



Department for
Business, Energy
& Industrial Strategy

INDUSTRIAL HEAT RECOVERY SUPPORT (IHRS) PROGRAMME

Programme Guidance Document

June 2020



OGL

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1. Programme Background

This document provides Programme guidance to potential IHRS Programme applicants.

Industrial heat recovery is a process by which heat generated in or for an industrial process, that otherwise would be wasted, is recovered and utilised. This waste heat can be used within the same industrial facility for heat or cooling, by another end-user (e.g. an existing heat network), or by converting the waste heat to power.

Industrial heat recovery has the potential to realise significant energy bill and carbon savings for industry through a reduction in primary fuel use. It therefore contributes to the Government's aims of achieving a low cost, clean and secure energy system, and can also provide competitiveness and productivity gains, giving it strong links with the Industrial Strategy.

A study by Element Energy found that 11 TWh/year of industrial heat used in 2014 could have been technically recovered from industrial processes in eight key energy intensive sectors, but that only 5 TWh/year of this would have been commercially viable. This demonstrates that the deployment of industrial heat recovery is falling well short of its potential at present. This is due to a number of technical barriers including insufficient knowledge and information, complexity of fitting heat recovery technologies to certain industrial processes and commercial barriers regarding the payback of investments and availability of capital.

BEIS has developed the Industrial Heat Recovery Support (IHRS) Programme to further understand the identified challenges and barriers to adoption, and to increase industrial confidence in deploying heat recovery technologies by working with industry to address these barriers.

There is up to £18m of grant funding available to support the uptake of industrial heat recovery projects which will be allocated through a competitive process. Eligible proposals that are well aligned with the aims and objectives of the Programme will be able to apply for grants to partially fund the proposed project from Concept through to Delivery. This includes grant funding for feasibility studies, preliminary engineering, detailed design and capital delivery or all of the above.

1.1 Programme Scope

The Programme will support the recovery of heat which meets the following criteria:

- The heat should be generated in or for an existing industrial process but is currently emitted to the environment once utilised.
- The heat should be carried in specific flows, including (but not limited to): hot flue gases, exhaust air, cooling fluids from cooling systems, hot product or waste product, hot water drained to a sewer, super heat or condenser heat rejected from refrigeration.
- The heat should be recovered from these specific flows via an appropriate heat recovery technology and used in one of the following ways:

- Immediate use on-site, to satisfy existing or potential commercially viable heating or cooling demand.
 - Use off-site, to satisfy existing or potential commercially viable heating or cooling demand, potentially through an existing heat network.
 - Conversion to electrical or mechanical power, for use on-site or at another industrial site to satisfy existing or potential commercially viable power demand, or for export to the national grid or private wire system.
- The recovered heat should be capable of being metered or otherwise estimated, to enable monitoring and evaluation of the project.
 - Funding cannot be used to support capital delivery of new build plant. Heat recovery must be retrofit solutions on existing plant. Similarly, new CHP installations are not eligible, however retrofit upgrade of power generators set into CHP systems are eligible.
 - Funding will only be available for the elements of the project capturing and using the heat on site, and for any pipework up to the edge of the industrial site boundary.
 - The proposed user of the recovered heat or energy must be existing and in place.

Rather than focus on one specific type of heat recovery technology, the Programme will be technology neutral.

The recovery of waste gases, which are subsequently combusted, and the heat of combustion utilised is not within the scope of this Programme, because its focus is on waste heat only.

1.2 Eligibility Criteria

In addition to the criteria described in section 1.1, minimum requirements for prospective projects to be eligible for IHRS are described below. Any applications that do not conform to all these criteria will be rejected.

- **Location** - The proposed project site must be located in England or Wales.
- **Compliance with State aid rules** - We recognise that the scope of the IHRS could potentially overlap with other existing incentive mechanisms leading to a breach of State aid rules. Failure to comply with State aid law can lead to the recovery of any funds granted under the Programme. As part of the application process applicants are required to confirm whether the project is receiving state funding from other sources and confirm whether or not the funding sought in the application complies with State aid rules.
- **Confirmation of Acceptance of BEIS Grant Offer Letter terms** - The applicant must review and confirm acceptance of terms and conditions of the Grant Offer Letter and Grant Funding Agreement before the application submission can be considered.
- **Project technology is commercially available** – The heat recovery technology chosen is at Technology Readiness Level (TRL) 9 or is commercially available.
- **Sectors** - The Programme is open to companies in all industrial manufacturing sectors as set out in the Office of National Statistics (ONS) Standard Industrial Classification

(SIC) codes 10 – 33¹. The Programme is also open to Data Centres² (SIC Code 63110¹) given their emerging significance and high impact potential. The programme is also open to third party companies, to apply as the main applicant, on behalf of sites operated by companies within the eligible SIC codes.

¹ Where parent company of industrial manufacturing sectors or data centres have a different SIC code please contact ihrsprogramme@icf.com to confirm eligibility.

² Facility HVAC and ancillary systems only. Does not apply to internal processor cooling.

2. Programme Overview

The IHRS Programme is a competition-based grant funding programme designed to support development of heat recovery opportunities, hereafter referred to as Projects, from Concept to Definition through to Implementation and Operation start-up.

To achieve this, the Programme has been split into two distinct phases: Phase 1 and Phase 2.

Phase 1 supports Concept and Definition activities by providing grant funding for:

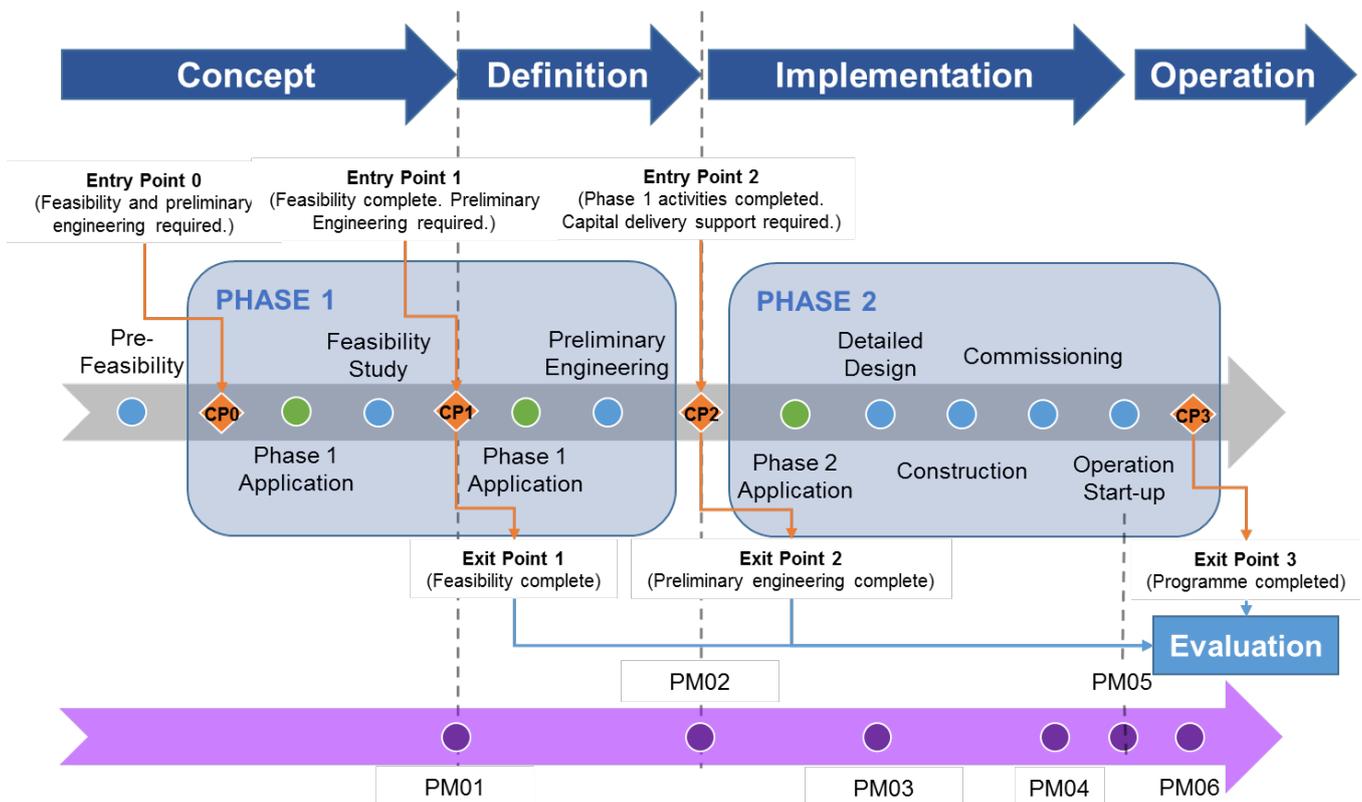
- Feasibility study and preliminary engineering; or
- Preliminary engineering only (for applicants who have already undertaken a feasibility study independent of the IHRS).

Phase 2 supports implementation activities including detailed design, construction, commissioning, and operation start-up through grant funding.

