Second Hydrogen Allocation Round (HAR2)

Project Application Form



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# Section 1: Second Hydrogen Allocation Round Introduction

## Application Introduction

On 14 December 2023, the Department for Energy Security and Net Zero (DESNZ) launched the Second Hydrogen Allocation Round (HAR2) to provide Hydrogen Production Business Model (HPBM) revenue support to eligible hydrogen production Projects. This document sets out the questions that Projects must answer, as well as the Templates, mandatory and supporting evidence that should be provided as part of applicants’ overall submissions.

**Application Guidance**

Provides all the details related to HAR2, including the application process, timeline, and funding rules. Applicants should ensure that they read the [Second Hydrogen Allocation Round (HAR2) Application Guidance Document](https://www.gov.uk/government/publications/hydrogen-allocation-round-2) before answering the questions set out within this document.

There are five main elements that make up a Project’s overall application submission. These comprise:

1. **Project Application Form (this document)**

This document consists of a series of key questions relating to the detail of the project submission and along with the Project Datasheet will form the primary basis for government to undertake the eligibility check and score Projects on the basis of the evaluation criteria. Projects should provide written responses within each answer box provided and ensure they keep to the overall word count set for each question.

1. **Mandatory Information**

Where requested, Project-specific and relevant required evidence must be provided by Projects and needs to be clearly referenced within the corresponding answer section. The mandatory evidence provided is used to substantiate and validate that the response is accurate and robust.

1. **Supporting Evidence**

Where requested, Project-specific and relevant supporting evidence can be provided by Projects and needs to be clearly referenced within the corresponding answer section. The supporting evidence provided is used to substantiate and validate that the response is accurate and robust. The onus will be on the Project Representative to demonstrate to government the credibility of information in a way that the Project considers to be most appropriate.

1. **Templates**

Projects will also be required to complete the following Templates alongside their written submission:

* **Annex A – Project Datasheet:** this document should be completed alongside the Project Application Form. It will be used to assess the Project against the eligibility and evaluation criteria. Please complete all parts of the annex that are relevant to the Project and provide mandatory and supporting evidence to justify the information provided.
	+ **There are three versions of this annex, you will only need to complete one depending on the Project’s production technology.** Please complete **Annex A1** if using electrolytic, **Annex A2** if using gasification/pyrolysis of biomass/wastes and **Annex A3** if using gas splitting producing solid carbon production technologies.
* **Annex B – References Matrix:** this document must be used to clearly set out all the mandatory and supporting evidence that has been submitted alongside the Project Application Form and Project Datasheet (Annex A) and the application questions this evidence is supporting.
* **Hydrogen Emissions Calculator:** this will be used during the eligibility check to confirm whether a Project is likely to be compliant with the Low Carbon Hydrogen Standard (LCHS).
* **Fugitive Hydrogen Emission Risk Reduction Plan:** this will be used during the eligibility check to demonstrate how fugitive hydrogen emissions at the production plant will be minimised.
1. **Online Application Form**

An Online Application Form needs to be completed alongside this Project Application Form. This includes details related to the Project’s organisation and its governance arrangements. Projects are encouraged to read the Online Application Form Manual, where more information can be found.

Projects must submit an [Expression of Interest Form](https://beisgovuk.citizenspace.com/industrial-energy/har2-expression-of-interest) by 23:59 on 5 February 2024 to receive a link to the Online Application Form. See Section 2.2 of the Application Guidance for more information on the Expression of Interest Form.

Projects must upload their completed version of this Project Application Form, their Mandatory and Supporting Evidence, and Templates to Section B of the Online Application Form.

The application submission window will open at 00.01 on 6th February 2024. Applications submitted before this date will not be considered. The deadline for finalised submissions is 23:59 on 19th April 2024.

The process will be run by the DESNZ. If applicants have any general questions about the submission process or about filling in any part of the submission documentation, please email queries to HAR2@energysecurity.gov.uk.

## Application Structure

This document, the Second Hydrogen Allocation Round Project Application Form, is divided into the following sections:

* **Section 3**: Eligibility, the information required will allow a Project to be assessed on whether it meets the eligibility criteria.
* **Section 4**: Project Summary, this information will provide background and context to assessors when reviewing the rest of the submission.
* **Sections 5-8**: Evaluation Criteria, each section focuses on the information required to support the assessment of the four evaluation criteria.

Alongside this Project Application Form, the assessment of the Project will be supported by the submission of Templates and additional mandatory and supporting evidence where necessary.

Table 1 summarises the Project Application Form structure and response requirements.

