GGR Innovation Programme: Phase 1

Application Form (TRN 4696/10/2020)

Updated 8 December 2020 to correct for errors made[[1]](#footnote-1) in the original version

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# GGR Innovation Programme: Phase 1 – Application Form (TRN 4696/10/2020)

## Application Guidance

Further information and guidance about the GGR Innovation Programme: Phase 1 can be found in the Competition Guidance Notes (available at [https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition](https://www.gov.uk/guidance/funding-for-low-carbon-industry)).

This Competition is being delivered using the Small Business Research Initiative (SBRI) approach as a pre-commercial procurement and the competition will have two phases.

Phase 1, Design studies (total budget of up to £7 million, up to £250,000k per contract for each study): project teams will deliver a publishable design studies that will provide:

* A detailed description of the science and engineering underpinning the proposed GGR solution,
* a detailed engineering design for a pilot project that could be taken forward between 2022 and 2025
* a detailed and costed project plan setting out how and where the GGR solution will be piloted if selected for funding
* a programme and business plan detailing how the GGR solution could continue to be developed beyond the end of the pilot phase, should the pilot phase be funded.

BEIS will appoint a monitoring officer[[2]](#footnote-2) to oversee Phase 1 projects, which must deliver a draft report by 19th November 2021 and a final report by 31 December 2021.

In Phase 2, the best of the Phase 1 designs will be selected for construction, operation, test, refinement and evaluation. Phase 2 is expected to run from April 2022 to March 2025.

This application form covers applications for Phase 1 of this Competition only. Applicants should also complete the Declaration forms contained in the separate documents labelled “Declarations”. All documents can be downloaded from the GRR Innovation Programme website ([https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition](https://www.gov.uk/guidance/funding-for-low-carbon-industry) or [Contracts Finder](https://www.contractsfinder.service.gov.uk/Notice/eaf48ad8-30ae-416f-a58a-2586f6280ec5?origin=SearchResults&p=1))

Please refer to Section 3 (Competition Timetable, Application and Assessment Process) of the GGR Innovation Programme Competition Guidance Notes for further information on the application and submission process.

# Contact and Bidder Details and Proposal Summary

|  |  |  |
| --- | --- | --- |
| Summary Information | | |
| Name of Bidding Organisation  (This should be the lead organisation/co-ordinator for the proposed project. Please note that this will be the organisation with whom BEIS contracts for Phase 1 of this Competition.) |  | |
| Project Title |  | |
| Lot Number (Lot 1 or Lot 2) |  | |
| Estimated Start Date |  | |
| Phase 1 Project Duration | 0 mths | |
| Total proposal price for Phase 1 Feasibility Study | £ 0.00 | |
| Estimated costs of Phase 2 Pilot Project | £ 0.00 | |
| Is this a collaborative application? | Click to enter | Please provide contact and business details for all the project partners in Annex 1. |

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| --- |
| Bidder Contact Details |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Title | Choose title | Name |  | | |
| Position | |  | | | |
| Email | |  | | | |
| Telephone | |  | | Mobile |  |
| Organisation name | | | |  | |
| Address | | | |  | |
| Town/City | | | |  | |
| Postcode | | | |  | |
| Organisation Type | | | | Choose type | |
| If type of business is ‘other’, please describe here: | | | |  | |

|  |
| --- |
| Organisation Details |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number of employees (including directors) | | | | | | | | | | | | 0 | | | |
| Business Registration Number | | | | | | | | | | | |  | | | |
| Turnover (in most recent annual accounts) | | £ 0.00 | | | | as at | | | | | | enter date | | | |
| Balance Sheet Total (total assets net of depreciation) | | £ 0.00 | | | | as at | | | | | | enter date | | | |
| Business maturity | | | | | | | | | | | | Choose maturity | | | |
| Does the business have a parent company? | | | | | | | | | | | | Choose an item | | | |
| How is the business currently funded? (Choose all that apply) | | | | | | | | | | | | | | | |
|  | No Funding | |  | | | | Founders (including bank loans) | |  | Friends and Family | | |  | | Public Sector Grants\* |
|  | Angel Investment | | |  | | | | Venture Capital |  | | Private Equity | | |  | Stock Market Floatation | |
| Other public sector funding: With respect to this project or the technology it is based on, please list briefly any public sector support you are receiving or have received in the past 10 years, or which is currently being sought (please add further details in a separate annex if necessary). | | | | |  | | | | | | | | | | | |

