Department for
Business, Energy
& Industrial Strategy

CCUS Innovation 2.0

Call 2 Guidance (May 2022)

May 2022

Any enquiries regarding this publication should be sent to us at:
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Part 1: CCUS Innovation 2.0

Section 1. Overview

Mission Statement: To accelerate the deployment of next-generation CCUS technology in the UK so that it can deploy at-scale by 2030, and ensure UK obtains maximum benefit.

The £20 million CCUS Innovation 2.0 programme aims to support innovations that either significantly reduce the cost of Carbon Capture Usage and Storage (CCUS), or help UK industry to understand the opportunity for deploying Next Generation Carbon Capture Technology on industrial, waste, or power generation sites for 2030.

Through two calls, Call 1 (now closed) and Call 2 (open May 2022), the programme provides £19.5m of grant funding to innovation projects that develop technologies for capturing, using, transporting, and storing CO2, thus increasing their technology and commercial readiness level (TRL & CRL), in preparation for commercial deployment. Technology development can, for example, focus on a specific carbon capture or carbon utilisation process, or key underlying equipment used in the wider CCUS process.

The programme will not fund direct air capture (DAC) technology, as this was the subject of a separate £70 million BEIS GGR programme[1]. Figure 1 is the high-level schedule for CCUS Innovation 2.0, and Figure 2 illustrates how this programme fits into the wider timeline for deployment of next generation CCU and CCS technology out to 2030.

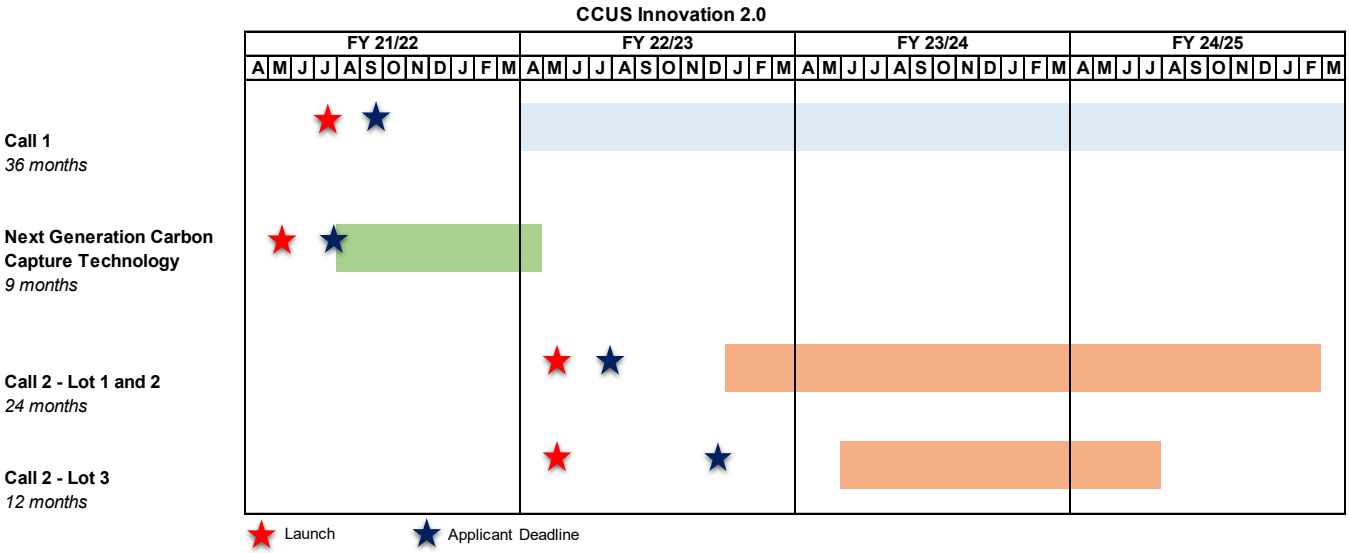

Figure 1: CCUS Innovation 2.0 high-level schedule

[1] Direct Air Capture and other Greenhouse Gas Removal technologies competition https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition

