



Department for
Business, Energy
& Industrial Strategy

CHECKPOINT 2

Guidance Document

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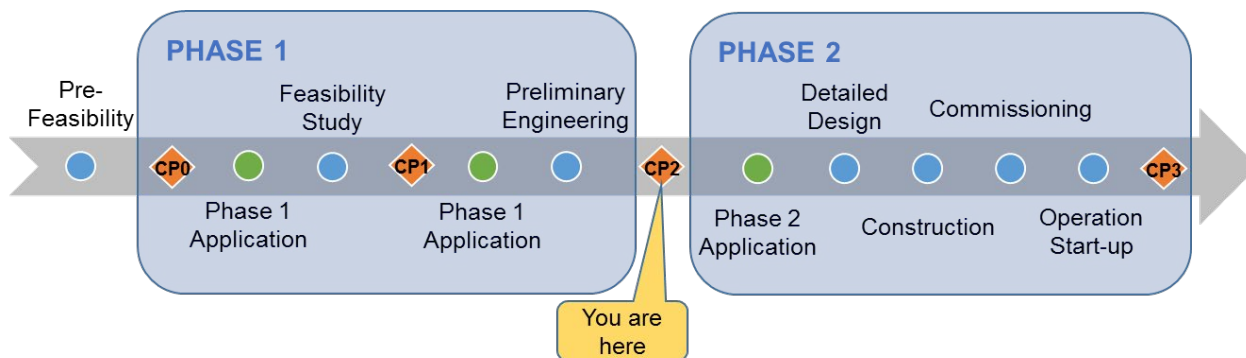
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Intention

This document provides guidance to Industrial Heat Recovery Support (IHRS) Programme applicants completing and submitting a Checkpoint 2 form.

Figure 1 IHRS Programme Checkpoint 2 Location



Checkpoint 2 provides an opportunity for participants of the IHRS Programme to communicate the key findings from their project's feasibility study and preliminary engineering (whether IHRS- or independently-funded) and refine key technical and economic information before applying to participate in Phase 2 of the Programme.

Checkpoint 2 fulfils the following functions:

- Opportunity to confirm with BEIS that proposed heat recovery project aligns to IHRS scope on a non-competitive basis and receive feedback prior to a Phase 2 Application.
- Minimise additional work/avoid duplication of work for competitive Phase 2 Application.
- To assist and align to internal stakeholder engagement and/or business case proposal.

There are three pathways through Checkpoint 2 as summarised below:

- **Continuing the IHRS Programme** from Phase 1 through to Phase 2 capital grant application. Completion and review of the Checkpoint 2 form is required for Payment Milestone 2 and for entry into the competitive assessment process for Phase 2.
- **New entrants** for Phase 2 capital grant application provided that feasibility study and preliminary engineering work have been undertaken independently of the IHRS Programme. New entrants will be considered alongside Phase 1 participants applying to continue with the programme as part of the Phase 2 competitive assessment process.
- **Exiting the programme** - The opportunity to withdraw applications should the preliminary engineering study indicate that the heat recovery project would not deliver sufficient energy savings, economic benefits or is impacted by other reasons identified in Phase 1; or should the participants not require Phase 2 funding.

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

Completing Checkpoint 2

Applicants must complete the Checkpoint 2 form, based on the outcome of their preliminary engineering (whether IHRS- or independently-funded).

Overall this is an opportunity for applicants to demonstrate that they have given thought to the implementation of the proposed heat recovery project and the benefits it will bring.

The information you will be asked to provide will be specific to your pathway through Checkpoint 2. For new entrants or existing participants wishing to apply to Phase 2, information required should come from feasibility studies and preliminary engineering, whether carried out independently or through the IHRS grant funding. For those already in the Programme or exiting, a copy of the previously submitted CP1 form will be attached as a read-only reference.

Forms for **exiting** applicants will be available on the IHRS portal. Example forms can be viewed on the template Checkpoint forms available on the IHRS webpage.