To register for IHRS, **all applicants must submit a completed Application Registration form** to the Delivery Partner at the following email address: ihrsprogramme@icf.com

Further information on Programme phases can be found in Section 4. The alignment between the Programme phases and typical Project stages (Concept, Definition and Implementation and Operation start-up) are shown in Figure 1 below:

Figure 1 IHRS project phases and alignment with overarching project phases. Please see Appendix B for enlarged version.



One of the key objectives of the IHRS Programme is to widen industry understanding and confidence in the benefits, opportunities and challenges of deploying heat recovery technology. To achieve this and ultimately encourage the spread of deployment across sectors; applicants will be required to develop measurement and verification (M&V) plans that not only demonstrate outcomes, but also contribute to the development of case studies that can be shared with wider industry and support the overarching Programme evaluation process. Consideration will be given to the commercial sensitivity of certain data when developing the requirement for the case studies.

2.1 Checkpoints (CP)

To provide flexibility and support to applicants throughout the Programme, an underlying Checkpoint process has been developed. Checkpoints perform the following functions:

- Ensures that proposed projects align to IHRS scope and contain sufficient information prior to formal application assessments.
- Provides Entry and Exit points throughout the Programme at relevant stages.
- A mechanism for submission of evidence for grant payments.

Depending on the Programme entry point and the type of funding required, applicants are required to submit up to four checkpoints throughout the Programme at entry and exit points for review by the Delivery Partner.

The Checkpoint process is outlined in section 3.3.2.

2.2 Schedule of Assessment Windows and Deadlines

IHRS grant applications will be assessed over scheduled assessment windows. The schedule of the assessment windows is detailed in Figure 2.

Figure 2 Assessment Window schedule outline

Assessment Window	Submission Deadline	2019											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Phase 1 Assessment Window 1	28-Dec-18	Ph1 AW1											
Phase 2 Assessment Window 1	31-Jan-19		Ph2 AW1										
Phase 1 Assessment Window 2	31-Jan-19		Ph1 AW2										
Phase 2 Assessment Window 2	29-Mar-19				Ph2 AW2								
Phase 1 Assessment Window 3	29-Mar-19				Ph1 AW3								
Phase 2 Assessment Window 3	31-May-19					Ph2 AW3							
Phase 1 Assessment Window 4	31-May-19					Ph1 AW4							
Phase 2 Assessment Window 4	31-Jul-19							Ph2 AW4					
Phase 1 Assessment Window 5	31-Jul-19							Ph1 AW5					
Phase 2 Assessment Window 5	30-Sep-19									Ph2 AW5			
Phase 1 Assessment Window 6	30-Sep-19									Ph1 AW6			
		2020											
Phase 2 Assessment Window 6	31-Jan-20		Ph2 AW6										
Phase 1 Assessment Window 7	31-Jan-20		Ph1 AW7										
Phase 2 Assessment Window 7	31-Jul-20							Ph2 AW7					
Phase 1 Assessment Window 8	31-Jul-20							Ph1 AW8					

Note that given the timing of the assessment windows and the requirement that the IHRS Programme ends in March 2022 only Phase 1 projects which are completed ahead of July 2020 will be able to apply to Phase 2 funding.

Please see section 3.4 for further guidance on Assessment Windows.

2.3 Programme funding summary

The IHRS Programme has up to £18m of funding available as grants to support uptake of industrial heat recovery projects including grant funding for feasibility studies, preliminary engineering, detailed design and capital delivery.

The Programme funding will be allocated across assessment windows. We anticipate that any unallocated funding in a specific assessment window could be rolled over to subsequent assessment windows. As such, the available funding in each assessment window will be updated as the assessment windows progress. This will be made available and updated on the [IHRS webpage](#).

All funding is subject to State aid rules.

The combined maximum grant allocation for each Project's feasibility study, preliminary engineering and detailed design, shall not exceed £290,000. The maximum grant allocation for each Project's capital delivery shall not exceed £1,500,000. Further detail on grant funding allocations, including State aid requirements can be found in section 5.2.

IMPORTANT NOTE: All implementation activities **MUST** be completed by the scheduled Programme end in March 2022 as Milestone Payments **CANNOT** be guaranteed after this point. This excludes completion of Monitoring and Evaluation activities which may take place beyond that point.

3. Programme Process

The Programme will operate as a competitive process to ensure that funded projects:

- Meet the Programme aims and objectives,
- Can demonstrate value for money for BEIS,
- Provide a portfolio of heat recovery project case studies for a range of project sizes and across industrial sectors.

All applications will be subject to competitive assessment in accordance with the criteria in section 3.5.

The application process follows a series of Checkpoints that provide review steps in the entry into the Programme, which is done through Phase applications. The Checkpoints also facilitate exit from the Programme. The following sections explore the Checkpoint, entry and exit points.

3.1 Checkpoint process

The Checkpoint process provides a framework to update project information, facilitate efficient progression through Programme stages, ensure the project is in scope and is suitably developed for the next stage of the Programme. The checkpoints are intentionally aligned to typical internal governance and stakeholder engagement requirements.

The Checkpoint process improves the efficiency of the application process, ensuring that applicants only undertake the application process where the proposed project meets the eligibility criteria of the Programme. This will reduce the risk of applicants spending time to complete applications for proposed projects that are not aligned to the Programme.

Information submitted in the Checkpoint forms prior to Phase 1 & 2 application stage serve as project summary for these applications.

The Checkpoint process is also the means by which the Delivery Partner ensures all activities have been duly completed and authorises relevant milestones payments

See relevant sub sections in Section 4 and individual Checkpoint guidance in Appendices E-H for further information on the Checkpoint process.

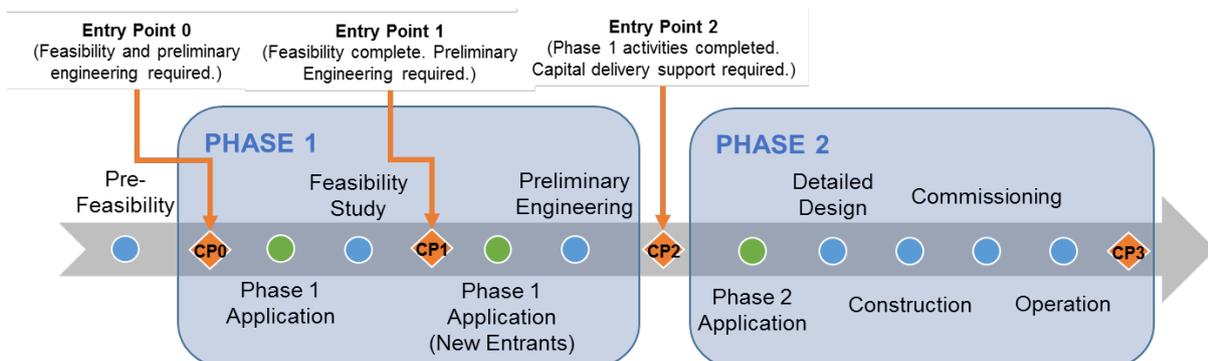
3.2 Entering and exiting the Programme

3.2.1 Entry Points to the Programme

There are three entry points depending on the maturity of the proposed project, with two for Phase 1 and one for Phase 2. Applicants can enter the Programme at any of these points regardless of prior IHRS participation, as long as the Checkpoint entry requirements are met.

- Entry Point 0: After conducting pre-feasibility study (Checkpoint 0)
- Entry Point 1: After conducting an independently funded feasibility study (Checkpoint 1)
- Entry Point 2: After conducting a feasibility study and preliminary engineering, which may be conducted with IHRS or independent funds (Checkpoint 2)

Figure 3 IHRS Programme Phases and Application Process Entry Points



3.2.2 Exit Points from the Programme

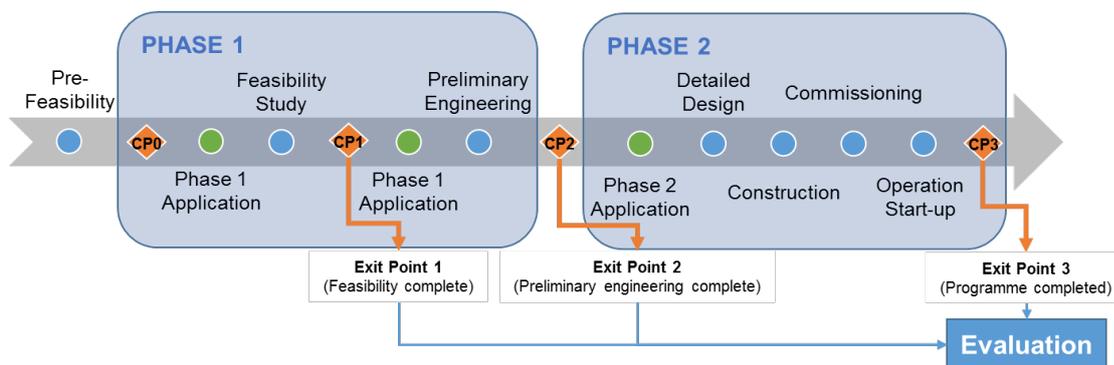
Exit points have been incorporated into the Checkpoint process where BEIS or IHRS participants decide to withdraw the project from proceeding with the Programme. It is recognised that applications may wish to be withdrawn for various reasons and neither BEIS nor applicants are obliged to continue with a project should it be no longer in the best interests of the applicant or the Programme to do so.