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| --- |
| Parent Company Details (if applicable) |

|  |  |  |  |
| --- | --- | --- | --- |
| Organisation name |  | | |
| Address |  | | |
| Town/City |  | | |
| Postcode |  | | |
| Turnover (in most recent annual accounts) | £ 0.00 | as at | enter date |
| Balance Sheet Total (total assets net of depreciation) | £ 0.00 | as at | enter date |
| Company maturity | Choose an item. | | |

|  |  |
| --- | --- |
| Details corresponding to BEIS Key Performance Indicators (KPIs) | |
| Number (and size) of Organisations supported to deliver project (Lead Partner and Other Organisations as would be named on the contract) |  |
| Number of active Business Relationships and Collaborations likely to be supported (Formal and Informal, Overall and New) through this Project |  |

## Public Description of Project

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| The public description of the project should be a brief non-confidential description of the project that BEIS may use in online or printed publications; please describe the project objectives and key deliverables and the expected project benefits)  (maximum 300 words) |
|  |

## Eligibility Criteria

This section seeks information to address the Competition Eligibility Criteria: all projects will be assessed against these eligibility criteria before progressing to evaluation against the Assessment Criteria. Please see section 4 of the Competition Guidance Notes for further information.

Please answer all eligibility criteria questions. Mark “YES or NO” with and “X”

|  |  |  |  |
| --- | --- | --- | --- |
| Eligibility Criteria | Eligibility Question | YES | NO |
| The activities for any Design study or pilot project procured in this Competition must be conducted largely in the UK (and the majority, over 50%, of the eligible project costs must be incurred in the UK). | Are the proposed activities to be conducted largely in the UK, and will over 50% of the eligible project costs be incurred in the UK? |  |  |
| Innovation and technology readiness - This Competition is to support the development of innovative direct air capture and other greenhouse gas removals technologies. It is to support the development of technologies that are not yet commercial from Technology Readiness Levels (TRLs) 4 to 7 at the start of the projects. (Further information on TRLs can be found in Appendix 1 of the GGR Innovation Programme Competition Guidance Notes). | Will your technology / system be at TRL 4 – 7 at the start of the project? |  |  |
| Technology Scope  The focus of the Competition is to support the development of innovative direct air capture and other greenhouse gas removals technologies.  Exclusions: Funding will not be provided for projects where the technology development focuses on:  Forestry and other Land-Use and/or Land-Use Change projects  Projects where the primary route to removal is through soil carbon sequestration  Fertilization of the oceans to stimulate take-up of CO2 | Is your technology within scope? |  |  |
| Project Status - BEIS is unable to fund retrospective work on projects. | Can you confirm that your application does not seek retrospective funding for work already carried out on this project, or to be carried out before April 2021? |  |  |
| Additionality - Projects can only be funded where evidence can be provided that innovation would not be taken forwards (or would be taken forwards at a much slower rate) without public sector funding. | Can you confirm that this project would not be taken forward (or would progress at a much slower rate) without public sector funding? |  |  |
| Eligible project costs - SBRI is aimed at organisations working on research and development (R&D) of an innovative process, material, device, product or service prior to commercialisation.  The full list of eligible project costs is set out in Appendix 2 and outlined in Section 5 of the GGR Innovation Programme Competition Guidance Notes . | Can you confirm that requested funding is for eligible costs only? |  |  |
| Project end date - Phase 1 Design Studies must be completed and approved by BEIS (projects need to allow for time for the BEIS monitoring officer to review the feasibility study and amend accordingly) by 31 December 2021. | Can you confirm that the project will meet the specified project end dates? |  |  |
| Risk-Benefit sharing - The sharing of risks and benefits is an important aspect to the SBRI approach. Projects receive financial support and retain any intellectual property generated, with certain rights of use retained by BEIS. Project outputs are also expected to be shared widely and publicly and project teams are not permitted to include profit in the eligible project costs (for Phase 1 or Phase 2). | Have you accounted for risk-benefit sharing in the cost of your application? |  |  |
| Applicants and project team make-up – Phases 1 and 2 of the Competition are expected to be delivered by a project team or consortium. A single project application must be submitted by the lead project member (the project co-ordinator).  Please refer to Section 4 (Eligibility for funding) of the GGR Innovation Programme Competition Guidance Notes for further information. | Can you confirm that your project team meets eligible organisation requirements? |  |  |
| Delivering multiple projects  If project consortium member(s) are part of multiple successful bids they must be able to deliver on them and they must not have applied for funding for the same piece of work more than once. | If you or your consortium are part of multiple successful bids would you be able to successfully deliver all projects if necessary? |  |  |
| If you or your consortium are part of multiple successful bids could you please confirm that you have not applied for funding for the same piece of work more than once? |  |  |

## Assessment Criteria

This section seeks information to address the Competition Assessment Criteria: these criteria will be used to rank projects during the assessment process. Please see section 7 of the Competition Guidance Notes for further information.