Although Checkpoint 2 review is not competitive, it is essential that Programme participants submit and have their Checkpoint form reviewed in order to progress to the next stage of the Programme be it Exit or Phase 2 application. For existing participants, milestone payment applications will only be processed upon receipt of the completed Checkpoint 2 form confirming completion of the preliminary engineering. IHRS Participants exiting the Programme must also comply with the Evaluation Process to receive the associated milestone payment.

You are advised to provide as much details as possible across all questions. This will enable the Delivery Partner to review your Checkpoint information and provide you with further comments on crucial points that need to be more fully addressed if your project is to proceed to Phase 2 competitive assessment. To make sure the Delivery Partner reviews all the data, please reference, within the response to a question, the name of any documents you submit in support of that response.

[Table 1](#) gives an outline of the detail required for Checkpoint 2.

Table 1 Checkpoint 2 Completion Requirements

Section	Checkpoint 2 Requirement
Applicant Details (Section 0)	<p>This section will contain the information you provided at the application registration stage. If you need to change any of this detail, please note the change in the box at the end of this section and the update will be made by the Delivery Partner. This is to manage the integrity of the initial registration checks.</p> <p>If you are a new applicant at CP2 you will be asked to add some further detail to the information about the applicant company that was submitted in the Application Registration form:</p> <ul style="list-style-type: none">• Company size.• Your agreement to State aid and BEIS Grant Offer Letter• An overview of the heat recovery opportunity and• Grant Funding Agreement terms.

Section	Checkpoint 2 Requirement
<p>Technical Concept (Section 1)</p>	<p>New applicants will need to describe your heat recovery project, to the detail you have from your feasibility study and preliminary engineering activity.</p> <p>1.1 Provide an overview of the process generating the waste heat. This should include the source of energy, amount of heat generated, factors affecting the availability of waste heat and its technical characteristics (temperature, pressure, gas content, flow rate, etc.).</p> <p>1.2 Provide an overview of the proposed technical solution for recovering waste heat. This could include the heat recovery method, estimated thermal efficiencies, rated outputs, and factors (e.g. production, temperature, gas quality, etc.) affecting its performance. State the maturity and market status of the chosen technology and consider whether there is a precedent for the selected technology in a similar application and/or within the sector from which the Project is proposed.</p> <p>1.3 Provide an overview of the technical profile of the proposed use of the recovered heat or energy. This could include the process, operation parameters, current energy consumption and fuel type.</p> <p>1.4 Provide an overview of the technical concept of the heat transport or energy delivery to the user. This should include a conceptual plant layout plan, conceptual schematic diagrams, relevant technical specifications gathered of the proposed heat / energy transfer solution being assessed.</p> <p>You must provide the figures for the expected available, recovered and used heat (1.5-1.7). You must also provide a process flow diagram.</p> <p>Continuing applicants can provide an updated write-up extracting the detail you have gained from having completed a feasibility study. In 1.8-1.10 you must provide:</p> <ul style="list-style-type: none"> • A process flow diagram. • A physical layout schematic. • An energy mass balance of the heat recovery. <p>To make sure the Delivery Partner reviews all the data, please reference the name of any documents you submit.</p> <p>If exiting, you do not complete any of this section.</p>
<p>Delivery Plan (Section 2)</p>	<p>In this section of CP2 you will be asked to describe the previously undertaken feasibility study and preliminary engineering, and you must attach a copy of both reports with CP2.</p> <p>If you have not completed a feasibility study or preliminary engineering or they are no longer relevant, then you should be entering the Programme at CP0 or CP1.</p> <p>The questions under 2.1 and 2.2 will ask you to provide the same information for the feasibility study (2.1) and the preliminary engineering work (2.2), referred to as activities</p> <p>New applicants must provide the detail for both.</p> <p>If Continuing or exiting you will not be asked, or able to edit the responses you provided for 2.1 in CP1. The 2.2 questions are not exactly the same as were asked at CP1, so you must update or</p>