Irrespective of the rationale for exiting the Programme, all applicants withdrawing from the Programme are required to provide feedback to BEIS via the relevant Checkpoint form stating the reasons for exit. The completed relevant Checkpoint form and completion of the evaluation process are required in order to receive any milestone payments associated with that Checkpoint.

Exit points from the Programme for Phase 1 and Phase 2 are as follows:

- Exit Point 1: Post feasibility study (Checkpoint 1) and evaluation.
- Exit Point 2: Post preliminary engineering (Checkpoint 2) and evaluation.
- Exit Point 3: Post project operation start-up (Checkpoint 3) and evaluation.

Figure 4 IHRS Programme Exit Points



3.3 Application Process

3.3.1 Application Registration

To register for IHRS, **all applicants must submit a completed Application Registration form** to the Delivery Partner at the following email address: ihrsprogramme@icf.com

This step is required regardless of the stage at which applicants wish to apply.

The Application Registration form is available at the following link:

<https://www.gov.uk/government/publications/industrial-heat-recovery-support-programme-guidance-and-application-forms>

3.3.2 Checkpoint

Within two working days of submitting the Application Registration form, applicants will receive a confirmation note from the Delivery Partner which will provide further guidance on the subsequent application steps along with the Checkpoint form to be completed.

How will my Checkpoint form be assessed?

Checkpoint form submissions are not competitively assessed. They are subject to a review and feedback by the Delivery Partner before an applicant may proceed to application stage to ensure eligibility criteria are met.

Following review of their submitted Checkpoint form, applicants will be given a confirmation note with the following feedback:

- **Proceed** – Applicants may proceed onto the Application Workbook. Applicants may also receive comments based on the Checkpoint form submission that should be addressed in the Application Workbook.
- **Cannot proceed** – Applicants cannot proceed with full application as they either do not meet the minimum eligibility requirement (see section 1) or they failed to fully complete the required fields in the Checkpoint forms.

3.3.3 Application

Applicants entitled to proceed at the Checkpoint stage will receive a confirmation note with instructions to submit a full application. The full application is made when the applicant completes and submits an Application Workbook. The Application Workbook will be provided to the applicant along with the confirmation note.

What data should I be collecting for my application?

Primarily, applicants should be collecting data concerning energy flows around the process targeted for the project e.g. heat and cooling flows, heat wasted, process flows, temperatures, production throughput, electricity consumption, fuel consumption, fuel type, and anything additional that may be relevant to the proposed project.

Applications can be submitted for competitive assessment at any point throughout the Programme duration up to the final Assessment Window's submission deadline.

Applicants should be notified of the outcome of their application by the end of the 2-month assessment window in which their application was considered.

See relevant sub sections in Section 4 and individual guidance in Appendices D – J for further information on the Checkpoint and application processes.

Copies of the Application Registration form, Checkpoint forms and Application Workbooks are available at: <https://www.gov.uk/government/publications/industrial-heat-recovery-support-programme-guidance-and-application-forms>

Please note applicants are not required to repeat any activities that may have been completed previously outside of the Programme, as long as those activities are still meaningful and fulfil Programme requirements. For example:

- If an outdated or inconclusive feasibility has already been undertaken you can apply at Entry Point 0 for funding for a new feasibility study.
- If a feasibility study has been completed the applicant may proceed directly to Entry Point 1, application for IHRS funding for preliminary engineering only.
- If preliminary engineering has been completed the applicant may proceed directly to Entry Point 2, application for IHRS funding for capital delivery.
- If detailed design has already been completed the applicant may simply reduce the cost and scope of capital delivery activities but must make the Delivery Partner aware of this in Checkpoint 2 and provide evidence in the Phase 2 Application Workbook.

3.4 Assessment Windows

During each assessment window, applications received before the first day of that window will be competitively assessed. The assessment results will be presented to BEIS' Assessment Panel for final award decision. Each Assessment Window will run for a period of two months.

An outline of the scheduled assessment windows is summarised in Figure 2 (section 2.2) with the corresponding Application Workbook submission deadlines. Further notes on the assessment windows are as follows:

- The programme was originally set up with six Phase 1 assessment windows (Ph1 AW1 – Ph1 AW6) and five Phase 2 assessment windows (Ph2 AW1 – Ph2 AW5).
- Alongside the extension of the programme to March 2022, two additional assessment windows have been added to the previous schedule of assessment windows, for both Phase 1 and Phase 2. These additional assessment windows are dependent upon uptake and on-going availability of grant funding.
- Application Workbooks can be submitted at any point, following feedback from the Delivery Partner after relevant Checkpoint submission, throughout the Programme period up to the respective Phase 1 and Phase 2 final assessment window submission deadline.
- Applications will be competitively assessed within the next allocated assessment window based on the application workbook submission date, as detailed in in Figure 2 (section 2.2).

3.5 Assessment Criteria and Scoring Guidance

This section outlines the criteria against which applications will be competitively assessed and the scoring guidance.

The BEIS Assessment Panel will award funding in each assessment window to the applicants who score highest against the assessment criteria set out below. This is subject to the exceptions described in section 3.5.3 and 3.5.4.

The criteria for competitive assessment of Phase 1 and Phase 2 are detailed in Table 1 and Table 2 respectively:

Table 1 Competitive assessment criteria for Phase 1 applications

	Criterion	Weighting	Description	Scoring guide
1	Technical concept	25%	<p>This criterion will be used to assess the technical concept of the potential heat recovery opportunity, including (but not limited to):</p> <ul style="list-style-type: none"> • Technical characteristics of the waste heat resource and the factors affecting its availability; • Technical characteristics of the recovered waste heat energy user(s); • The technical option(s) being considered for recovering and utilising the waste heat. 	<p>Higher marks will be awarded to applicants that demonstrate the potential heat recovery opportunity is technically feasible. High scoring applications will, for example:</p> <ul style="list-style-type: none"> • Quantify waste heat availability through historical data; • Quantify waste heat utilisation potential through robust estimation methods; • Scoped out the most appropriate technical options.
2	Delivery plan	25%	<p>This criterion will be used to assess the delivery plan for carrying out Phase 1 activities, including the approach, resources available and risk management. The delivery plan shall include (but is not limited to):</p> <ul style="list-style-type: none"> • Defining the objective and purpose of the proposed activities; • Approach and method of the proposed activities; • Activity schedule; • Availability of relevant skills, experience and knowledge to carry out the proposed activities; • Availability of additional specialised resources (e.g. services, tools, etc.) for carrying out the proposed activities; 	<p>Higher marks will be awarded to applicants who have taken all reasonable steps to maximise the likelihood of successfully delivering the aims and objectives of Phase 1 activities (whilst identifying and managing the innate technical risk). High scoring applications will, for example:</p> <ul style="list-style-type: none"> • Present well thought-out, robust, credible, realistic plans for the proposed activities; • Show a robust approach to risk management; • Have a strong delivery team with proven experience or qualifications of delivering the proposed scope of activities;

			<ul style="list-style-type: none"> • Assessment and mitigation of potential risk in carrying out the proposed activities. <p>The proposed activities should be presented in a SMART approach:</p> <ul style="list-style-type: none"> • Specific • Measurable • Achievable • Relevant • Time-bound 	<ul style="list-style-type: none"> • Guarantee access to any necessary specialist facilities, operational knowledge and skills, or other resources required to execute the project; • Not be heavily dependent for success on external factors beyond the project team's direct control; • Strongly demonstrate the necessity of public funding.
3	Cost, Finance and Additionality	25%	<p>This criterion will be used to assess the reasonableness of cost for carrying out the proposed Phase 1 activities. Applicants shall ensure the costs represent a fair market value and do not include profit to the applicant. Applicants shall present the cost of carrying out the proposed activities in Phase 1 in a detailed itemised manner for each planned activity.</p> <p>Applicants will also be required to present the cost estimates and financial plan for the proposed heat recovery opportunity, including (but not limited to):</p> <ul style="list-style-type: none"> • Itemised capital expenditure breakdown; • Anticipated payment schedule; • Assumptions for cost estimates; • Potential funding arrangement. <p>Applicants will also be required to demonstrate that the project is not financially feasible in the absence of public funding. This demonstration should include:</p> <ul style="list-style-type: none"> • Internal hurdle rates (with supporting evidence); 	<p>Higher marks will be awarded to applicants with the most robust, realistic and credible costing to ensure the success of the planned activities and proposed heat recovery opportunity.</p> <p>The applicants will also be judged on their need for public funding and the amount of public funding needed.</p>

			<ul style="list-style-type: none"> Supporting narrative of the IHRS business case, with a focus on any differences between the IHRS investment vs. other investments; Minimum funding required for project to proceed. 	
4	Wider benefits	25%	<p>This criterion will be used to assess the potential indirect benefits of the potential heat recovery opportunity, and the likelihood of achieving the expected results which includes (but not limited to):</p> <ul style="list-style-type: none"> Other potential benefits (environmental, social or economic benefits); Identification of risk and factors which may affect the potential benefits of the heat recovery opportunity; Replication potential across other sites with similar processes, within similar sector or other sectors; All technical and financial assumptions applied. <p>Arguments should be supported by numerical evidence where possible.</p>	<p>Higher marks will be awarded to applicants who have taken all reasonable steps to demonstrate the likelihood of achieving the expected potential benefits. High scoring applications will, for example:</p> <ul style="list-style-type: none"> Provide strong evidence for substantiating the potential benefits and assumptions applied; Present strong understanding of the potential risk and factors affecting the resulting benefits; Provide robust assessment of potential replication across similar or other sectors; Apply thorough and robust assumptions.