**Table 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Assessment Criteria  | Application section  | Weighting  | Assessment Areas | Annex (Templates)  |
| Eligibility  | 3 | N/A | Demonstrate the Project is eligible.  | Annex A – Project DatasheetAnnex B – References MatrixNote this section requires the Hydrogen Emissions Calculator and the Fugitive Hydrogen Emission Risk Reduction Plan templates both located [here](https://www.gov.uk/government/publications/uk-low-carbon-hydrogen-standard-emissions-reporting-and-sustainability-criteria). |
| Project Summary  | 4 | N/A | Provide background and context to assessors. | N/A |
| Deliverability  | 5 | 40% | Demonstrate the Project’s capability and capacity to deliver successfully by the selected commercial operation date. | Annex A – Project DatasheetAnnex B – References Matrix  |
| Cost  | 6 | 30% | Demonstrate whether the Project will deliver cost-effective hydrogen. | Annex A – Project DatasheetAnnex B – References Matrix |
| Economic Benefits and Supply Chain Development | 7 | 20% | Demonstrate the contribution the hydrogen plant will make to the economy and the development of hydrogen supply chains. | Annex A – Project DatasheetAnnex B – References Matrix |
| Wider Electricity System Benefits  | 8 | 10% | Additionality: Demonstrate whether a Project’s low carbon electricity source is met by new low carbon generation and does not divert low carbon electricity from other users to avoid negative impacts on wider decarbonisation.Network Constraints: Demonstrate whether Projects are located in areas that will help alleviate electricity network constraints. | Annex A – Project DatasheetAnnex B – References Matrix |

# Section 2: Important information regarding this process

## 2.1 General Guidance

**The application submission window will open at 00.01 on 6th February 2024. Applications submitted before this date will not be considered. The deadline for finalised submissions is 23:59 on 19th April 2024.**

Contact information for the Project is to be provided through the Online Application Form[[[1]](#footnote-2)].

Completed versions of the Project Application Form, alongside the templates and any mandatory and supporting evidence, should be uploaded to the Online Application Form. **Projects must upload the Project Application Form in Microsoft Word format (.docx file format).**

Government will not be responsible for any costs incurred in the preparation of any submission, irrespective of whether the Project is successful in the process.

Across the assessment government will place significant emphasis on the credibility and consistency of information provided. Projects should provide supporting information and evidence which demonstrates and substantiates the credibility of projections made in their submission. Government reserves the right to use publicly available information within the assessment and take any piece of information provided in any section of the submission into account in relation to any component of the HAR2 scoring to which it is pertinent.

Government reserves the right to take relevant information related to any entities listed in the application from other Project submissions into account when assessing a Project, and to contact such third parties to confirm information in the applications, for the purpose of cross-checking the information provided in the applications to ensure consistency and fairness of the assessment of Projects.

Projects should note the application submission is what is scored, and any supporting evidence provided is used to substantiate and validate that the response is accurate and robust. This evidence must be clearly referenced underneath the written response statement it is being used to support, including where relevant, reference to specific sections or pages within the supporting documentation.

Projects are required to submit specific, targeted evidence to support the application. **Lack of evidence, poor quality evidence, or large quantities of evidence that is not directly relevant to what is sought may negatively impact the assessment of the projects.**

Where answer statements are provided that are not supported by credible evidence, or where the evidence provided contradicts such statements, Government reserves the right to adjust key submission information such as cost and schedule data to more accurately reflect the evidence provided upon full evaluation.

Projects must consider their obligations under competition law before agreeing to share any information that could amount to competitively sensitive information. Projects will not be penalised in the scoring for refusing to share information in circumstances in which the sharing of that information could give rise to a breach of competition law.

Each individual piece of supporting evidence can be referenced multiple times in the Project Application Form and Annex A but should be uploaded only once to the Online Application Form. If large documents are required and submitted, please ensure specific pages or sections are referenced within the relevant sections of the application form, to make clear which answers the document is supporting.

All questions within the following sections will need to be copied, inserted, and completed for each offtaker or supply.

* 5.3.2 Offtaker Arrangements – Agreements & Development plan
* 5.3.3 Electricity Supply – Power Supply and Grid connection
* 5.3.4 Feedstock and Other Energy – Commercial and Physical Supply Arrangements

The word count stated will apply to each entity inserted, for example, 500 words for each offtaker.

Please note that the word limit does not cover the references sections. This is so applicants can be specific as to where information can be found in any documents provided. If this section is used to continue answers, the words will be removed before the assessment. To aid with document referencing please also fill in the References Matrix provided in Annex B, using the referencing convention set to name and reference all supporting and mandatory documentation provided.

Reasonable and proportionate inclusion of diagrams and simple tables will be excluded from the word counts, as well as any headings and subheadings. Please clearly state the word count within each answer.

**Only the answers provided in the application submission boxes will be scored and assessed.** Any text provided above the word limits will be removed, from the end of the answer, before information is provided to assessors and will not count towards the score.