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| Technology feasibility and applicability |

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| Weighting - 10% |
| Applicants should provide robust description of following information:   * Comprehensive description of the technology development status of your proposed approach with reference to Technology Readiness Levels (TRLs) * Evidence of GGR performance, such as outputs from previous R&D projects, previous prototypes, or demonstrators, either in the UK or elsewhere * Outline path to technology/approach reaching 50k tCO2e per annum by 2030 or sooner including main technical difficulties to be overcome and development milestones * If relevant, path to permanent Transport & Storage. Storage location does not need to be identified at this stage, but if geological storage of captured GHG is the end point of removal this will need to be stated and an explanation of how the GHG will be produced in a form suitable for geological storage will need to be provided. See Annex 4 of the Guidance documentation.   Please limit your response to 3 pages (Ariel, font-size 10, single-spaced) |
|  |

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| Social value |

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| Weighting - 10% |
| Applicants are expected to demonstrate Social Value by demonstrating how the proposal will (a) benefit the UK, (b) deliver jobs for UK citizens, and (c) bolster the UK’s reputation as a pioneer in green technologies. Please  Describe the method of GGR and how your proposed approach significantly advances the development of GGR technology in the UK  Provide estimates below of the numbers and types of jobs that deployment of their technology would create – e.g. the size of staff required to operate a single plant (or even jobs created per kt CO2e removed per year if possible), levels of technical expertise or specialist knowledge required, and any other relevant information  Provide quantitative or qualitative estimates of any other ways that widespread adoption of this technology in the UK might add value to society and bolster the UK’s reputation as a pioneer in green technologies.  Please limit your response to 2 pages (Ariel, font-size 10, single-spaced). |
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| Cost reduction and Technology development |

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| Weighting - 25% (split into sections a – 10%, b – 10% and c – 5%) |
| Section 3a. In the spreadsheet template provided set out robust evidence on Life Cycle Analysis of GGR and quantify, per tonne CO2e removed, any additional required inputs to the system (e.g. water use, land footprint, any other).  (Weighting for section 3a – 10%)  Please use the spreadsheet provided |
| Section 3b. Provide below a realistic and robust cost reduction plan until 2030, including a reasonable assessment of removal cost in 2030 in £/tCO2e, with reference to the information you have provided in the “pilot costs” and “2030 costs” tabs of the accompanying spreadsheet.  Applicants are expected to:   * Describe costs of the solution, and how confidence in lifetime costs (including CAPEX and OPEX) will be improved, and provide supporting evidence. * Describe how the design study phase will firm up costs for the commercialised solution.   (Weighting for section 3b – 10%)  Please limit your response to 3 pages (Ariel, font-size 10, single-spaced) |
|  |
| 3c. Provide below a realistic and robust commercialisation plan.  Applicants are expected to:   * Provide a description of the path you expect to take in scaling the technology/approach up * Provide a description of any changes to additional resources needed as the technology is further developed (energy, feedstocks, land footprint, water, etc.) * Provide any expected revenue streams from the technology including the sale of by-products if there are any, * Provide any other steps you plan to take or milestones you need to reach to achieve full commercialisation   (Weighting for section 3c – 5%)  Please limit your response to 2 pages (Ariel, font-size 10, single-spaced) |
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| Project Team |

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| Weighting - 10% |
| Applicants are expected to:   * Describe the skills you have in your team and assure BEIS that you have the team you need to deliver * Demonstrate the capacity to deliver technical and project management aspects of the Project. * Demonstrate a strong commitment of all participating organisations for consortium bids * Highlight any skill gaps that will be addressed by subcontractors   Please limit your response to 2 pages (Ariel, font-size 10, single-spaced) |
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| Project Delivery |

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| Weighting - 25% |
| Applicants are required to provide a project plan, for Phase 1. This will be assessed by looking at a range of factors, including:   * the completeness and quality of the proposed project plan; * the appropriateness and realism of the project milestones and deliverables; * the quality of risk assessment and contingency planning; * the approach to engineering design, research, quality assurance and data quality.   High scoring applications will, for example:   * present well thought-out, robust, credible, project plans including Gantt chart (10% of the total marks); * show a realistic and robust approach to risk management and data collection, with a comprehensive risk matrix, including mitigation methods for the risks mentioned within (10% of the total marks); * guarantee access to any necessary specialist facilities, operational knowledge and skills, or other resources required to execute the project (5% of the total marks) * and not be heavily dependent for success on external factors beyond the project’s direct control   Please provide your project plan as an annex. An example risk table is provided below |