Table 2 Competitive assessment criteria for Phase 2 applications

	Criterion	Weight	Description	Scoring guide
1	Technical design	15%	<p>This criterion will be used to assess the detailed design of the potential heat recovery opportunity, including (but not limited to):</p> <ul style="list-style-type: none"> • Waste heat resource(s); • Heat or Energy user(s); • Preliminary engineering design and technical specifications; • Plant layout design; • Schematic diagram for all key process and instrumentation; • Full scope of supply of the proposed plant (including all peripheral equipment) and its technical specifications; • Plant thermal balance. 	<p>Higher marks will be awarded to applicants who have taken all reasonable steps to present the most robust and credible heat recovery potential, with a strong commercial and financial potential for further exploitation.</p> <p>Applicants should provide all key findings and conclusions based on the feasibility study and preliminary engineering results.</p>
2	Delivery plan	25%	<p>This criterion will be used to assess the detailed technical, commercial and financial delivery plan for implementing Phase 2, which includes (but not limited to):</p> <ul style="list-style-type: none"> • Delivery schedule of the proposed activities (including all equipment and services delivered by the relevant supply chain); • Availability of relevant skills, experience and knowledge to carry out the proposed activities; • Availability of additional specialised resources (e.g. services, tools, etc.) for carrying out the proposed activities; • Assessment and mitigation of potential risk in carrying out the proposed activities. <p>The proposed activities should be presented in a SMART approach:</p> <ul style="list-style-type: none"> • Specific • Measurable 	<p>Higher marks will be awarded to applicants who have taken all reasonable steps to maximise the likelihood of successfully implementing Phase 2 to the expected results (whilst identifying and managing the innate technical risk). High scoring applications will, for example:</p> <ul style="list-style-type: none"> • Present well thought-out, robust, credible, realistic plans for the proposed activities; • Show a robust approach to risk management; • Have a strong delivery team with proven experience or qualifications of delivering the proposed scope of activities; • Guarantee access to any necessary specialist facilities, operational knowledge and skills, or

	Criterion	Weight	Description	Scoring guide
			<ul style="list-style-type: none"> • Achievable • Relevant • Time-bound 	<p>other resources required to execute the project;</p> <ul style="list-style-type: none"> • Not be heavily dependent for success on external factors beyond the project's direct control.
3	Cost, Finance and Additionality	25%	<p>This criterion will be used to assess the reasonableness of cost and financial plans for implementing Phase 2. Applicants shall ensure the costs represent a fair market value and do not include profit to the applicant. Applicants shall:</p> <ul style="list-style-type: none"> • Present the cost of implementing Phase 2 in a detailed itemised manner for each planned capital item/activity; • Present details of the funding arrangement and supporting evidence that funding is available to proceed IHRS investment. <p>Applicants will also be required to demonstrate that the project is not financially feasible in the absence of public funding. This demonstration should include:</p> <ul style="list-style-type: none"> • Internal hurdle rates (with supporting evidence) • Supporting narrative of the IHRS business case, with a focus on any differences between the IHRS investment vs. other investments; • Minimum funding required for project to proceed. 	<p>Higher marks will be awarded to applicants with the most robust, realistic and credible costing to ensure successful implementation of Phase 2 and achieving the expected results.</p> <p>Higher marks will also be dependent on the applicant's ability to strongly demonstrate the necessity of public funding.</p>
4	Wider benefits	15%	<p>This criterion will be used to assess the potential benefits of the potential heat recovery opportunity, and the likeliness of achieving the expected results which includes (but not limited to):</p>	<p>Higher marks will be awarded to applicants who demonstrate robust effort and analysis to achieve the expected benefits of the potential heat recovery opportunity underpinned by strong evidence base. High</p>

Criterion	Weight	Description	Scoring guide
		<ul style="list-style-type: none"> • Other potential benefits (environmental, social or economic benefits); • Identification of risk and factors which may affect the potential benefits of the heat recovery opportunity; • Replication potential across other sites with similar processes, within similar sector or other sectors; • All technical and financial assumptions applied. <p>Arguments should be supported by numerical evidence where possible.</p>	<p>scoring applications will, for example:</p> <ul style="list-style-type: none"> • Provide strong evidence for substantiating the potential benefits and assumptions applied; • Present details of robust methodologies applied to estimate the potential benefits; • Present robust steps in identifying and mitigating potential risk and factors affecting the resulting benefits. <p>Taken reasonable steps to assess the potential replication across similar or other sectors.</p>
Value for Money	20%	<p>This criterion will be used to assess if the potential opportunity presents Value for Money of the grant funding specific to the direct benefits of recovering heat, i.e.:</p> <ul style="list-style-type: none"> • £ of grant funding per kWh of waste heat utilised; • Energy saving potential; • Carbon savings potential. 	<p>Higher marks will be awarded to applicants who demonstrate best Value for Money of public funds.</p>

Whilst diversity is an aim of the Programme, diversity criteria will not be applied when the Programme opens for applications. It is expected that diversity of sector and technology will occur without the application of diversity criteria. However, this will be kept under review, and should a lack of diversity become apparent, consideration will be given to introducing diversity criteria. Should diversity criteria be introduced, this will be done with advance notice, and from the commencement of a new assessment window. Further detail regarding assessment criteria and data to be collated can be found in the relevant Phase Application Guidance in appendices I and J.

3.5.1 Scoring guidance

Scores for each assessment criteria will be out of 10 as presented in Table 3.

Table 3 Scoring guidance

Score	Description
0	There is no evidence that the criterion has been answered.
1 – 2	There is very little evidence that the criterion has been satisfactorily answered and major omissions are evident.
3 – 4	There is little evidence that the criterion has been satisfactorily answered and some omissions are evident. Much more clarification is needed.
5 – 6	There is reasonable evidence that the criterion has been satisfactorily addressed but some omissions are still evident and further clarification is needed.
7 – 8	The criterion has been well addressed with a good evidence base, with only minor omissions or lack of clarity.
9 – 10	There is clear evidence that the criterion has been completely addressed in all aspects, with question answered clearly and concisely with a strong evidence base.

3.5.2 Scoring threshold

Applications must reach a score of at least 5 out of 10 for each criterion to continue with the competitive assessment. The exception to this is Value for Money where projects will have to meet a minimum Value for Money (VfM) ratio threshold of 1 to be considered. All projects which meet this minimum VfM will receive a VfM score according to their ranking against other applications within the same assessment window.

3.5.3 Funding of projects following assessment

It is expected that applications for funding will be made for the irreducible minimum a project requires. Once submitted, the applied costs within an application cannot be revised down. Applications will be ranked based on the competitive assessment of applications in each assessment window. The number of applicants receiving grant award will depend on the available funding allocated within the respective assessment window. Grant funding will be awarded to applicants in order of their competitive ranking within the assessment window until the allocated funding is exhausted. In the event that the remaining grant funding is insufficient to meet an applicant's requested grant amount, the remaining grant funding will be awarded to the next affordable applicant in order of competitive ranking.

3.5.4 Further information request

As part of the assessment process applicants may be requested to further clarify elements of their application.

3.5.5 Tiebreaker criteria

Should two projects be tied following the initial assessment, and there is only sufficient funding in the remaining pot for one of the two projects, a diversity prioritisation exercise will take place. As the Programme progresses, the diversity prioritisation tiebreaker will take in to account projects funded in earlier assessment windows.

Diversity prioritisation will be undertaken using the following 2 criteria, in the order noted below:

1. Sector: The aim is to fund a mix of sectors.
2. Technology: The aim is to fund a mix of technologies

3.5.6 Unsuccessful application

Unsuccessful applications will receive feedback, including as to whether the application passed the scoring threshold. Unsuccessful applicants will be able to apply again in subsequent windows.

3.6 Evaluation Process

A key objective of the Programme is to further understand and address barriers to implementation of industrial heat recovery projects. As such, at the specific Checkpoints, or wherever in the Programme a project exits the IHRS, there will be a project evaluation process to collate information and lessons learned. This is likely to be facilitated by:

- a) The Checkpoint form and Checkpoint process;
- b) An evaluation report and/or case study development or;
- c) An evaluation interview (either in person or by telephone).

Completion of all these evaluation elements is required to receive the relevant payment milestone which may be associated with the exit point. For Phase 2, the evaluation will require consideration of the M&V plan and results (see section 4.2.2).

BEIS do not envisage the evaluation to be onerous, but it will be proportionate to the stage at which the project is. For example, if exiting at Checkpoint 3, applicants' evaluation process will require all 3 of the above, including a review of the project's M&V results following 12 months of data collection. Where a project exits at Checkpoint 1, the evaluation would most likely consist of the Checkpoint form and process, where necessary followed by an evaluation interview to understand the reasons for exit in more depth.

