially applications will be checked against Eligibility Criteria detailed in Section 4.

Applications which fail the Eligibility Criteria will not be assessed further, so it is essential to ensure that your project meets these criteria before you submit your application.

Applications which meet the Eligibility Criteria will then be assessed against the Assessment Criteria summarised below and described in more detail in Section 8:

- Impact of the innovation on 2030 and 2050 carbon reduction targets
- Wide scale applicability to existing UK buildings
- Potential to reach widespread market deployment by 2025
- Feasibility and coherence of the business plan
- Reduction in upfront and / or lifetime costs of low carbon heating technology measures
- Ability to integrate into the overall retrofit

After this stage, all applicants will receive a short summary of key feedback regarding their applications irrespective of whether they are successful or not. BEIS aims to have provided all feedback to applicants within two months of the final funding decision. However, applicants are asked to remember that BEIS may receive a significant number of applications and the timing of the release of feedback will be at BEIS's discretion.

3.3 Grant Award

Prior to the issue of the formal grant offer, there will be an opportunity to discuss the Grant Offer Letter at a meeting with an official from BEIS who will explain the conditions of the letter and respond to any queries which the applicant may have at that stage. BEIS officials will also discuss and finalise the formal project milestones with the project team before issue of the formal grant offer. BEIS may also involve an external technical adviser in these milestone discussions and in subsequent monitoring of the project.

In the case of projects which are delivered by project consortia, the lead company (project co-ordinator) will be the recipient of the grant offer letter and will be responsible for managing payment of grant funding to the other project partners. For consortium projects, funding will not be provided by BEIS until a consortium agreement for the project has been finalised and signed by all the members of the project consortium.

4 Eligibility for Funding

4.1 Eligibility Criteria

To be eligible for funding, proposed projects must meet all of the following eligibility criteria:

Technology Scope

The Low Carbon Heating Technology Innovation Fund will support proposals for innovative technologies, tools or processes to produce better ways of providing low carbon heat in existing buildings, including:

- For electric systems:
 - For air source heat pump technologies a minimum SPF_{H4} of 2.5, with scoring weighted towards innovations that significantly exceed this figure (the call will refer to EU Minimum Performance Standards)
 - For ground source heat pump technologies a minimum SPF_{H4} of 3.0, with scoring weighted towards innovations that significantly exceed this figure (the call will refer to EU Minimum Performance Standards)
 - Resistive systems, evidence that there is some novel approach which means that overall electricity consumption *and* peak power consumption is no greater than direct electric.
- For *gas driven systems*¹ Carbon content of 140g or lower per kWh useful heat delivered to building. By “useful heat” we mean heat *used* for the purposes of space and/or water heating.
- For *hybrid systems* Carbon content of 140g or lower per kWh useful heat delivered to building and evidence that the system can respond to external (e.g. ‘Smart’) request to run in gas (or other energy vector), rather than electrical, mode at times of peak electricity demand.

¹ For natural gas conversion factors please use <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

- For other systems, evidence that the overall heat-demand of the building to be heated can be delivered by the system or evidence on what other sort of heating system the Product is integrated with. In addition the overall fuel and/or electricity should meet the peak demand for heating, typically during the coldest period of weather. If occurring, CO₂ emissions associated with the provision of heat in g per kWh useful heat provided.
- For tools, new approaches to installation and/or approaches to monitor & improve low carbon heating-system performance, evidence of impact on installation and/or running costs for existing low carbon heating technologies and systems.

Proposals must not be for innovations that are widely used commercially (in the UK or elsewhere).

Technology Readiness Level (TRL)

The deliverable for this Innovation Fund is innovative technologies, processes or tools that have the potential to produce better ways of providing low carbon heat in existing buildings. The proposal must demonstrate how the technology, process or tool can be deployed at scale by 2025. Thus, proposals are expected to have a current minimum technology readiness level of 6 (i.e. ready for prototype system demonstration). A description of Technology Readiness Levels is provided in Appendix 1.