# Section 3: Eligibility

Eligibility Criteria are fully described in Section 3.5 of the Application Guidance Document. In summary, to be eligible a Project must meet the following criteria:

* Project plant located entirely in the United Kingdom (UK) and the Applicant is a UK registered business.
* Can demonstrate that the Project can be operational between 31 March 2026 and 31 March 2029.
* Using core technology that has been tested in a commercial environment, with a Technology Readiness Level (TRL) of 7 or more.
* New build hydrogen production facilities, including new phases of existing projects, where at least 5MW (H2 HHV) of new hydrogen production capacity is added to an existing plant[[2]](#footnote-3)[2].
* Be one of the following eligible production technologies: Electrolytic, Gasification/pyrolysis of biomass/wastes without Carbon Capture and Storage (CCS), or Gas splitting producing solid carbon.
* Has identified and engaged with at least one qualifying offtaker[[3]](#footnote-4)[3].
* Has identified and engaged with a core production technology supplier.
* Meet a minimum hydrogen production capacity of 5MW H2 HHV[[4]](#footnote-5)[4].
* Capable of meeting the requirements of the Low Carbon Hydrogen Standard (LCHS).
* Can demonstrate access to finance.

Please ensure the Eligibility Cover Page is completed within Annex A – Project Datasheet. Applicants must reference evidence for each Eligibility Criteria to support your submission.

Eligibility will be checked and verified against the information and evidence referenced and, if needed, further checks will be undertaken within the application response and additional supporting evidence provided. Projects that fail to pass the eligibility criteria will not progress further to the evaluation process. If during the assessment of the application form, or further additional checks show that the Project no longer meets the eligibility criteria, Government will at that point consider it to have failed eligibility and reserves the right to end the evaluation.

## Section 4: Project Summary

## 4.1 High-level Project description (500 words)

This question can include information from any of the assessment criteria question answers, but no additional supporting information can be submitted. This question is not assessed or scored. For clarity, this question is not to provide detailed information to demonstrate evidence against any of the assessment criteria.

**Please provide a concise, high-level summary description of the Project. Include in the response an overview of the Hydrogen Production Facility, the current stage of design, and details on the** **current status of arrangements with all feedstock and electricity suppliers and offtakers. Diagrams and images are allowed within the answer.**

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| **Answer (Please clearly state the word count within each answer):** |

## 4.2 Future expansion phases (250 words)

Please provide a concise description of any planned additional stages of development of the Hydrogen Project, such as future addition of multiple staged hydrogen production units within the Hydrogen Project site. Where possible, please include an estimate of size in MW (HHV). Please include a description of the uncertainty around these future phases in terms of execution, offtake market, volumes, and costs. This is a non-scored, non-mandatory question. The data gathered by DESNZ may only be utilised to inform future policy delivery.

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| **Answer (Please clearly state the word count within each answer):** |

# Section 5: Deliverability

Assessment against this criterion will be undertaken based on information provided through Annex A - Project Datasheet and answers provided within this Section (5) of the Project Application Form, alongside any associated mandatory and supporting information submitted.

The Deliverability section will evaluate the credibility of a Project’s delivery plan and determine the level of confidence in a Project’s ability to achieve its stated Commercial Operational Date (COD). The Deliverability criterion will evaluate credibility by assessing:

* The Project’s organisational capability, including track record, capability, and credibility to deliver and operate the proposed Project as stated, including funding capability **(Section 5.1)**.
* The Project’s current level of development progress made to date, and their plans to complete all future work required to meet the stated COD. This will include:
	+ Project Deliverability - including schedule, planning and consents, and supply chain and procurement plan **(Section 5.2)**.
	+ Technical Deliverability – including the robustness of the technical design, credibility of the offtaker(s) plans and the required electricity and feedstock arrangements **(Section 5.3)**.

# 5.1 Organisational Deliverability

This section aims to understand the Organisation’s credibility and capability to deliver the hydrogen production plant, including having the appropriate organisation setup, team skills and capability, and governance in place. The organisational structure should be described including how the delivery of the Project will be managed, detailing the experience of key personnel.

**Note**: This section covers the developer-side project organisation only. Procurement of principal contractor(s), and commercial agreements and arrangements with offtakers and electricity, or feedstock suppliers will be covered separately in subsequent sections.

**Mandatory Information**

Mandatory information that needs to be submitted with the application:

* **Project organisational chart** – detailing all the key roles and named individuals required to deliver the Project.