Additionally, it is envisaged that there will be a longer-term Programme evaluation exercise which could involve further interviews, questionnaires or site visits following the Programme end.

4. Programme Phases

This section describes the activities undertaken by the applicant during each of the Programme phases outlined in Figure 1 and Appendix B. Programme Overview Diagram).

When you are ready to apply to the IHRS Programme complete and submit the Application Registration form. The form will provide the Delivery Partner with information to review whether projects are eligible to apply to the IHRS Programme and to be able to direct you to the appropriate point of entry into the Programme

Application Registration form Guidance provides additional information.

4.1 Phase 1

Phase 1 provides grant funding for:

- Feasibility study and preliminary engineering; or
- Preliminary engineering only (for applicants who have already undertaken a feasibility study independent of the IHRS)

Applicants who have already completed these activities independent of IHRS funding may proceed directly to Entry Point 2, starting with Checkpoint 2.

4.1.1 Pre-Feasibility

IHRS applicants must have completed all 'pre-feasibility' activities prior to entry to the Programme.

Pre-feasibility activities include (but not limited to):

- Understanding of technical option(s) to pursue with feasibility study.
- Understanding of the waste heat technical characteristics and key factors affecting its availability.
- Understanding of potential heat or energy users which could benefit from utilisation of the recovered waste heat or energy.
- Consideration of board and / or Senior Management briefs to inform of intention to engage with the IHRS Programme.
- Verification that all necessary data collection processes are in place to capture required data validating the feasibility outputs of the potential project.
- Consideration of potential funding sources and commercial arrangements required to proceed with the potential project.
- High-level estimation of the potential benefits (including non-energy benefits) as a result of implementing the potential project.

- Identification of potential resources required to proceed with the potential project.

4.1.2 Checkpoint 0

Already completed a feasibility study?

Applicants who have completed a feasibility study independent of the IHRS Programme must proceed to Checkpoint 1 and then apply for preliminary engineering funding via a Phase 1 application.

However if the existing feasibility study is outdated or inconclusive you can still apply at Entry Point 0.

Table 4 outlines the function of Checkpoint 0. Applicants need to provide an overview of the proposed project to the Delivery Partner who will review the information. The Delivery Partner will confirm whether the proposal meets the eligibility criteria and may feedback at high-level on the project’s anticipated benefits and how they align with the Programme’s aims.

Table 4 Function of Checkpoint 0

CP0	Submission Point	Purpose
New entrants only	Applying for feasibility study and preliminary engineering after completing a pre-feasibility study independently of IHRS. The Checkpoint form must be submitted for review and feedback before proceeding with the Phase 1 application.	To ensure project meets eligibility criteria (see section 1) and aligns with the aims and objectives of IHRS, prior to the competitive assessment of the application.

Checkpoint 0 provides applicants with the opportunity to:

- Present the high-level technical concept of the heat recovery opportunity prior to Phase 1 Application.
- Present the task-based plan for carrying out the proposed activities;
- Elaborate on the objective and purpose of the feasibility study and preliminary engineering;
- Present the estimated benefits of the heat recovery opportunity;
- Present the cost for implementing the proposed Phase 1 activities and present high-level cost of the potential project.
- Indicate the funding plan for financing the heat recovery opportunity.

Checkpoint 0 also provides an opportunity for applicants to get feedback on areas to strengthen for Phase 1 Application.

Appendix E. Checkpoint 0 Guidance provides additional information and support to applicants considering submitting project proposals at Checkpoint 0. If applying for

support for Preliminary Engineering only, applicants should proceed directly to Checkpoint 1 before submitting a Phase 1 Application.

4.1.3 Phase 1 Application

Applying for Preliminary Engineering only?

Applicants wishing to apply directly for support for preliminary engineering should ensure they have read section 4.1.5 - Checkpoint 1 after this section.

Applicants proceed onto a full application for Phase 1 by completing and submitting a Phase 1 Application Workbook. This shall be completed by applicants upon receiving a confirmation note from the Delivery Partner that their proposal is deemed suitable to proceed (see section 3.3.2 for details) after submission of the relevant Phase 1 Checkpoint forms (Checkpoint 0 for Entry Point 0 or Checkpoint 1 for Entry Point 1).

The Delivery Partner may provide additional technical comments within the confirmation note, upon submission of the relevant Phase 1 Checkpoints. Where provided, applicants are strongly advised to address these comments within the Phase 1 Application Workbook along with any additional documentation evidence (where applicable) to substantiate the response provided.

In preparation for their Phase 1 Application, applicants should also undertake the following:

- Agree the detailed resource (internal or external) for feasibility study and / or preliminary engineering,
- Develop a detailed list of activities to be carried out along with the respective purpose, approach and the proposed time schedule;
- Identify and manage the anticipated risk in carrying out the proposed activities;
- Obtain and prepare detailed costing for feasibility study activities and estimated costs for preliminary engineering
- Secure internal budget / spending approval for feasibility study and / or preliminary engineering.
- Collate existing data to support the technical concept and projected benefits.

Appendix I. Phase 1 Application Guidance provides additional information and support to applicants.

4.1.4 Feasibility Study

Where applicants have successfully secured BEIS IHRS funding through the Phase 1 Application process, an on-site feasibility study must be carried out to the agreed timescales. Feasibility studies may be undertaken by internal or external resources. Details of the delivery route chosen, ability to carry out the proposed activities and expected outputs from the feasibility study must be described in detail in the Phase 1 Application Workbook.

The list below provides an outline of the minimum requirements expected from the feasibility study:

- **Summary**
 - High level overview of process
 - Overview and description of waste heat sources
 - Results of pre-feasibility options screening
 - Account of previous energy efficiency / heat optimisation activities performed relevant to this project.
- **Proposed project scope aims and objectives**
 - Waste heat source
 - Waste heat utilisation methods - recovery, conversion, export
 - Technology overview
 - High level Process Flow Diagram (PFD) / Energy balance
 - Benefits - heat recovered / financial benefit / CO₂ benefit / other
 - Wider benefits - Potential environmental impacts / productivity / occupational health and safety / other
- **Project delivery**
 - Project delivery plan detailing the key project implementation steps
 - Front End Engineering Design (FEED) / Sign off / Implementation
 - Risk and mitigation register
- **Financial Business Case**
 - Costs – Capital expenditure (CAPEX) / operating expenditure (OPEX) / revenues etc.
 - Other benefits - employment / growth etc.

Many aspects of this list are directly linked to information required at Checkpoint 1 and for the Phase 2 application. Structuring the feasibility study according to the list will help in the collection and structuring of information required for later Programme requirements.

A high-level sensitivity analysis should also be undertaken to demonstrate the dependence of project feasibility on key technical, operational and economic parameters.

The outcomes of the feasibility study should provide a sufficient evidence base to revise the technical and economic feasibility of the project and this will be updated at Checkpoint 1.

4.1.5 Checkpoint 1

There are three pathways through Checkpoint 1 as summarised in Table 5.

Table 5 Functions of Checkpoint 1

CP1	Submission Point	Purpose
Existing participants continuing the Programme	Updated Phase 1 Application Workbook after feasibility study has been completed, before continuing with preliminary engineering.	To ensure outputs of feasibility study are still in line with aims and objective of IHRIS and are sufficient for project to proceed to preliminary engineering with IHRIS funding.
Existing participants exiting the Programme	Checkpoint form to be submitted after feasibility study has been completed, and the applicant or BEIS decides not to proceed with further IHRIS support.	To ensure the learnings from the feasibility study are captured, should the feasibility study indicate that the project would not deliver previously anticipated benefits or should existing participants not wish to progress to Preliminary Engineering. The completion of the evaluation process is required for milestone payment 01.
New entrants applying for preliminary engineering only	Checkpoint form to be submitted after completing an independently-funded feasibility study, to check eligibility and obtain feedback before proceeding to Phase 1 (preliminary engineering only) application.	To ensure project aligns with aims and objectives of IHRIS and that outputs of the independently-funded feasibility study are sufficient to proceed to the competitively assessed Phase 1 application submission for preliminary engineering with IHRIS funding.

Checkpoint 1 provides an opportunity for new applicants or existing participants to communicate the key findings from their feasibility study (whether IHRIS- or independently-funded) and refine key technical and economic information before progressing onto preliminary engineering.

New applicants are required to complete the Checkpoint 1 form including the technical and economic case for the proposed heat recovery project based on the outputs and findings of the independently-funded previously conducted feasibility study. Applicants are advised to provide as much details as possible across all questions. The Delivery Partner will review the Checkpoint information and provide further technical comments/feedback on specific points that need to be addressed in the full application.

Existing participants will need to provide an updated Phase 1 Application Workbook, extracting the outputs and findings of the completed feasibility study, to continue or exit the Programme.

Checkpoint 1 requires applicants/participants to undertake the following:

- Present (or revise) technical concept to confirm viability and strength of the proposed project

- Present (or revise) the proposed activities to be carried out during preliminary engineering
- Present (or revise) the detailed costing for preliminary engineering
- Secure internal budget / spending approval for preliminary engineering
- Collate (or revise) existing data to support the technical concept and projected benefits
- Exit from the Programme should the outcomes of the feasibility study demonstrate that the proposed project is not strong enough to justify continuing (existing participants only).