## Table 4a – Risks and Risk Management – GGR Innovation Programme Phase 1 Feasibility Study

(Bidders can provide their own Risk Table as a separate Annex if preferred)

|  |  |  |  |
| --- | --- | --- | --- |
| Risk  (Identify and describe all key project risks, including: financial, technology, supply chain, regulatory, etc) | Overall risk rating: (Probability x Impact)  High, Medium or Low | Mitigation actions  (Describe the actions taken or planned responses to reduce the impact and/or probability of the risk) | Residual risk rating, after mitigation applied: (Probability x Impact)  High, Medium or Low |
| Technical risks (there may be several)  Risk 1  Risk 2 etc |  |  |  |
| Process integration  List risks… |  |  |  |
| Resource issues (e.g. availability of equipment)  List risks… |  |  |  |
| Collaborators (e.g. failure of partners)  List risks… |  |  |  |
| Economic and market factors (e.g. changes in cost of equipment)  List risks… |  |  |  |
| Legislative/regulatory changes  List risks… |  |  |  |
| Human resources (e.g. loss or disability of key personnel)  List risks… |  |  |  |
| Competition (e.g. technology substitution)  List risks… |  |  |  |
| IP risk (challenges)  List risks… |  |  |  |
| Planning and permitting  List risks… |  |  |  |
| Commercial considerations  List risks… |  |  |  |
| Additional risk type |  |  |  |

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| --- |
| Project Financing |
| Weighting – 20% |
| Applicants are expected to show:  Robustness of the project costs estimate – i.e. whether the proposed eligible project costs are realistic & justified in terms of the project plan and sufficient to yield the deliverables sought;  Highest marks (up to 20%) will be awarded to projects that can demonstrate that the proposed SBRI contract will represent good use of the public money with realistic and justifiable costs, and that the project is are likely to secure the expected project aims and deliverables;  Please use the space below to describe how your proposed project costs are realistic and justifiable.  Please complete the Finance Form provided alongside this application. If you wish to include other information on costs use the space below, limiting your response to 1 page (Ariel, font-size 10, single-spaced). |
|  |

Please ensure that all declaration forms have been filled in, signed, and provided with the submission of your proposal. These declarations are provided and can be downloaded from the GGR Innovation Programme website ([https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition](https://www.gov.uk/guidance/funding-for-low-carbon-industry) or [Contracts Finder](https://www.contractsfinder.service.gov.uk/Notice/eaf48ad8-30ae-416f-a58a-2586f6280ec5?origin=SearchResults&p=1).

# Annex 1: Partner Information (for Collaboration Projects only)

Please complete this once for each partner

|  |
| --- |
| Contact Details – Partner x |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Choose title | Name | |  |
| Position |  | | | |
| Email |  | | | |
| Telephone |  | Mobile | |  |
| Organisation name | | |  | |
| Address | | |  | |
| Town/City | | |  | |
| Postcode | | |  | |
| Organisation Type | | | Choose type | |
| If type of business is ‘other’, please describe here: | | |  | |

|  |
| --- |
| Organisation Details – Partner x |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number of employees (including directors) | | | | | 0 | | | | | | | | | |
| Business Registration Number | | | | |  | | | | | | | | | |
| Turnover (in most recent annual accounts) | | | | | £ 0.00 | | as at | | | | enter date | | | |
| Balance Sheet Total (total assets net of depreciation) | | | | | £ 0.00 | | as at | | | | enter date | | | |
| Business maturity | | | | | Choose maturity | | | | | | | | | |
| Does the business have a parent company? | | | | | Choose an item | | | | | | | | | |
| How is the business currently funded? (Choose all that apply) | | | | | | | | | | | | | | |
|  | No Funding |  | | | | Founders (including bank loans) | |  | | Friends and Family | |  | | Public Sector Grants\* |
|  | Angel Investment | |  | | | Venture Capital | | |  | Private Equity | | |  | Stock Market Floatation | |
| \*With respect to this project or the technology it is based on, please list any public sector support received in past 10 years, or currently being sought (please add further details in a separate annex if necessary) | | | |  | | | | | | | | | | | |

|  |
| --- |
| Parent Company Details (if applicable) |

|  |  |  |  |
| --- | --- | --- | --- |
| Organisation name |  | | |
| Address |  | | |
| County |  | | |
| Postcode |  | | |
| Turnover (in most recent annual accounts) | £ 0.00 | as at | enter date |
| Balance Sheet Total (total assets net of depreciation) | £ 0.00 | as at | enter date |
| Company maturity | Choose an item. | | |

This publication is available from: <https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition>

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1. Detailed description of the changes made can be found in the Question and Answer documentation published at <https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition> [↑](#footnote-ref-1)
2. In most instances the monitoring services will be provided by an external organisation [↑](#footnote-ref-2)