## 5.1.1 Organisational capability (1250 words)

**Please provide a Capability Statement below demonstrating that the applicant, including any developer-side professional services, has the relevant skills and experience to deliver the Project, which should include details of the following:**

* + **Relevant organisational and project delivery skills and competencies within the organisation that are essential for delivering the Project (company track record and specific employees, or developer-side professional services appointed);**
	+ **The Project organisational structure that will build, own, and operate the hydrogen production facility;**
	+ **Relevant previous delivery experience and track record (including professional consultants, if applicable);**
	+ **The Project’s organisation(s) financial capability and proposed plans to secure any funding required to deliver the Project.**

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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* CVs for key personnel
* Partnering or sub-contracting agreements (client-side delivery organisation only). For example, technical, project management and commercial professional consulting services.
* Company Organisational Structure
* Project Organisational Structure
* Company Capability Statement (including professional consultants, if applicable).
* Examples of relevant project experience (including professional consultants, if applicable)
* Internal governance and approvals process
* Financing plans (planned funding arrangements).

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| **Evidence:**

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| Document Reference  | Document Name  | Relevant page/section  |
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5.2 Project Deliverability

In this section, please describe how the Project intends to execute and deliver all the remaining development stages, right through to construction and commissioning of the production facility. There should be a realistic and achievable project schedule, supported by details on all the critical risks and constraints identified, with mitigation plans to ensure the COD stated in the schedule is achieved.

**Mandatory Information**

Mandatory information that needs to be submitted with the application:

* **Level 2 Project Schedule (Level 3 preferred)** - in native file format (Primavera P6 (XER) or MS Project (XML/MSP)), plus a PDF copy;
* **Project Risk Register,** which includes assessment on the likelihood, severity and the planned mitigation measures for each risk identified;
* **Supply Chain engagement –** demonstrating the development progress made. For example, securing contracts with suppliers (particularly long lead item suppliers), obtaining planning, land consents, and all other approvals and consents.

## 5.2.1 Project delivery schedule (750 words)

This section aims to understand the Project’s delivery schedule, the current development stage, and the robustness of the planned activities and their sequence to achieve COD.

Please provide an integrated Level 2 logic linked schedule for the project development, construction, and commissioning phases of the Project, including:

* The development of all critical Project elements, including but not limited to the Project, production facility and offtakers, hydrogen transport, grid connection and power agreements and feedstock arrangements;
* Clearly show the critical path, float, contingency and any key milestones such as: planning, consents, decisions gates, long lead equipment items, power connections, FID, COD etc;
* All project development stages essential to achieving COD, including but not limited to, engineering and design, planning, environmental permitting, and consents, procurement, construction, and commissioning.

**Please provide a detailed schedule narrative justifying why the Project delivery schedule provided is deliverable within the timescales stated. This should include details of all key milestones, phases, and critical path activities, including explanations of any uncertainties and gaps in the schedule. All critical project risks and interdependencies that impact delivery should be identified and appropriately scheduled.**

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| **Answer (Please clearly state the word count within each answer):** |

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| **Evidence:**

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## 5.2.2 Planning, consenting & land requirements (750 words)

This section aims to understand the Project’s planning, consenting and land requirements, their current approval status and outstanding work to secure all permissions required to achieve COD.

**Please provide details on the following:**

* **A detailed overview of all planning, consenting, and land requirements for the Project, the hydrogen distribution infrastructure, and any hydrogen storage;**
* **A description on the progress made to secure all planning, consenting and land agreements (including purchase or lease agreements). This should include details of all relevant environmental impact assessments, statutory permitting and licencing requirements, including Environmental Agency compliance requirements, for example, consideration for water discharge, extraction, emissions of gases, noise, and plumes;**
* **A detailed description of the plans for completing all outstanding planning and consenting activity, including a detailed description of the work required and any areas of uncertainty being resolved to secure all planning, consenting and land agreements.**

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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Planning, consenting, and permitting strategy and plan
* Planning advice and stakeholder consultation or feedback
* Environmental studies, surveys, and impact assessments
* Pre-planning feedback.

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| **Evidence:**

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## 5.2.3 Supply chain - delivery and equipment (750 words)

This section aims to understand services and equipment needed to deliver the Project and the robustness of their supply chains plans in place to deliver to the stated timescales. Associated risks to securing the Project’s services and equipment should be identified and mitigation plans described in Section 7.2.1.

**Please provide details on the following:**

* **An overview of the Project’s procurement and contracting strategy for all contracts required to deliver the Project. This should cover all the delivery services (professional and construction) and equipment and plant, including justifying with evidence the long lead item timescales provided;**
* **Details of the current procurement stage and progress made to date to secure all contracts required to deliver the Project;**
* **A detailed description of the planned future work required to secure these contracts and any risk and dependencies being managed to avoid delays. Please explain how long lead item timescales are being managed to avoid delays to COD (electrolysers, compressors, hydrogen storage, hydrogen transport, water connections, grid connections, etc.).**

Where applicable, please refer to the information provided within Annex A – Project Datasheet and mandatory and supporting evidence to substantiate the answer provided.

|  |
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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Procurement and contracting strategy and plans
* Supply Chain engagement that demonstrates stage of development, for example Letters of Intent, Memorandum of Understanding, draft contracts for all suppliers
* Engagement with EPC contractors, if applicable
* Engagement with utilities.