The first payment milestone (PM01) is associated with the completion of the feasibility study and subsequent submission of the updated Phase 1 Assessment Workbook for all IHRS participants that entered the Programme at the Entry Point 0, regardless of whether they are continuing or exiting the Programme. If a participant decides to leave the Programme at Exit Point 1 they must explain the decision to leave when updating the Application Workbook. They must also complete the evaluation process. Where feasibility study outcomes show that proposed projects are not strong enough to justify continuing, BEIS will require the participant to exit the Programme and will withdraw support for the preliminary engineering stage.

Phase 1 Application Workbook Guidance provides additional information on updating the Phase 1 Application Workbook.

4.1.6 Preliminary Engineering

Successful Phase 1 IHRS Participants (awarded at Entry Point 0) that have secured IHRS grant funding may proceed to undertake preliminary engineering following review of their Checkpoint 1 and updated Phase 1 Application Workbook submission. New entrants (at Entry Point 1) may proceed to undertake preliminary engineering activities after being successful with the competitive assessment of their Phase 1 application (as detailed in section 4.1.3).

Preliminary engineering enables the applicant to further develop the business case and determine technical limitations, benefits and risks associated with the implementation of the proposed heat recovery project on site. This may be done either using internal resources or outsourced via a procurement exercise undertaken in accordance with the inputs submitted in the Phase 1 application. Additional technical information should be used to refine the potential energy savings and carbon reduction benefits as evidenced by an energy and mass balance. Further refinement of the business case should be undertaken in line with the more accurate assessment of the process and energy flows on-site.

Applicants can define the scope and activities completed under preliminary engineering provided that all necessary information to progress to Phase 2 is captured. This allows preliminary engineering to be aligned to internal governance for capital expenditure approval.

A comprehensive sensitivity analysis should be conducted as part of preliminary engineering to demonstrate the range of anticipated benefits associated with the project. This will help IHRS Participants and BEIS to determine the value of progressing the project to Phase 2 (Implementation).

4.1.7 Checkpoint 2

There are three pathways through Checkpoint 2 as summarised in Table 6.

Table 6 Functions of Checkpoint 2

CP2	Submission Point	Purpose
Existing participants wishing to continue the Programme	Checkpoint form to be submitted after completion of preliminary engineering to obtain feedback prior to considering whether to proceed to Phase 2 application.	To ensure project aligns with aims and objectives of IHRIS and that the outputs of feasibility study and preliminary engineering confirm the viability of the project before proceeding to Phase 2 application Completed Checkpoint form also required for milestone payment 02.
Existing participants exiting the Programme	Checkpoint form submitted after completion of preliminary engineering, and the applicant decides not to apply to Phase 2 IHRIS support.	To ensure the learnings from the feasibility study and preliminary engineering are captured. Completed Checkpoint form and completion of the evaluation process required for milestone payment 02.
New entrants applying for capital funding for project implementation only	Checkpoint form to be submitted after completing a feasibility study and preliminary engineering independently of the Programme, to check eligibility (see section 1) and obtain feedback before proceeding to Phase 2 application.	To ensure project aligns with aims and objectives of IHRIS and that outputs of independently-funded feasibility study and preliminary engineering are sufficient to proceed to the competitively assessed Phase 2 application submission for IHRIS funding.

Checkpoint 2 provides an opportunity for new applicants or existing participants to communicate the key findings from the feasibility study and preliminary engineering, refine key technical and economic information before progressing onto implementing the proposed Project.

Checkpoint 2 requires existing participants and new applicants to undertake the following:

- Assess outputs from preliminary engineering (independent or IHRIS funded).
- Confirm and provide confidence of project viability prior to Phase 2 application.
- (For existing IHRIS participants only) Exit from the Programme should the anticipated risks, costs and benefits render the proposed project unviable or should the participants not require Phase 2 funding.

The second payment milestone (PM02) is associated with the completion of the preliminary engineering and subsequent submission of Checkpoint 2 for all Phase 1 IHRIS Participants, regardless of whether they are wishing to continue or exit the Programme. If a participant decides to exit at Exit Point 2 they must explain the decision to leave when completing the Checkpoint 2 form. They must also complete the evaluation process. Where feasibility study and preliminary engineering outcomes show that proposed projects are no longer deemed viable, BEIS will require that the participant exits the Programme.

Please note – Applicants who have completed Phase 1 with IHRS funding are not guaranteed Phase 2 funding and are subject to the same competitive assessment as Phase 2 new entrants.

Appendix G. Checkpoint 2 Guidance provides additional information on completion of the Checkpoint 2 Form.

4.2 Phase 2

Phase 2 of the IHRS Programme provides grant funding for the delivery phase of the project including:

- Detailed design
- Procurement
- Construction
- Commissioning
- Operation start-up
- Monitoring and Evaluation

There is no requirement for Phase 2 applicants to have completed Phase 1 through the Programme provided that there is sufficient evidence of Concept and Definition activities (feasibility study and preliminary engineering) undertaken outside of the IHRS at the point of submission at Entry Point 2.

4.2.1 Phase 2 Application

Applicants proceed onto a full application for Phase 2 by completing and submitting a Phase 2 Application Workbook. This shall be completed by applicants upon receiving a confirmation note from the Delivery Partner that their proposal is deemed suitable to proceed (see section 3.3.2 for details) after submission of Checkpoint 2 form.

The Delivery Partner may provide additional technical comments within the confirmation note, of Checkpoint 2. Where provided, applicants are strongly advised to address these comments within the Phase 2 Application Workbook along with any additional documentation evidence (where applicable) to substantiate the response provided.

The technical and economic information of the proposed project must be submitted with a high degree of detail and confidence at this stage.

In preparation for their Phase 2 Application applicants should undertake or consider the following:

- Agree resource (internal and / or external) for all key project stages in Phase 2.
- Obtain capital, maintenance, labour and other costs associated with each of the project stages.

- Secure internal budget / spending approval
- Monitoring and Verification (M&V) of project data for a minimum of 12 months post operation start-up.
- Develop a proposed payment milestone schedule

Appendix J. Phase 2 Application Guidance provides additional information and support to applicants that have completed Checkpoint 2 and are progressing the Phase 2 Application Workbook

4.2.2 Monitoring and Verification Plan

An essential part of the Programme is to be able to evaluate the benefits achieved by the proposed Project against the baseline parameters submitted in the Phase 2 application, as well as evaluating the performance of the programme against the overall programme objectives. To ensure that all information required to conduct the evaluation is captured, a detailed Monitoring and Verification (M&V) plan is to be developed between the Participant and Delivery Partner. The data provided through the M&V plan will contribute to the overall IHRS Programme evaluation and will be used for the purpose of creating project case studies.

As part of the Phase 2 Application, applicants are required to outline an M&V plan to ensure the key technical and economic delivery parameters are captured. This M&V plan should take in account the requirement for comparative data to be provided against the baseline information provided in the Phase 2 Application. The M&V plan between the Applicant and BEIS will be incorporated into the Grant Funding Agreement.

The M&V plan will be finalised with applicants, either as part of the project kick off meeting (see section 5.4.1) or shortly thereafter based upon the outline submission from the application process with an emphasis on understanding how project success factors may be demonstrated (and potentially shared with wider industry/the public) without infringing on the commercial sensitivity of certain data.

4.2.3 Project implementation

Following the successful award of a Phase 2 grant, participants are fully responsible for the delivery of the project from detailed design through to project operation start-up and M&V.

While projects will have different specific delivery routes, there are a number of activities which will be undertaken during the project implementation stage. These include, but are not limited to, reporting of progress; site visits by the Delivery Partner; and development of case studies.

4.2.4 Checkpoint 3

Table 7 outlines the function of Checkpoint 3.

Table 7 Function of Checkpoint 3

CP3	Submission Point	Purpose
All Phase 2 participants	Checkpoint form to be completed after completion of	To capture case studies and lessons learned from projects implemented in Phase 2.

CP3	Submission Point	Purpose
	Phase 2 implementation and activities.	The completed Checkpoint form and completion of the evaluation process are required for final milestone payment.

Checkpoint 3 provides an opportunity for Phase 2 participants to communicate the key findings from their project implementation including the following:

- Communicate results of monitoring and evaluation phase post implementation of the heat recovery project.
- Provide feedback on the IHRS Programme to BEIS.
- Re-appraisal of the heat recovery project business case.

The final payment milestone (PM06) is associated with the completion of the project implementation and subsequent submission of Checkpoint 3 for all Phase 2 participants and completion of the evaluation process.

Appendix H. Checkpoint 3 Guidance provides additional information on completion of the Checkpoint 3 Form.

5. Programme Administration

This section outlines key administrative aspects of the Programme.

5.1 Grant Offer, Funding and State aid

Section 2.3 provides details of the funding allocation according to the assessment windows.

Funding for Phase 1 will be distributed amongst both those applicants seeking funding to support feasibility study and preliminary engineering, and those applicants seeking support for preliminary engineering only.

It should be noted that applicants seeking funding to support feasibility studies and preliminary engineering, or preliminary engineering only will be assessed as part of the same competition within any given assessment window.