Project Activity

The Low Carbon Heating Technology Innovation Fund will only support project proposals which meet the definition of Industrial Research or Experimental Development, as defined within the EU General Block Exemption Regulation (GBER) Section 4 Article 25 (Aid for research and development projects).

Industrial Research

Under the terms of the GBER, industrial research is defined as:

*‘ 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**. 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 as well as of pilot lines, when necessary for the industrial research and notably for generic technology validation;*

Activities may include:

- the creation of component parts of complex systems;

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

Experimental Development

Under the terms of the GBER, experimental development is defined as:

*‘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**. Experimental development may comprise **prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services** in environments representative of real life operating conditions **where the primary objective is to make further technical improvements on products, processes or services** that are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product and which is too expensive to produce for it to be used only for demonstration and validation purposes. 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**’*

Activities undertaken may include prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions where the primary objective is to make further technical improvements on products, processes or services that are not substantially set.

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.

Project status

BEIS is unable to fund work on projects retrospectively.

Additionality

Projects can only be funded where evidence can be provided that innovation would not be taken forwards (or would be taken forwards at a much slower rate) without public sector funding. Additionality will be assessed as part of the Assessment Criteria.

Grant Size and Intensity

Please refer to GBER Acts 25.5 and 25.6 and see Section 5 below.

Under the GBER rules, the eligible costs shall be the costs of the project and must not include any of the non-eligible costs listed in Appendix 2.

Previous recipients of public sector innovation funding can apply but the proposed project must be a new proposal which has not previously received funding. Applicants will be required to provide details of other public sector funding which they have received or for which they have applied which relates to the same technology.

Project Location

The activities for any project supported by this Low Carbon Heating Technology Innovation Fund must be conducted largely in the UK (and the majority of the eligible project costs must be incurred in the UK).

Project Duration

The projects should be completed – including all reporting requirements – within 3 years of the grant award and by the end of March 2021, whichever is sooner.

General conditions

Applicants(s) must be financially viable and undertakings must not be subject to an outstanding order from the Commission to recover incompatible aid already granted or in financial difficulty (e.g. seeking rescue and restructuring aid). In addition, Appendix 3 lists a number of questions relating to issues including bribery, corruption or fraud and BEIS would not expect to provide grant funding to companies which cannot answer 'No' to all of these questions.

5 Funding Levels and State Aid Requirements

5.1 Grant Intensity

The Low Carbon Heating Technology Innovation Fund will be operated in accordance with the EU General Block Exemption Regulation (GBER) – specifically: Section 4, Article 25 (Aid for research and development projects)².

The scheme is open to:

- all SMEs
- private sector organisations irrespective of size
- collaborative proposals
- Universities and Public Sector Research organisations

Applicants to the Low Carbon Heating Technology Innovation Fund are eligible for a minimum grant of £200k and a maximum grant of £2 million. The maximum level of public funding (the grant intensity) of public funding that can be provided for each project is dependent on the size of the organisation, as summarised below in Table 1. BEIS may choose to award a lower level of funding – below the maximum permitted by the State Aid regulations – in order to secure greater value for money.

Table 1: Maximum public funding for projects in the Low Carbon Heating Technology Innovation Fund.

Research Category	Type & size of applicant	Maximum amount of public sector funding
Industrial Research – Single Companies	Small enterprise ³	70%
	Medium enterprise ⁴	60%

² <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=EN>

³ A small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million

	Large enterprise	50%
Industrial Research - Collaborations (either Business to Business or between Business and research organisations)	Small enterprise ²	80%
	Medium enterprise ³	75%
	Large enterprise	65%
Experimental Development - Single Companies	Small enterprise ²	45%
	Medium enterprise ³	35%
	Large enterprise	25%
Experimental Development - Collaborations (either Business to Business or between Business and research organisations)	Small enterprise ²	60%
	Medium enterprise ³	50%
	Large enterprise	40%

Note: State Aid compliance is a legal requirement and the risk of non-compliance rests with the grant recipient⁵. It is therefore crucial that you address State Aid fully within the application, as any errors at this stage may result in BEIS being able only to offer a reduced level of funding or repayment of grant by applicants.