Section	Checkpoint 2 Requirement
	<p>complete the questions extracting the detail you have gained from now having completed the preliminary engineering.</p> <p>2.n.3 List and explain the specific objectives and purpose of the activities that were undertaken. You should consider technical objectives, business objectives such as cost and payback, and implementation feasibility.</p> <p>2.n.4 Detail and explain the feasibility study conclusions. The response should connect to the objectives described in the question above and to any new or unexpected conclusions. You need to provide sufficient detail for the review to show clearly the viability of the proposed heat recovery project.</p> <p>When writing 2.n.4 take care not to duplicate the specific areas covered in the next two questions.</p> <p>2.n.5 Provide an assessment of the key barriers to, risks for and constraints on the heat recovery project that were identified. Each of these should have practical mitigation procedures for effectively managing the risk and constraint and overcoming the barrier.</p> <p>2.n.6 Specific detail on planning or permitting requirements</p> <p>If Continuing or exiting, you will be asked to confirm that the deliverables are as stipulated in the Grant Offer Letter and Grant Funding Agreement.</p>
2.3 Capital Grant Implementation	<p>The guidance below applies to New and Continuing applicants only. Those Exiting do not complete this section.</p> <p>2.3.1 to 2.3.3 you must provide details on the time period for, and a short narrative describing, the overall heat recovery implementation project. Not just in terms of the heat recovery technology already covered in the technical concept section.</p> <p>In 2.3.4 you must provide an overall project plan under the headings of Detailed Design, Construction and Commissioning. For each you will need to provide:</p> <ul style="list-style-type: none"> • A start and end month and year. • A summary of the risks you have identified for that stage including but not limited to technical, economic, contractual, and environmental. You must also show you have the risks under control by describing the mitigation you will have in place. • A description of how success of that stage of project will be defined. This should include targets or objectives that are specific, measurable, relevant and timebound. • For each stage you should undertake an environmental and hazard assessment. The more complete these are the better it will go in the assessment. Although not requested on the form ideally you would attach copies with CP2. <p>2.3.5 you must provide a list of the names of the companies taking part in the implementation of the heat recovery project. This is to show that you have identified resources for all the key elements of the project.</p> <p>2.3.6 for each person in your activity team please provide their name, specific role, experience and company. The intention is to show that the team have the experience and skills to deliver a successful activity.</p>

Section	Checkpoint 2 Requirement
	<p>3.1 Continuing and Exiting applicants will see the history of the costs entered previously at CP0 and CP1.</p> <p>3.1.2 New and Continuing applicants will be asked for: the value of the Capital Grant being applied for.</p> <p>All users will be asked to provide (or update) with the learning from the feasibility study and preliminary engineering work:</p> <ul style="list-style-type: none"> • 3.1.1 Expected cost to implement the heat recovery project. • 3.1.3 Expected rate of return on investment. • 3.1.4 Your company's minimum investment threshold. <p>The simple payback (3.1.5) will be calculated for you.</p> <p>3.2.1 is an opportunity for you to provide further narrative information to support the cost numbers for the heat recovery project itself.</p> <p>This will be covered in more detail in the Phase 2 Application Form.</p>
Wider Benefits (Section 4)	<p>This section is where you describe the benefits of the heat recovery project.</p> <p>4.1 Please provide your accurate estimates of the expected scale and effectiveness of the eventual heat recovery project in terms of a value for energy cost savings (4.1.4) and any other cost savings (4.1.5) such as water, waste or maintenance. This must reference the figures you provided in section 1 (which are shown here). In 4.1.7 please describe the non-energy cost savings, how you calculated them and any assumptions. These could include materials, waste, water, labour.</p> <p>4.2. When describing the non-financial benefits, you could include; environmental, wider economic and employment or social impact. You could also show the operational benefits the heat recovery project will bring for example simpler process or improved quality.</p> <p>New and continuing applicants will be asked to confirm they have attached a document with the results of a high-level sensitivity analysis which demonstrates the dependence of benefits on key technical, operational and financial parameters. You summarise these results by listing in 4.3 all the key factors that may affect the benefits from the heat recovery project, showing what they are and what the impact may be.</p> <p>You will need to provide detail on the Wider benefits in the Application Workbook.</p>
Further Information (Section 5)	<p>This is a purely optional question for you to provide further narrative information to make the case for your application.</p>
Exiting the Programme (Section 6)	<p>This section is only visible to participants Exiting the scheme after the feasibility study.</p> <p>Exiting applicants will be asked to provide a narrative on your reasons for leaving the Programme and to provide a narrative on the lessons learned from undertaking the feasibility study. These could both be related to financial or business case reasons, unsolvable operational challenges, a change in business direction.</p> <p>For both these questions a suitably detailed response is a requirement of any milestone payment.</p>