Funding for Phase 2 covers the entirety of delivery including:

- Detailed design
- Engineering and construction
- Commissioning
- Operation start-up

Additional Phase 2 Activities that applicants need to plan for includes:

- 12-months of on-going Monitoring and Verification of project benefits
- Post project evaluation

Successful applicants will have their award funding ring fenced for the phase for which their application has been successful.

The value of grant funding will be agreed through the signing of a Grant Offer Letter and the Grant Funding Agreement. Draft templates of these documents will be available in due course from the following link:

<https://www.gov.uk/government/publications/industrial-heat-recovery-support-programme-guidance-and-application-forms>

5.1.1 State aid and maximum funding

As part of the application process, Applicants are asked to confirm that they are in agreement with these terms. Grant funding allocations are subject to State aid rules; Table 8 below is intended as a high-level outline of maximum funding levels.

Table 8 State aid maximum aid intensity

Phase	Activity	Maximum aid intensity*	SME uplifts	Assisted areas
Phase 1 Concept and Definition	a) Feasibility study	Up to 50% of eligible costs	Small enterprise – Up to an additional 20%	N/A
	b) Preliminary engineering	Up to 30% of eligible costs		Medium enterprise – Up to an additional 10%
Phase 2 Capital Delivery	a) Detailed design			
	b) Construction			
	c) Commissioning			
	d) Operation Start-up			
	e) Monitoring and Evaluation			

* Maximum aid intensity for large enterprises.

Notwithstanding State aid rules, the maximum grant funding for Phase 1 feasibility study, Phase 1 preliminary engineering and Phase 2 detailed design, in total [i.e. Ph1 (a) + Ph1 (b) + Ph2 (a)], shall not exceed £290,000. The maximum grant funding for Phase 2 Construction, Commissioning, Operation Start-up and Monitoring and Evaluation, in total [i.e. Ph2 (b) + Ph2 (c) + Ph2 (d) + Ph2 (e)], shall not exceed £1,500,000.

Notwithstanding the above maximum grant limits, applicants should bear in mind that the total grant funding pool is limited. Applicants should avoid bidding for the largest grant limit available to them unless they are able to justify the need for that level of grant funding, and consider that all applications will be assessed against reasonableness of cost and Value for Money (see Table 1 and Table 2). An accurate appraisal of costs is therefore crucial to a credible application, which should be comprised of what grant funding as a minimum is necessary for

the Phase 1 and/or 2 activities to proceed. Once submitted, the applied costs within an application cannot be revised down.

To ensure the Programme is State aid compliant, grant funding allocations will be subject to the terms of the General Block Exemption Regulation (GBER). Funding for Phase 1 feasibility studies will be governed under Article 25, and funding for preliminary engineering and Phase 2 under Article 38. This Programme will provide additional support to applicants in assisted areas and SMEs, where applicable. Definitions for SME and Large Enterprise are as below (Table 9). Both employee and annual turnover criteria apply. Failure to comply with State aid law can lead to the recovery of any funds granted under this scheme. Further guidance can be found here: <https://www.gov.uk/guidance/state-aid>

Table 9 Definitions of SME and Large Enterprises

Enterprise	Definition
Small Enterprise	Employees < 50 persons Annual turnover / balance sheet < €10m (approx. £7m)
Medium Enterprise	Employees < 250 persons Annual turnover ≤ €50m OR balance sheet ≤ €43m
Large Enterprise	Employees ≥250 persons Annual turnover >€50m OR balance sheet >€43m

Applicants cannot combine funding of the IHRS with other forms of State aid received for a discrete heat recovery project (i.e. for the same eligible costs) if this would result in the aid intensity and aid amount permitted by the GBER being exceeded. Applicants may use other sources of funding for projects outside the site boundary (e.g. for the transport of the recovered heat to a heat network outside of the industrial site boundary), as long as this is allowable under the relevant scheme rules and is compliant with State aid rules.

There is no requirement for depreciation to be applied to eligible costs for feasibility studies under section 4 of Article 25. There is no requirement for depreciation to be applied to eligible costs for preliminary engineering, detailed design, and capital implementation under Article 38.

Failure to comply with State aid rules can lead to the recovery of any funds granted under this scheme. As part of the application process applicants are required to confirm whether the project is receiving state funding from other sources. Applicants may wish to seek 3rd party legal counsel to ensure compliance.

5.1.2 EU Exit

Availability of Programme funding will not be impacted by EU exit. Additionally, BEIS will maintain the funding caps (both maximum cap and percentage of total project) stated in Table 8 after the UK leaves the EU.

5.2 Payment Milestones

The Programme has pre-defined payment milestones where grant funding is released to the applicant.

For Phase 1, the payment milestones align to Checkpoints 1 and 2 i.e. completion of a feasibility study and completion of preliminary engineering.

For Phase 2, payment milestones align with stages within the project implementation. As part of the Phase 2 application submission, applicants are required to present their delivery plan for each of the proposed activity, with reference to the breakdown of funding and costs associated with each payment milestone.

The final payment milestone will represent no less than 10% of the total grant award for the appropriate phase.

Table 10 and Table 11 provide a summary of the proposed payment milestones for Phase 1 and Phase 2 respectively. Further detail on each of these is provided within the applicable Phase Application Guidance Note in the appendices. Milestone payments will be made through completion of a Grant Claim Form, which BEIS will provide to successful Applicants.

Table 10 Phase 1 Payment Milestones

Payment Milestone Ref	Description	Guidance	Award Criteria (or payment release criteria)
PM01	Feasibility study	PM01 is payment of the total grant funding for the feasibility study upon its completion, as applied for under Phase 1 Application	Submission and review by the Delivery Partner of the updated Phase 1 Application Workbook with electronic copy of the feasibility study.
PM02	Preliminary engineering	PM02 is payment of the total grant funding for the preliminary engineering upon its completion, as applied for under Phase 1 application	Submission and review by Delivery Partner of Checkpoint 2 form with electronic copy of preliminary engineering report and/or outputs.

Table 11 Phase 2 Payment Milestones

Payment Milestone Ref	Description	Guidance	Award Criteria (or payment release criteria)
PM03	Detailed design completion	PM03 is payment for the total grant funding for the detailed design, upon its completion	Satisfy Delivery Partner that detailed design has been completed
PM04	Installation / Construction Phase including construction completion	PM04 is for payment of procurement and construction of fixed assets. Applicants are free to propose sub-division of	Submission of proof of procurement and / or construction activities as agreed in payment milestone schedule (as confirmed in the grant offer letter). Potential site visit from Delivery Partner to demonstrate that

Payment Milestone Ref	Description	Guidance	Award Criteria (or payment release criteria)
		PM04 as they see appropriate although finale PM04 schedule will be subject to approval by BEIS.	construction works have been completed
PM05	Operational handover	PM05 is designed to allow for capture of costs associated with commissioning / optimisation and handover of the project to operations	Demonstrate commissioning documents Potential site visits from Delivery Partner
PM06	Close out payment	This final payment milestone is aligned with closing out the project, demonstrating M&V and delivery of a case study if applicable. Represents no less than 10% of the total grant award.	Submission of Checkpoint 3 form with M&V data (data records and re-appraisal of the heat recovery project business case) demonstrating the performance of the project. Close out interview with Delivery Partner.

The final schedule of Payment Milestones will be agreed and formalised once an applicant has been successful in the competitive assessment process. This will be set out as a Schedule to the Grant Funding Agreement and may differ from the schedule proposed by the applicant in their application.

5.3 IHRIS guidance

In addition to the guidance notes, telephone and email enquiry support will be available to applicants. Applicants may submit their enquiries to ihrsprogramme@icf.com or call the IHRIS helpline on 02030963106.

5.4 Phase 1 and 2 delivery activities

5.4.1 Project Kick-Off

The Delivery Partner will arrange for a project kick-off meeting (or call where appropriate) after the signing of the Grant Offer Letter and Grant Funding Agreement. The kick off meeting will review the:

- Delivery plan

- Risk mitigation steps
- Progress reporting requirement
- Delivery Partner site visit schedules (if relevant)
- M&V requirements (if relevant).

5.4.2 Reporting Requirements

Throughout the delivery of Phase 1 and Phase 2, awarded participants are required to submit monthly progress reports to the Delivery Partner.

A defined template will be provided by the Delivery Partner. The intention is to keep the process light touch. Note, however, that applicants are responsible for their own project management.

The Delivery Partner will be monitoring progress against the delivery plan, the conditions set out in the Grant Offer Letter and Grant Funding Agreement and any additional requirements agreed during the kick-off meeting, including risk management.

During Phase 2 operating phase, applicants will be required to report in accordance with predetermined M&V plans.