5.2 Public Funding

When considering levels of aid intensity (described above), public funding includes the grant and all other funding from, or which is attributable to, other government departments, UK public bodies, other Member States public bodies or the EU institutions. Such funding includes grants or other subsidies made available by those bodies or their agents or intermediaries (such as grant funded bodies).

In applying to this Low Carbon Heating Technology Innovation Fund you must state if you have received, are applying for, or expect to receive, any funding for your project from public authorities (in the UK or in other Member States) or the EU or its agencies. Any other public funding, relating to the same eligible costs and above the de minimis threshold

⁴ The category of micro, small and medium-sized enterprises ('SMEs') is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million

⁵ The UK's rights and obligations of EU membership, including compliance with EU State aid rules, continue to apply until the UK's exit from the EU has been completed. The Low Carbon Heating Technology Innovation Fund will continue to comply with any future subsidy controls that might apply in the UK following EU exit.

(see article 8(3)(a)), will be cumulated with BEIS funding to ensure that the public funding limit and the aid intensity levels are not exceeded for the project.

It is the responsibility of applicants to ensure that they provide accurate information and meet the requirements of State Aid rules before submitting applications. BEIS requires applicants to notify them of any change to situation or circumstance during the project.

If there is a breach of State aid rules, for whatever reason, the European Commission requires repayment of any grant received, including interest. In this situation applicants will be required to repay any funding received. It is also important to ensure that the total grant funding for the project from public sources (including from the European Commission) does not exceed the aid intensity permitted by GBER.

As part of the assessment process, the added value and additionality of public funding will be tested. **Applicants will need to demonstrate why public funding is required to deliver this project.**

5.3 Collaborative Projects

Under the GBER, no additional public funding is awarded to participants carrying out collaborative studies but projects should meet one of the following conditions to be defined as collaborative:

“(i) the project involves effective collaboration:

- between undertakings among which at least one is an SME, or is carried out in at least two Member States, or in a Member State and in a Contracting Party of the EEA Agreement, and no single undertaking bears more than 70 % of the eligible costs, or
- between an undertaking and one or more research and knowledge-dissemination organisations, where the latter bear at least 10 % of the eligible costs and have the right to publish their own research results;

(ii) the results of the project are widely disseminated through conferences, publication, open access repositories, or free or open source software.”

6 Project Plans, Finances and Financial Viability

6.1 Project Plans

Projects are expected to be up to 3 years in duration. All projects must be completed, including all reporting requirements, by 31st March 2021. All projects must submit a detailed Gantt chart, or equivalent as part of their application, which details the project timeline and the project milestones.

6.2 Project Costs

All applicants must complete the Finance Form spread sheet detailing their expected expenditure and spending profile for the project. The Finance Form can be downloaded, completed and then uploaded as part of the online application process.

During the assessment of applications, the project costs and plans that are submitted as part of the application process will be fully assessed along with the answers to the questions on the application form to ensure they are what might be reasonably expected.

The eligibility of all costs under State Aid rules and the financial viability of your organisation will be checked following the decision to select an applicant but before a formal offer is made. Being contacted for this information does not indicate either success or failure in the assessment process.

While BEIS understands that project costs are subject to change prior to agreeing a Grant Offer Letter and throughout the course of the project, we do expect the final version of the Finance Form to be our guide to project expenditure through delivery and costs should not vary significantly from this without prior agreement of the Department.

6.3 Financial Viability Checks

BEIS will undertake financial viability checks on all successful applicants. These will include looking at the latest independently audited accounts filed on the Companies House database.

Where a business is not required to file accounts with Companies House, other financial information may be requested to enable an appropriate financial viability review to be undertaken. We will be looking for evidence of your ability to resource the project

appropriately, so the information we request will be focused on understanding how your business operates in this respect.