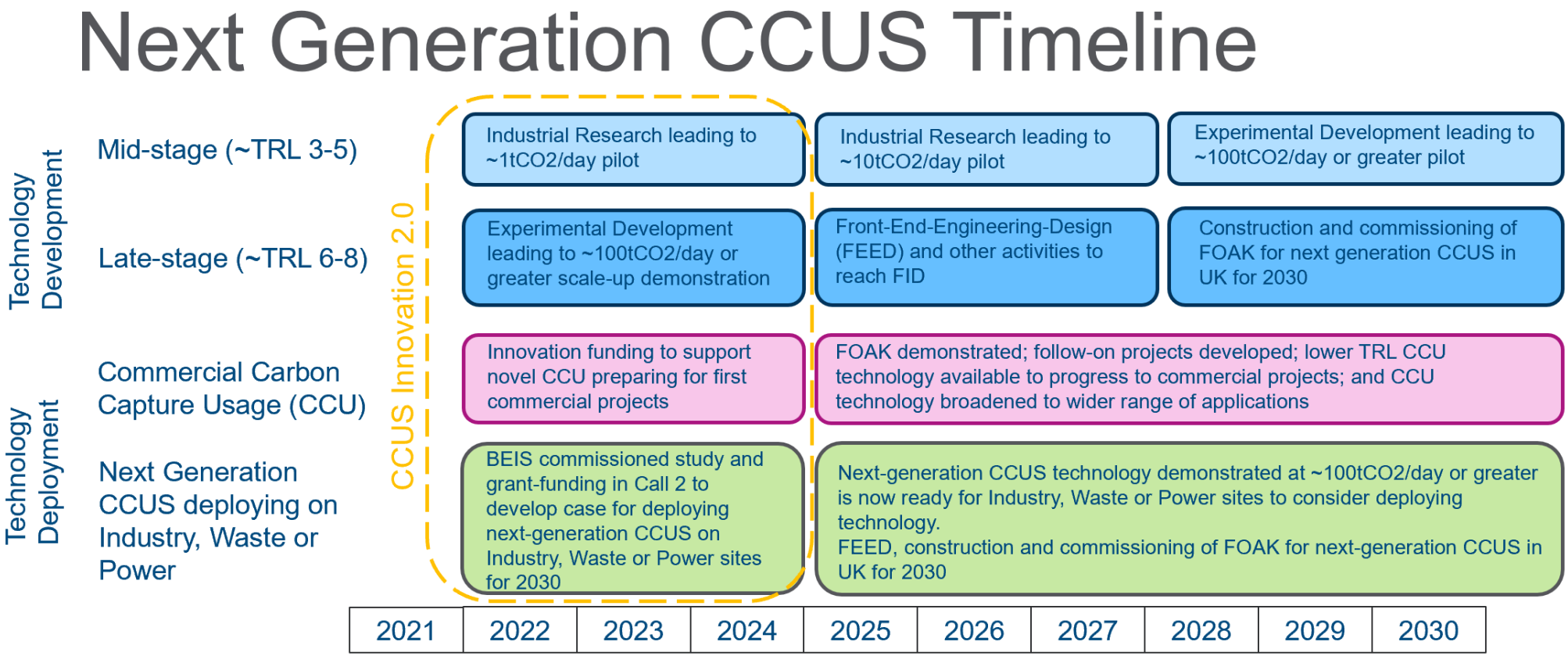

Figure 2: Next Generation CCUS Timeline

CCUS Innovation 2.0 follows on from the success of two previous CCUS innovation programmes managed by BEIS:

- The 2018 Call for CCUS Innovation, which was crucial in developing CCUS deployment projects entering the Industrial Decarbonisation Challenge (managed by UK Research & Innovation (UKRI)), as well as developing next generation CCUS technology; and
- The Carbon Capture Utilisation Demonstration (CCUD) programme, which funded numerous feasibility studies, Front-End-Engineering-Design (FEED) studies, and resulting in the construction of the UK's first industrial carbon capture and utilisation plant at Tata Chemicals Europe's Northwich site (Figure 3) [2].