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| **Evidence:**

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# 5.3 Technical Deliverability

In this section, please detail all the technical arrangements required to operate the hydrogen production facility and meet the offtake demand requirements. This should include a robust technical design, credible offtaker arrangements and plans to secure all required electricity and feedstock arrangements.

 **Mandatory Information**

Mandatory information that needs to be submitted with the application:

* Design intent document, covering project design and operational requirements and philosophy. This should include key aspects such as, electricity supply, feedstocks, production technology, transport and storage set-up, offtaker requirements and waste, residue, or co-product material;
* Offtaker commitment evidence, such as, Head of Terms, Memorandum of Understanding, or Letter of Intent;

## 5.3.1 Hydrogen production facility and operations (750 words)

This section aims to understand end-to-end system design, integration and operation of all critical components that will be required to ensure the Project is designed to operate as intended.

**Please provide details on the following:**

* **The Project's end-to-end system design and operational philosophy, summarising the detail provided within the design evidence submitted. This should include details on the Project site, balance of plant, transport and storage and production process. Specifically, please detail how this is being integrated and optimised to provide value for money over the contract lifetime;**
* **The current design status and design development progress made to date. Please provide evidence of the production facility designs, site layout plans, or other evidence to demonstrate current development stage;**
* **Details of the preventative measures that the Project is taking to ensure that equipment critical to operation is selected, integrated, constructed, and commissioned will meet the performance and reliability requirements over the lifetime of the contract;**
* **Please provide a detailed description and plan for completing all outstanding design work and the risks and dependencies being managed to avoid delays.**

Where applicable, please refer to the information provided within Annex A – Project Datasheet and evidence submitted to support and substantiate the answer provided.

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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Basis for design, Pre-FEED or FEED;
* System design, functional design specification, site layout plans, line diagrams, equipment specifications;
* The hydrogen production and demand forecast profile to demonstrate how daily hydrogen production matches the daily hydrogen demand.

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| **Evidence:**

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| Document Reference  | Document Name  | Relevant page/section  |
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## 5.3.2 Offtaker arrangements - agreements & development plan (500 words per offtaker)

This section aims to understand the level of progress made to identify and secure offtaker demand for the planned hydrogen production volumes. This includes details of offtake demand, the volumes committed to, and the level of offtaker commitment expected for the Project’s current development stage.

At least one of the proposed, viable offtakers must be a qualifying offtaker to meet HAR2 eligibility requirements.

If your Project is proposing to have a Hydrogen Heating Trial as an offtaker please note the additional requirements which need to be provided in the Second Hydrogen Allocation Round Application Guidance.

**Please provide details on the following:**

* **An overview of the Project offtaker(s), including their business requirements, hydrogen requirements, expected demand profile in relation to the Project’s planned production profile and all transport and storage requirements;**
* **The** **current status and progress made to date on developing the contractual and commercial agreement and the physical supply arrangements between the hydrogen producer and the offtaker(s), including evidence of offtaker engagement. This should include technical and commercial details on all offtaker(s) requirements;**
* **A detailed description of the planned future work required to complete all outstanding work to secure all contractual and commercial agreements, complete all physical supply arrangements and any risk and critical dependencies being managed to avoid delays;**

Where applicable, please refer to the information provided within Annex A – Project Datasheet and evidence submitted to support and substantiate the answer provided.

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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Offtaker(s) feasibility studies, site location plans and equipment layout drawings.

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| **Evidence:**

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# 5.3.3 Electricity supply - Power supply and grid connection (500 words per supply)

This section aims to understand how the Project plans to power the Project, including any power purchasing arrangements, plans to construct new generation and physical grid connections. This includes the current status of development and the robustness of the development plans to complete all outstanding work to enable COD to be achieved.

When answering the questions below, please ensure each of the following is covered, where applicable;

* Details of the power purchase procurement strategy and the intended power purchasing arrangements planned;
* Details of any developments plans for all generating assets (either direct wire, or through a power purchasing agreement) that are currently not operational, which the Project will rely upon to meet the planned hydrogen production volumes;
* Details of all planned physical grid and / or direct wire connection(s), including securing the required DNO connection capacity, land requirements, planning permission etc.