Before your project starts, BEIS will ask for evidence that you have the funding mechanisms in place to manage your cash flow across the life of your project. This could include letters of credit or other such mechanisms. We do not expect you to have cash deposits to cover the entirety of your project at the start. However, if you do not complete your project due to cash flow problems that you could have anticipated and managed, we may request repayment of any grant already issued to you.

BEIS will not make payments in advance of need and typically makes grant payments in arrears on satisfactory completion of agreed milestones and deliverables. BEIS understands, however, the difficulties which small businesses may face when financing this type of project. BEIS will explore cash flow issues with the applicant as part of developing the financial and milestone profile during the Grant Award process. BEIS may offer flexibility in terms of profiles and payments, within the confines of the requirements for use of public money within which it operates.

6.4 Grant Use

Grants provided will only cover the cost of the project (as defined in Article 2(83) of the General Block Exemption Regulation) and must not include any of the non-eligible costs listed in Appendix 2.

7 Public Description of the Project

Applicants are asked to provide a public description of the proposed project. This should be a brief non-confidential description of the project that BEIS may use in online or printed publications. Project objectives, key deliverables and expected project benefits should be described. There is a maximum 250 word count for the public project description.

8 Assessment Process and Criteria

8.1 Assessment Process

All applications will be considered initially against the eligibility criteria (described in Section 4.1) and then against the assessment areas outlined below which are based on the Low Carbon Heating Technology Innovation Funds objectives.

Projects will be required to secure an assessment score of at least 60% to be eligible to be awarded funding and funding will be awarded to the highest ranking projects within each technology family that meet this score. BEIS may allocate less than the total budget depending on the quality of the applications.

BEIS may also choose to allocate budget to lower scoring projects (that meet the 60% minimum threshold) in a different technology family to ensure support for a wider range of technologies.

The application form and these Guidance Notes are designed to inform you about the types of information you should provide to BEIS in order for your proposal to be assessed. The application form can be accessed online at <https://beis-low-carbon-heating-frontend.cloudapps.digital/>

For the avoidance of doubt, the individual questions listed under the headings below do not constitute assessment sub-criteria, but are an indication of the kinds of factors that will be taken into account in assessing each aspect of a proposal.

8.2 Assessment Criteria

Gateway Criterion A	Full Project Description
Weighting	Gateway Question
Guidance	<p>Applicants are required to provide a full description of the project, this description along with responses to the specific questions will be used to determine whether the project is technically feasible.</p> <p>Maximum 750 words</p>
Scoring	Yes/No

Criterion B	Cost Metrics
Weighting	25%
Guidance	<p>This criterion will be used to assess how the innovation will reduce the upfront and lifetime costs of delivering low carbon heating in existing UK buildings.</p> <p>Applicants will be asked to provide – with supporting evidence – the current and expected costs (5 years from Grant Award) of providing low carbon heat in the building type(s) for which the innovation is designed, and how the proposed innovation activity impacts on these costs. Applicants should consider the ‘Golden Rule’, that the costs of the technology should not exceed the lifetime savings. Approaches where costs significantly exceed the Golden rule are likely to be deemed impractical.</p> <p>Table 5b must be completed with the following cost metric data:</p> <ul style="list-style-type: none"> • Capital costs • Installation costs • Operating costs – to calculate any reduction in operating costs associated with retrofit, first calculate savings per vector (e.g. gas, oil, electricity) and that convert to bill savings using the Retail Fuel Prices provided by HMG⁶

⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/602657/5_Data_tables_1-19_supporting_the_toolkit_and_the_guidance_2016.xlsx