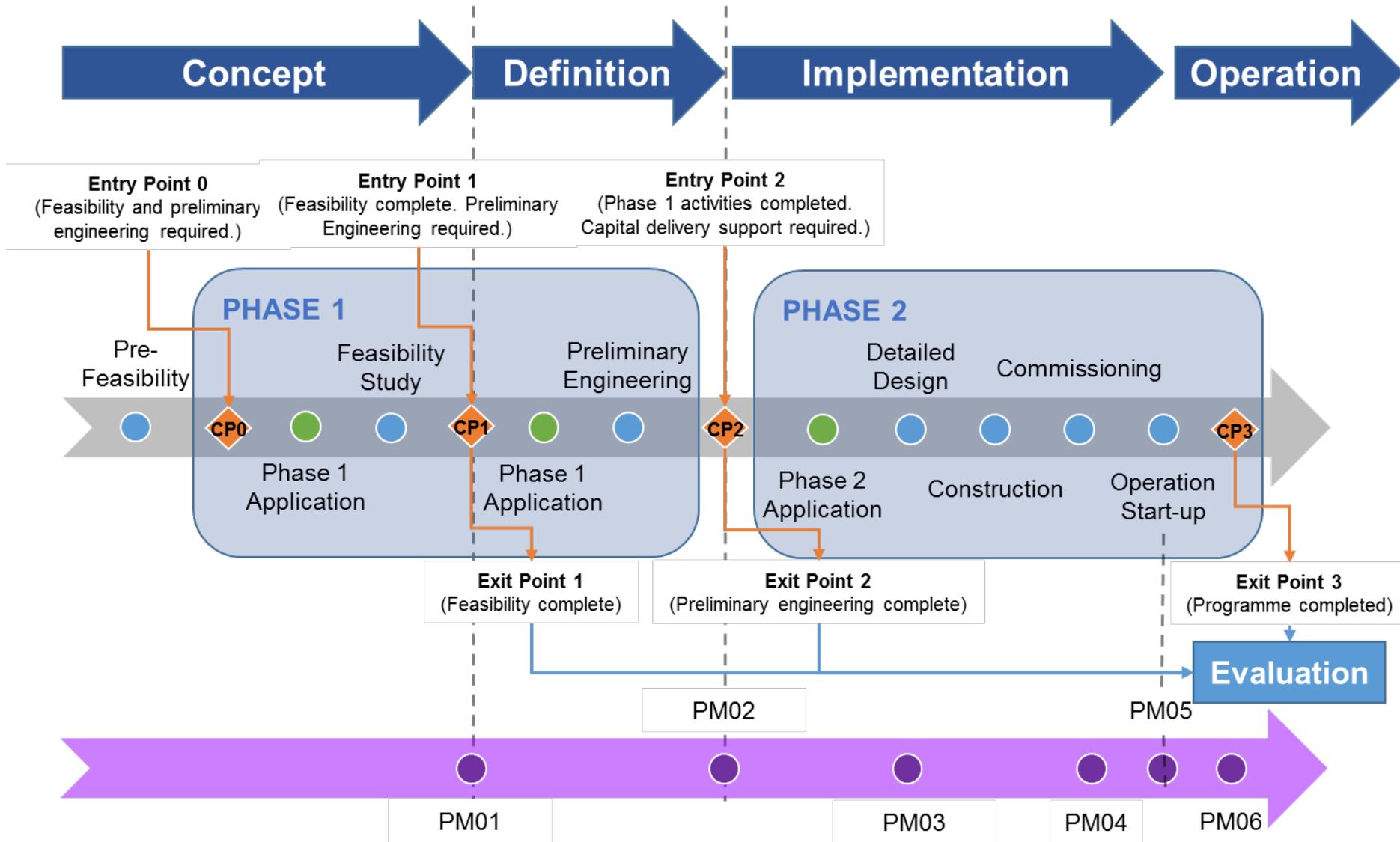
Appendix A. Definitions

Definitions of terms (in the context of this Programme) used throughout the guidance are stated in Table 12:

Table 12 Definitions

Term	Definition
Industrial Heat Recovery	Heat generated in or for an existing industrial process which is currently emitted to the environment, which can be recovered for either immediate use on site, offsite or converted to electrical or mechanical power.
Feasibility study	The initial stage of a project decision process, taking all relevant technical, commercial and financial information to assess whether a project is feasible or not.
Preliminary engineering	Design phase post feasibility study where the outputs may include process studies, process technology selection, technical configuration, cost optimisation, permit application process, Engineering, Procurement and Construction (EPC) cost estimates, EPC implementation schedule, and EPC tendering document. The outputs of preliminary engineering form the basis of detailed design, allowing project viability to be checked both technical and financially. Similar terms are Front End Engineering (FEE) or Basic Engineering.
Detailed Design	Development of all required technical documentation for procurement, construction, commissioning, operation and maintenance. This may include drawings approved for construction, detailed Bill-of-Material (based on preliminary engineering outputs), finalised technology specification based on chosen vendor information.
Capital delivery	Construction of assets associated with the proposed project
Delivery Partner	ICF
Project	The potential heat recovery opportunity being proposed under IHRIS Programme.
BEIS Assessment Panel	BEIS officers forming the panel in reviewing, assessing and awarding the IHRIS grant applications.
Participant	Applicants who have already received IHRIS grant funding support.
Applicant	New entrants to IHRIS who haven't previously obtained IHRIS grant funding support.
Application Workbook	The application form containing details which an Applicant must provide to submit a full application for competitive assessment.

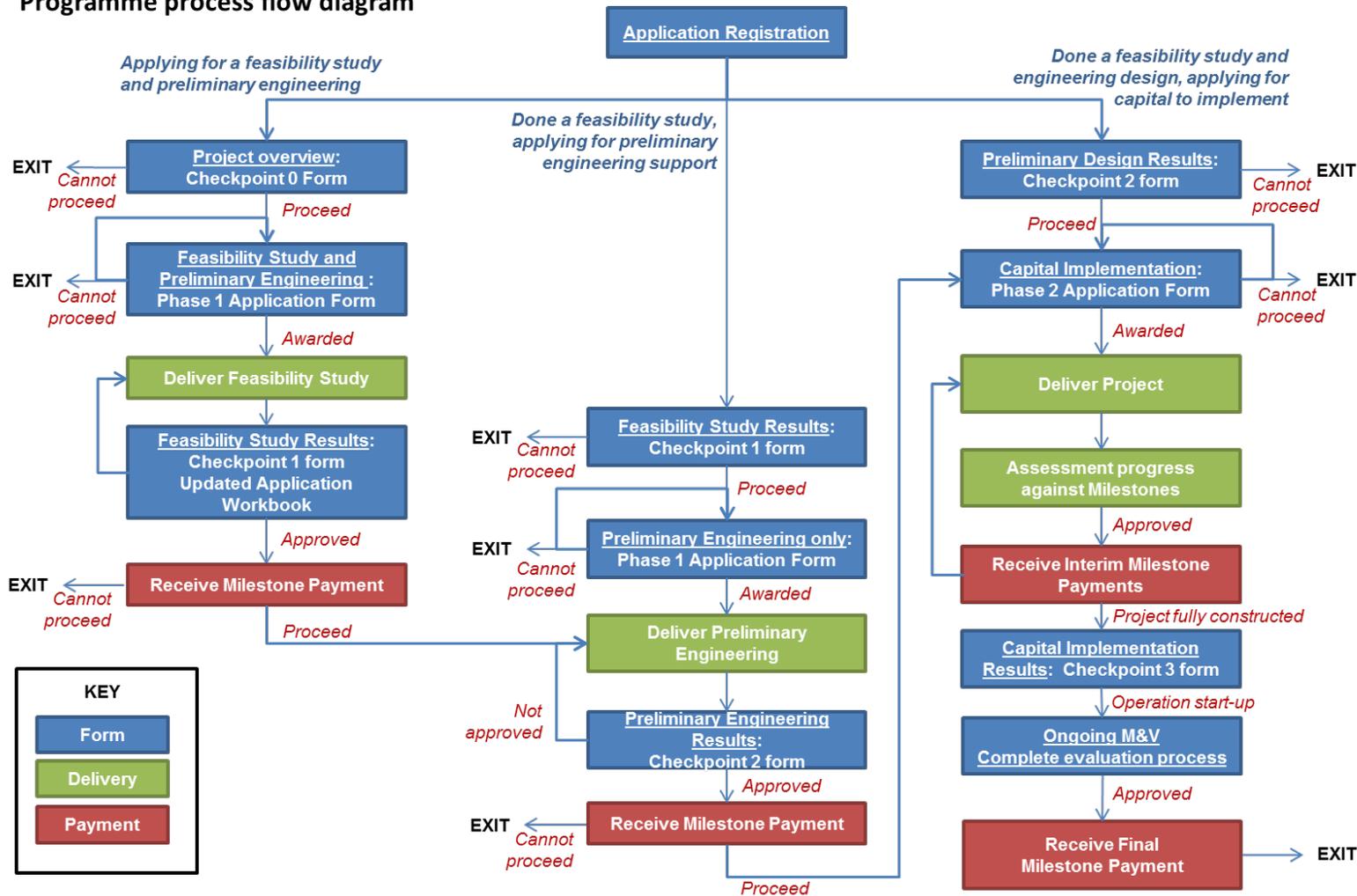
Appendix B. Programme Overview Diagram



Appendix C. Programme Process Flow Diagram

Industrial Heat Recovery Support Programme:
Programme process flow diagram

PV6.1



This publication is available from: <https://www.gov.uk/guidance/industrial-heat-recovery-support-programme-how-to-apply>

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