**Please provide details on the following:**

* **An overview of each electricity input required to power the Project.**
* **The progress made to date to develop and finalise all electricity supply and connection arrangements.**
* **A detailed description of the planned future work required to complete all outstanding work and any risk and critical dependencies being managed to avoid delays.**

Where applicable, please refer to the information provided within Annex A – Project Datasheet and evidence submitted to support and substantiate the answer provided.

|  |
| --- |
| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Power procurement strategy or methodology statement;
* Details of the intended power purchase agreement (or draft PPA/HoTs) that are being considered (including agreed duration, parties in agreement, quantity of power supply, location of power supply);
* DNO engagement on grid capacity and reinforcement requirements including connection offer/acceptance.
* Evidence of engagement with electricity suppliers and network operators, where applicable;

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# 5.3.4 Feedstock and Other Energy – Commercial and physical supply arrangements (500 words per supply)

This section aims to understand how the Project plans to source the feedstock and heat required to produce the planned hydrogen production volumes, including the commercial and physical supply arrangements, the current status of development and the robustness of these plans to enable COD to be achieved.

**Please provide details on the following:**

* **A detailed description of all feedstock and heat requirements (excluding electricity covered in question 5.3.3) needed to produce the planned production volumes (for example, water, biomass, steam or natural gas);**
* **A detailed description of the development progress made to date to finalise all contractual/commercial agreements and all physical and technical supply arrangements;**
* **A detailed plan of all future work required to secure feedstock(s) in line with COD and any risk and critical dependencies being managed to avoid delays.**

Where applicable, please refer to the information provided within Annex A – Project Datasheet and evidence submitted to support and substantiate the answer provided.

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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Feedstock procurement strategy or methodology statement;
* Details of any feedstock purchase agreement (or draft agreements/HoTs) that are being considered (including agreed duration, parties in agreement, quantity of supply, location of supply);
* Evidence of engagement with all feedstock supplier(s).
* Feedstock supply agreements;
* Feedstock quotations;
* Details of the physical infrastructure and logistic plans needed to deliver the feedstock(s) to site, and any development work required to supply the production facility.

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# 5.3.5 Waste, residue, and co-product material arrangements (500 words)

This section aims to understand the Project’s waste, residue, and co-product material plans. This includes the volumes expected to be produced and the plans for managing these once created.

**Please provide details on the following:**

1. **Details of each waste, residue and co-product material expected to be produced from the facility and a justification of classifying each material as a waste/residue/co-product;**
2. **A detailed plan for the storage, disposal, usage (including any planned revenues), sequestration and offtake of each material and the current development status for progressing these plans;**
3. **A detailed description of the future work required to finalise the plans for each material, highlighting any risk and critical dependencies being managed to avoid delays.**

Where applicable, please refer to the information provided within Annex A – Project Datasheet and evidence submitted to support and substantiate the answer provided.

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| **Answer (Please clearly state the word count within each answer):** |

**Supporting Evidence**

Supporting evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Engagement with the waste/co-product end user, if applicable (Letter of Intent, Memorandum of Understanding, draft quotations).
* Process Flow Diagrams (PFDs)

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# Section 6: Cost

Assessment against this criterion will be undertaken based on information provided through the Project Datasheet (Annex A) alongside any associated supporting documentation. There are no specific questions that need to be answered in this section of the Project Application Form.

Annex A asks for data on your expected CAPEX, OPEX, electricity and fuel costs and production volumes. You must provide a cost class for each CAPEX cost estimate based on The Association for the Advancement of Cost Engineering (AACE)’s cost estimate classification system, and an estimated cost certainty range for non-electricity/fuel OPEX, to reflect how developed each cost estimate is and the remaining uncertainty.

You must also provide supporting evidence, assumptions and calculations to justify how you have derived your cost and production estimates. ‘Comments’ boxes are provided throughout Annex A for you to provide detail on the assumptions and calculations underpinning your estimates, and ‘supporting documentation reference’ boxes are provided for you to input references to relevant supporting evidence.

Certain costs associated with the production of hydrogen are ineligible for support under the HPBM and will therefore be automatically excluded from the Strike Price. You must not include in your datasheet (Annex A) any costs which are ineligible for support under the HPBM. These include:

* OPEX associated with operating and maintaining hydrogen transport infrastructure (such as pipelines or tube trailers)
* Services costs incurred prior to contract award (e.g. pre-FEED, other DEVEX)
* Indirect and direct taxes and duties, including, but not limited to:
	+ VAT
	+ Green levies on electricity (e.g. Renewables Obligation, Feed-In Tariffs, Contracts for Difference, etc.)
	+ Business rates
	+ Import duties on imported materials and equipment.

Full details on eligible and ineligible costs can be found in the draft HPBM heads of terms[[[5]](#footnote-6)].