	<ul style="list-style-type: none"> • Maintenance costs • Life expectancy of heating system <p>A description of how the innovation will reduce the upfront/lifetime costs of low carbon heating technology systems must also be provided.</p> <p>Maximum 500 words</p>
Scoring	Highest marks will be awarded to innovations expected to lead to the greatest reduction in the cost of installing and operating low carbon heating systems of appropriate size in UK buildings.
Criterion C	Performance Metrics
Weighting	25% (15% performance enhancement, 5% performance monitoring, 5% for integration into heating system)
Guidance	<p>Applicants will be asked to consider how the innovation will impact on:</p> <ul style="list-style-type: none"> • Current and anticipated performance parameters e.g. SPF_{H4} • Energy Demand • Peak load factors, particularly peak electrical power demand • Consumer experience <p>All statements must be explained with robust supporting evidence. Where the innovation is for a technology, the applicant must be able to demonstrate how the innovation will enhance performance over comparable products on the market, for instance:</p> <ul style="list-style-type: none"> - <i>For electric heat-pumps:</i> Please confirm the SPF_{H4} your product achieves/will achieve. - <i>For other electrical heating systems:</i> Evidence that there is some novel approach which means that overall electricity consumption and peak power consumption is no greater than an equivalently-sized heat-pump system with an SPF_{H4} of 2.5. - <i>For systems which use gas as a fuel:</i> Evidence of carbon content per kWh useful heat delivered. - <i>For other systems:</i> Evidence of carbon content per kWh useful heat delivered and evidence of what proportion of building heat demand, over the course of a year, can be met by your product. <p>Applicants must be able to describe how the performance of the innovation will be monitored, in-situ, throughout the lifetime of the</p>

	<p>product. <i>This applies not just to the prototype phase but also to the commercial product, to ensure that consumers can monitor the performance of their heating system in situ, on an ongoing basis.</i></p> <p>Applicants must also explain how the innovation integrates into heating systems, with consideration of:</p> <ul style="list-style-type: none"> • The type or types of building the innovation you are proposing might apply to • Integration with/of other low carbon heating technologies • Integrations with/of storage heaters etc. <p>An average energy demand should be calculated in kWh based on the energy demand and usage pattern over an annual period.</p> <p>Applications should consider how this technology limits the effect on the peak electrical load through the year.</p>
Scoring	1. Highest marks will be awarded to projects that can demonstrate the best expected performance.
Criterion D	Market Potential
Weighting	20%
Guidance	<p>This criterion will be used to assess the likely scale and scope of the market for the proposed innovation, assuming successful deployment.</p> <p>The market potential both in the UK and internationally should be considered.</p> <p>Applicants will be asked to explain – with supporting evidence the size and nature of the proposed market and route to market – the likely commercial success of the innovation. Applicants must explain how value is expected to be generated from the innovation, and any further technology development that must be achieved to secure sales.</p>
Scoring	Highest marks will be awarded to innovations with widest market potential, to applicants who best demonstrate a clear understanding of the potential market for their technology, and to proposals where there is a credible, robust plan for commercialisation.

Criterion E	Project Delivery
Weighting	20%
Guidance	<p>This criterion will be used to assess the expected effectiveness and efficiency of delivery of the project and will also consider the project team’s potential capacity and capability to deliver the project. This will be assessed by looking at a range of factors, including:</p> <ul style="list-style-type: none"> • The capacity, experience and capability of the project team; • The project’s access to the necessary skills and facilities; • The completeness and quality of the proposed project delivery plans; • The appropriateness and realism of the project milestones and deliverables; • The quality of risk assessment and risk management, including consideration of health and safety and other regulatory requirements.
Scoring	<p>Highest marks will be awarded to applicants that have taken all reasonable steps to maximise the likelihood of successfully delivering the projects aims (whilst recognising the innate technical risk in any innovation project). High scoring applications will, for example:</p> <ul style="list-style-type: none"> • Present well thought-out, robust, credible, project plans; • Show a realistic and robust approach to risk management; • Have a strong delivery team with proven experience of successfully delivering comparable projects; • Guarantee access to any necessary specialist facilities, operational knowledge and skills, or other resources required to execute the project; • Show the strong commitment of all participating organisations; • Not be heavily dependent for success on external factors beyond the project’s direct control.