Submission

The completed Checkpoint form should be submitted to the Delivery Partner either through the IHRS portal or following the submission guidelines provided in the confirmation note from the Application Registration. Applicants will receive an email acknowledgement of receipt of the Checkpoint form and should then expect to wait up to two weeks for feedback on the Checkpoint form, prior to proceeding.

A copy of feasibility study report, preliminary engineering report and any additional supporting documentation should also be submitted to the IHRS Delivery Partner.

Please note – Review of the Checkpoint form at Checkpoint 2 is required for:

Existing Phase 1 participants to progress to Phase 2 competitive application; or

Existing Phase 1 participants to exit the Programme (participants will also need to complete the Evaluation Process).

Existing Phase 1 participants to receive Payment Milestone PM02 – Grant payment for preliminary engineering.

or

New applicants to proceed with Phase 2 competitive application

Review of Checkpoint 2

The Checkpoint form is not competitively assessed but is subject to a review process. Following review of the Checkpoint form, applicants will be given a confirmation note with the following feedback:

Confirmation note	Pathways	Basis of outcome
Proceed	Existing participants continuing from IHRS-grant funded Phase 1 activities to Phase 2 capital delivery	All Grant Offer Letter and Grant Funding Agreement requirements met. Applicants may proceed onto submitting a full application by completing and submitting a Phase 2 Application Workbook. If technical comments are provided, applicants are strongly encouraged to address these prior to the submission of their application Workbook. Applicants are not required to resubmit the Checkpoint form. Payment Milestone 2 (PM02) shall be released.

Confirmation note	Pathways	Basis of outcome
	New entrants applying directly for Phase 2 capital delivery	Applicant may proceed onto the full application by completing and submitting a Phase 2 Application Workbook for competitive assessment. If technical comments are provided, applicants are strongly encouraged to address these prior to the submission of their application Workbook. Applicants are not required to resubmit the Checkpoint form.
	Exiting participants exiting the Programme	All Grant Offer Letter and Grant Funding Agreement requirements met, and evaluation process completed. Participant decides not to proceed further and may exit the Programme. Payment Milestone 2 (PM02) shall be released.
Cannot proceed	Existing participants continuing from IHRS-grant funded feasibility study to preliminary engineering	Grant Offer Letter and Grant Funding Agreement requirements not met. Participant cannot proceed onto Phase 2 full application. Payment Milestone 2 (PM02) cannot be released.
	New entrants applying directly for Phase 2 capital delivery	Applicant cannot proceed with full application as they either do not meet the minimum eligibility requirement (see section 1, or the Checkpoint form is incomplete.
	Exiting participants exiting the Programme	Grant Offer Letter and Grant Funding Agreement requirements not met and/or evaluation process not completed Payment Milestone 2 (PM02) cannot be released until the Grant Offer Letter and Grant Funding Agreement requirements have been met and/or the evaluation process completed by the participants.

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

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