You should provide as accurate and robust information as possible, as the credibility of the figures provided and quality of supporting evidence will affect the score you receive for the cost criterion. To ensure projects do not score more highly by falsely understating their costs, Government will review the supporting evidence to assess the robustness of the cost estimates provided and, where necessary, make adjustments to account for a lack of evidence or remaining uncertainty that has not been captured in the cost estimates. Government will also check cost data against information provided for the deliverability assessment to ensure the evidence aligns and is substantiated.

Section 7: Economic Benefits and Supply Chain Development

Assessment against this criterion will be undertaken based on information provided through the Project Datasheet (Annex A) and answers provided within the Project Application Form alongside any associated supporting documentation.

## 7.1 Economic Benefits

Assessment against the economic benefits criterion is based solely on information provided in the Project Datasheet (Annex A). There are no specific questions that need to be answered in section 7.1 of the Project Application Form.

Annex A asks for a detailed breakdown of spending on key components and services in the ‘CAPEX’ tab, and the sourcing of these components and services in the ‘Economic Benefits’ tab. Information in these two tabs will form the basis of the assessment of the economic benefits criterion.

In the ‘Economic Benefits’ tab you must state whether the components or services required for your Project are sourced domestically (from within the UK) or are imported. You must do this for all CAPEX line items against which you have provided a cost estimate. For all line items sourced domestically, you must also provide a postcode for where the components or services will be sourced from. Specifically:

* For materials, the postcode should relate to the location where the materials used in your Project are manufactured.
* For services and site development, the postcode should relate to the location where the employees delivering the services or site development will be carrying out their work (e.g. for site development this will likely be the postcode of your production facility, for services it may be the postcode of your production facility if they are providing these services on site, or it may be the relevant office location if they are providing desk-based or remote services).

**Do not just provide a postcode for the headquarters of the company from which you are sourcing components or services (unless this is where the relevant employees working on the Project will be based). Doing so may lead to inaccuracies in the assessment of your Project.**

If the components or services for a single line item are being provided from multiple locations, you should provide the postcode for where the majority of the work will be taking place.

You should provide supporting evidence to justify the expected source of the key components and services. ‘Comments’ boxes are provided in the relevant tabs of Annex A for you to provide additional detail on the expected sources of different components and services, and ‘supporting documentation reference’ boxes are provided for you to input references to relevant supporting evidence.

## 7.2 Supply Chain Development

## 7.2.1 Supply chain resilience (1250 words)

What processes do you have in place, or plan to put in place, to mitigate risks affecting the supply of key components, and associated materials?

This question focuses on the ‘physical' equipment that will be installed. To obtain high scores you must provide evidence across the breadth of your supply chains (i.e., hydrogen generation equipment and its key components, hydrogen storage vessels and hydrogen transport methods, e.g., pipes or tube trailers) during both the installation and then the operational/ maintenance phases. The substantiating evidence should give us confidence you have appropriate processes in place, or plan to put them in place, to deal with the risks relating to all services and equipment outlined above in section 5.2.3.

Use the answer to explain how your systems will work. Please create a table listing all the key components and your approach to mitigate installation and operational/ maintenance risks for each of them. For example, what will happen if there are delays in the delivery of your electrolyser? What steps will you have to ensure the Project is operating as quickly as possible?

Where there is no clear evidence that contracts and dedicated systems or processes are in place or will be put in place, you cannot achieve a high score. Where contracts and/or systems are already in place, documentary evidence of this (e.g., appropriately redacted sections of key documents) is welcomed. Where contracts are not yet in place, please provide evidence that you will ask for the relevant information from your suppliers (e.g., extracts of tender templates, etc). Note that simply stating that you have systems in place or that you commit to run due diligence/ audits does not suffice as evidence.

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| **Answer (Please clearly state the word count within each answer):** |

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## 7.2.2 New entrants and SMEs (500 words)

Please provide evidence of engagement with new players and/or SMEs.

New entrants and SMEs[[[6]](#footnote-7)], wherever they are from, can help bring disruptive practices, ideas and products to the supply chain. What actions have you taken/ will you take to identify and promote new entrants into your supply chains throughout the duration of your Project, and to remove barriers to new entrants? This should include actions to specifically support SMEs, both in the UK and internationally, in the development, construction/ fabrication and operational phases of your Project.

Where some/ all contractors have already been selected evidence could include:

* copies of the tender invite(s) and lists of contractors approached (with reasons if no SMEs or new entrants were invited);
* the numbers and contract values (£m) of successful new entrants or SME contractors chosen; and
* reasons why new entrants and SMEs were not selected in tenders where they bid.

Where contractors have not been finalised, please provide evidence of new entrant and SME engagement to date and your procurement policy. Answer questions such as which aspects do you believe new entrants or SMEs can provide, which new entrants and SMEs have/ will you engage with, how you are promoting the Project more widely (e.g., attendance at hydrogen or SME conferences) and other actions.