Criterion I	Project Financing
Weighting	10%
Guidance	This criterion will be used to assess the:

	<ul style="list-style-type: none"> • Leverage of private sector funding into the project – i.e. the overall proportion of project costs to be funded by private sector funding; • Additionality of the project - i.e. whether work on this innovation would be taken forwards without public sector funding; and • The robustness of the project costs – i.e. whether the proposed eligible project costs are realistic and justified in terms of the proposed project plans and sufficient to deliver the deliverables sought.
Scoring	<p>Highest marks will be awarded to projects that can demonstrate that the proposed public sector contribution to the eligible project costs:</p> <ul style="list-style-type: none"> • Will leverage more than the legal minimum level of private sector funding (as determined by the State Aid funding intensity limits); • Will represent a good use of public funding by supporting projects which will not otherwise be funded; • Will represent good use of public funding by supporting projects whose costs are realistic and justified and are likely to secure the expected project aims and deliverables.

Criterion K	Wider Objectives
Weighting	Tie-breaker
Guidance	<p>Applicants should explain how the innovation will contribute to the wider objectives of this Low Carbon Heating Technology Innovation Fund. Applicants may wish to consider the following:</p> <ul style="list-style-type: none"> • Fuel poverty • Consumer acceptance • Supply chain strengthening • Peaking (particularly impacts of peak electric power demand) • Demand management • Off-gas grid decarbonisation • Avoidance of unintended consequences <p>An explanation and supporting evidence for any benefits claimed must be given.</p>

2.	Scoring	Criterion 6 will be used to differentiate between applications of otherwise equal quality.
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8.3 Scoring Guidance

We will select projects that offer the best value for money based on their assessment against the assessment criteria outlined in Section 8.2. The projects will be scored against these six assessment criteria using the following scoring guidance set out in

Table 2. For each criterion projects will be awarded one of the following scores ‘0’, ‘1’, ‘2’, ‘3’, ‘4’, ‘5’, ‘6’, ‘7’, ‘8’, ‘9’ or ‘10’, please see the table below for Scoring Guidance. Where the project falls between two adjacent categories they will be assigned an odd number.

The total score will be calculated by multiplying the score achieved for each criterion by the percentage weight of each. E.g. for a project which scored 7, 6, 4, 7 & 8 for criteria 1 – 5 above, the total score would be calculated as follows:

$$10 * [(7 * 25\%) + (6 * 25\%) + (4 * 20\%) + (7 * 20\%) + (8 * 10\%)] = 62.5\%$$

A total score of at least 60% is required for a project to be eligible to receive funding, but does not guarantee that it will receive funding.

Table 2: Scoring Guidance

Score	Description
0	Not Satisfactory: Proposal contains significant shortcomings and does not meet the required standard
2	Weak: Proposal partially meets the required standard, with one or more significant weaknesses or gaps.
4	Partially Satisfactory: Proposal partially meets the required standard, with one or more moderate weaknesses or gaps
6	Satisfactory: Proposal mostly meets the required standard, with one or more minor weaknesses or gaps.
8	Good: Proposal meets the required standard, with moderate levels of assurance

10	Excellent: Proposal fully meets the required standard with high levels of assurance
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9 Notification

Applicants will be informed by email whether their application has been successful, subject to compliance with the terms and conditions of the Conditional Grant Offer.

BEIS may wish to publicise the results of the scheme which may involve engagement with the media. At the end of the application and assessment process, BEIS may issue a press release or publish a notice on its website. These public documents may, for example, outline the overall results and describe some of the projects to be funded.

Some organisations may want their activities to remain confidential and you will be given a chance to opt out of any involvement in media relations activity and further case study coverage of projects, should you see this as being absolutely necessary. However, the public description of the project you provide in your application will be made available in the public domain if your application is successful, and you are not able to opt out of the project description being published. In addition, all funded projects must include reporting and dissemination milestones – agreed with BEIS - as part of their project deliverables.

Any organisation that wishes to publicise its project, at any stage, must contact the Low Carbon Heating Technology Innovation Fund Project Manager or their Project Monitoring Officer at BEIS before doing so.

10 Project Monitoring and Evaluation

There will be a number of reporting requirements on project teams during the course of the project, including after the final payment milestone:

- Reporting: to track project progress and ensure payments are made according to a schedule of milestones to be agreed with selected projects. This reporting will be in confidence to BEIS and its technical advisers and will not be published. Any changes to schedules or project plans will need to be discussed with BEIS and applicants should expect interaction with the team during the project;
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- Evaluation of the scheme: Successful applicants will be expected to collect monitoring data during and after final payments, in order for BEIS and/or partner third parties to assess the Innovation Fund against key performance indicators. Requirements will be set out in grant offer letters.

11 Feedback and reapplication

A short summary of key feedback regarding the applications will be provided to all applicants, this feedback will be based on the comments of the project assessors (both BEIS officials and external technical assessors, if used). No additional feedback will be provided and there will be no further discussion on the application.

The feedback from the assessors is intended to be constructive. Comments are not a check list of points which must be answered or argued in a resubmitted application. It is your decision as to whether you act on the suggestions made.

12 Confidentiality and Freedom of Information

Where any request is made to BEIS under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004 for the release of information relating to any project or applicant, which would otherwise be reasonably regarded as confidential information, then BEIS will notify you of the request as soon as we become aware of it. An applicant must acknowledge that any lists or schedules provided by it outlining information it deems confidential or commercially sensitive are of indicative value only and that BEIS may nevertheless be obliged to disclose information which the applicant considers confidential.

As part of the application process all applicants are asked to submit a public description of the project. This should be a public facing form of words that adequately describes the project but that does not disclose any information that may impact on Intellectual Property (IP), is confidential or commercially sensitive. The titles of successful projects, names of organisations, amounts awarded and the description of the project may be published once the award is confirmed as final.

All assessors used during the assessment of applications will be subject to a confidentiality agreement.

Appendix 1: Technology Readiness Levels (TRLs)

Technology readiness levels are an indication of the maturity stage of development of particular technology on its way to being developed for a particular application or product. The table below provides a definition of Technology Readiness Levels 1 to 9.

TRL 1 – Basic Research	3. Scientific research begins to be translated into applied research and development.
TRL 2 – Applied Research	4. Basic physical principles are observed, practical applications of those characteristics can be 'invented' or identified. At this level, the application is still speculative: there is not experimental proof or detailed analysis to support the conjecture
Applied research and development	
TRL 3 – Critical Function or Proof of Concept Established	5. Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
TRL 4 – Laboratory Testing/Validation of Component(s)/Process(es)	6. Basic technological components are integrated - Basic technological components are integrated to establish that the pieces will work together.
TRL 5 – Laboratory Testing of Integrated/Semi-Integrated System	7. The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in a simulated environment.
Demonstration	
TRL 6 – Prototype System Verified	TRL 6 – Prototype System Verified
Representative model or prototype system, is tested in a relevant environment.	Representative model or prototype system, is tested in a relevant environment.
Pre-commercial deployment	
TRL 8 – System Incorporated in	8. Technology is proven to work - Actual

Appendix 1: Technology Readiness Levels (TRLs)

Commercial Design	technology completed and qualified through test and demonstration.
TRL 9 – System Proven and Ready for Full Commercial Deployment	9. Actual application of technology is in its final form - Technology proven through successful operations.

Appendix 2: Eligible Costs

Timing: In addition to the requirements of the EU General Block Exemption Regulation, BEIS will only provide the grant to cover eligible costs incurred and defrayed in the period between acceptance of the BEIS grant and the deadline specified in the grant offer letter for completion of the project.

Who can incur eligible costs: The definition of eligible costs includes the applicant's own costs, eligible costs incurred by consortium members and eligible costs incurred by companies sub-contracted to the applicant or consortium members.

Use of contractors: BEIS would not normally expect to see contractors in key posts, e.g. CEO, FD, etc within the applicant company or consortium members. Exceptionally, where BEIS is willing to fund a project which includes contractors in key posts, the day rate attributable to the project must be agreed with BEIS at the outset and cannot be varied without written agreement.