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## 7.2.3 Skills (500 words)

Please state the main skill gaps, shortages or barriers you are facing and state the main skills challenge your Project proposes to address through its lifetime.

Please break your answer down into those relating to the direct employees on the Project (i.e. those that will be employees of your Project company, or in the case of larger hydrogen generation company applicants, those employees that will be deployed to work on the Project) and then skill gaps, shortages and barriers your construction and operational/maintenance supply chains are facing, and what your Project proposes to do to address the main skills challenge over its lifetime. As well as your direct employees and your supply chains, what skills gaps, shortages and barriers will your offtakers face, and what, if anything, will the Project be doing to help address these.

High marks will be given to those projects that provide a balanced, evidenced backed response and do not exaggerate claims (e.g., their project will enable employees in a large electrolyser manufacturer to receive additional training – unless this can be credibly evidenced).

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| **Answer (Please clearly state the word count within each answer):** |

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Section 8: Wider Electricity System Benefits

This criterion assesses the contribution the Project can make to the Government’s objectives of decarbonising the power sector by 2035 and managing the challenges associated with network constraints as we transition to net zero. Projects will be assessed against their overall contribution to these aims, across two sub-criteria: i) additionality of electricity input source, and ii) location relative to electricity network constraints. Scores across both sub-criteria will be combined to give a total system benefits score.

## 8.1 Additionality of electricity input (500 words)

Please provide evidence of the specific electricity input source(s) being claimed as ‘additional’, including justification for the data provided in the Project Datasheet (Annex A) on the additional electricity source and percentages claimed. The electricity input sources that can be claimed as additional are listed in the HAR2 Application Guidance under the ‘additionality principles’. Please also provide any evidence (if available) that the hydrogen production facility has been a decisive factor in the generation asset being claimed as additional becoming operational. Projects will be scored on; i) percentage of the facilities overall electricity demand being supplied by additional sources; and ii) the quality of the evidence to prove this additional electricity will be delivered to the site.

**Supporting Information**

Evidence could include, but is not limited to, the following types of documentation for this assessment criteria:

* Details of the electricity to be supplied from specific additional generation assets, including why they are additional e.g., Indicative PPAs with the specific generation asset (or assets) being claimed.
* A breakdown of the % of additionality electricity being sourced from these additional generation assets (of total electricity input for hydrogen production), per year (evidence to be provided in the electricity sources tab in the Project Datasheet)
* Schedules for delivery of generation assets being claimed as additional.
* Evidence of the procurement plan to use excess electricity that would otherwise be curtailed, e.g., expected excess electricity volumes for specific generation assets linked by private wire, and / or evidence of ability to operate in the balancing mechanism to use excess electricity that would otherwise be curtailed (including planned % of input per year).

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| **Answer (Please clearly state the word count within each answer):** |

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## 8.2 Impact of the location of electrolysers on the electricity system in Great Britain

We will score projects based on the impact of their location on the electricity system, as per the HAR2 Application Guidance. Please provide details of the Project location in the Project Datasheet (Annex A). No further evidence will be required.

This publication is available from: [www.gov.uk/government/publications/hydrogen-allocation-round-2](https://www.gov.uk/government/publications/hydrogen-allocation-round-2)

If you need a version of this document in a more accessible format, please email alt.formats@energysecurity.gov.uk. Please tell us what format you need. It will help us if you say what assistive technology you use.

1. [] The online application form is the system set up to collect all of the relevant information, documents and supporting evidence from the Project. [↑](#footnote-ref-2)
2. [2] We are defining ‘New Build Production Facilities’ as a newly constructed facility built for the specific purpose of producing hydrogen. See the Second Hydrogen Allocation Round Application Guidance for more information. [↑](#footnote-ref-3)
3. [3] Where qualifying offtaker refers to offtakers that are eligible for HPBM support. [↑](#footnote-ref-4)
4. [4] When considering hydrogen production capacity, we care about the maximum MW of hydrogen output of the facility in high heating value terms before load factor or plant availability are taken into account. This is not necessarily the same as electrical input. The 5MW threshold applies to individual Projects. Projects will not be able to aggregate capacity across different locations or have a phasing approach to build capacity gradually to 5MW. [↑](#footnote-ref-5)
5. [] Low Carbon Hydrogen Hydrogen Production Business Model Head of Terms, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/1125173/Low\_Carbon\_Hydrogen\_Production\_Business\_Model\_Heads\_of\_Terms.pdf [↑](#footnote-ref-6)
6. [] Use the gov.uk and EU definition of SMEs: An SME is any organisation that has fewer than 250 employees and a turnover of less than €50 million or a balance sheet total less than €43 million. [↑](#footnote-ref-7)