Non-sterling costs: Costs must be denominated in GB pounds. If relevant, applicants should indicate where conversion has been made to GB pounds from other currencies and indicate the conversion rate and assumptions used.

13 List of Eligible Costs

Eligible costs are as defined in Article 25(3) of the EU Block Exemption Regulation⁷.

⁷ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=EN>

14 List of Non-Eligible Costs

Under no circumstances can the grant be claimed or used:

- a. For activities of a political or exclusively religious nature;
- b. In respect of costs reimbursed or to be reimbursed by funding from other public authorities or from the private sector;
- c. In connection with the receipt of contributions in kind (a contribution in goods or services as opposed to money);
- d. To cover interest payments (including service charge payments for finance leases);
- e. For the giving of gifts to individuals, other than promotional items with a value no more than £10 a year to any one individual;
- f. For entertaining (entertaining for this purpose means anything that would be a taxable benefit to the person being entertained, according to current UK tax regulations);
- g. To pay statutory fines, criminal fines or penalties; or
- h. In respect of VAT that you are able to claim from HM Revenue and Customs.
- i. Contractors in key roles - BEIS would not normally expect to see contractors in key posts, e.g. CEO, FD, etc. Exceptionally, where BEIS is willing to fund a project which includes contractors in key posts, the day rate attributable to the project must be agreed with BEIS at the outset and cannot be varied without written agreement.

Appendix 3: Reasons for Exclusion

If you cannot answer 'no' to every question in the table below it is very unlikely that your application will be accepted, and you should contact us for advice before completing the Application form.

Has your organisation or any directors or partner or any other person who has powers of representation, decision or control been convicted of any of the following offences?	Answer
(a) conspiracy within the meaning of section 1 or 1A of the Criminal Law Act 1977 or article 9 or 9A of the Criminal Attempts and Conspiracy (Northern Ireland) Order 1983 where that conspiracy relates to participation in a criminal organisation as defined in Article 2 of Council Framework Decision 2008/841/JHA;	
(b) corruption within the meaning of section 1(2) of the Public Bodies Corrupt Practices Act 1889 or section 1 of the Prevention of Corruption Act 1906; where the offence relates to active corruption;	
(c) the offence of bribery, where the offence relates to active corruption;	
(d) bribery within the meaning of section 1 or 6 of the Bribery Act 2010;	
(e) fraud, where the offence relates to fraud affecting the European Communities' financial interests as defined by Article 1 of the Convention on the protection of the financial interests of the European Communities, within the meaning of:	
(i) the offence of cheating the Revenue;	
(ii) the offence of conspiracy to defraud;	
(iii) fraud or theft within the meaning of the Theft Act 1968, the Theft Act (Northern Ireland) 1969, the Theft Act 1978 or the Theft (Northern Ireland) Order 1978;	
(iv) fraudulent trading within the meaning of section 458 of the Companies Act 1985, article 451 of the Companies (Northern Ireland) Order 1986 or section 993 of the Companies Act 2006;	
(v) fraudulent evasion within the meaning of section 170 of the Customs and Excise Management Act 1979 or section 72 of the Value Added Tax Act 1994;	

(vi) an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993;	
(viii) fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006; or	
(ix) making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of the Fraud Act 2006;	
(f) money laundering within the meaning of section 340(11) of the Proceeds of Crime Act 2002;	
(g) an offence in connection with the proceeds of criminal conduct within the meaning of section 93A, 93B or 93C of the Criminal Justice Act 1988 or article 45, 46 or 47 of the Proceeds of Crime (Northern Ireland) Order 1996; or	
(h) an offence in connection with the proceeds of drug trafficking within the meaning of section 49, 50 or 51 of the Drug Trafficking Act 1994; or	
(i) any other offence within the meaning of Article 45(1) of Directive 2004/18/EC as defined by the national law of any relevant State.	