Figure 3: Tata Chemicals Europe 40,000 tCO2 CCU Facility in Northwich

Call 1

Launched in July 2021, BEIS provided just over £12 million of grant funding to CCUS Innovation 2.0 Call 1 projects. The successful Call 1 projects are listed in Table 1, for which further details can be found on GOV.UK. These projects constitute a combined industry and government investment of almost £26 million in Next Generation CCUS Innovation.

Table 1: Call 1 selected projects

Lead Project Partner	Project Title	Grant Value
Baker Hughes Ltd	Electrified Subsea System for offshore CO2 storage	£2,122,698.59

[2] TATA CHEMICALS EUROPE TO BUILD UK'S FIRST INDUSTRIAL SCALE CARBON CAPTURE AND UTILISATION PLANT WITH £16.7M INVESTMENT, June 2019, https://www.tatachemicalseurope.com/news-release-tata-chemicals-europe-build-uks-largest-carbon-capture-use-plant

Carbon Clean Solutions Ltd	Parametric testing of Novel Non-Aqueous Solvent technology with Rotating Packed Beds.	£607,126.57
C-Capture Ltd	XLR8 CCS Accelerating the deployment of a low cost carbon capture solution for hard to abate industries	£1,723,101.02
Deep Branch BioTechnology Ltd	Deep Blue C	£4,827,394.93
Econic Technologies Ltd	Turning waste carbon dioxide into value for the surfactants industry	£1,000,000.00
Imperial College	StrataTrapper: Commercialising breakthrough research on accurate reservoir simulation for subsurface CO2 storage	£959,662.00
Ingenza Ltd	BioReact Carbon Formate - Continuous Capture of Industrial CO2 and its Utilisation as a Platform Chemical Feedstock	£443,632.88
Keadby Generation Ltd	FOCUSS - Flexibly-Operated Capture using Solvent Storage	£515,878.00

Review of Next Generation Carbon Capture Technology Study for Industrial, Waste and Power Sectors

In August 2021, BEIS appointed AECOM and the University of Sheffield to conduct a review and techno-economic analysis of next generation carbon capture technologies for application in the industrial, waste and power sectors. For the purposes of the study, “next generation” is a technology that will be ready for commercial deployment in the timescales of 2030-2035. This is distinct from the ‘benchmark’ of amine solvent-based capture systems that are currently considered the most developed capture technology on the market. Commercial scale is assumed to be full-scale deployment on an industrial plant, typically of the order of >1,000 tonnes of CO2 captured per day. The results of the study are intended to provide guidance to Government and to industries that may develop carbon capture projects as part of their decarbonisation strategy.

The objectives of the study were to:

1. Provide an updated review of carbon capture technologies that are in development globally, consider their development status, opportunities and barriers to

deployment, and identify those that may be ready for commercial deployment in 2030-2035.

2. Develop a concept for a mobile pre-deployment de-risking plant, with a nominal size of 10-100 tCO2 capture per day, that can be installed at a range of emitters to provide long duration representative testing of key components of capture technologies that operate on representative flue gases.
3. Undertake a techno-economic assessment of a representative selection of carbon capture scenarios, covering a range of capture technologies that are applied to a range of industrial emitters.

The results of the techno-economic assessment include a levelised cost of capture (LCOC), an impact on product cost and commentary on the demonstration status, opportunities and challenges, as well as the assumptions for each scenario. The scenarios assessed and LCOC values derived are shown in Figure 4. These results are based on a number of assumptions associated with the economics and deployment pathway of carbon capture in the UK, as well as the technology itself. In addition to its performance, the selection of a particular technology and the economics of its application are highly site-specific and may be influenced by a range of engineering and economic factors.

All of the assessed technologies were at a developmental stage and are the subject of ongoing development work, which will provide essential evidence to demonstrate their long-term performance and validate the performance and cost assumptions made in this study.

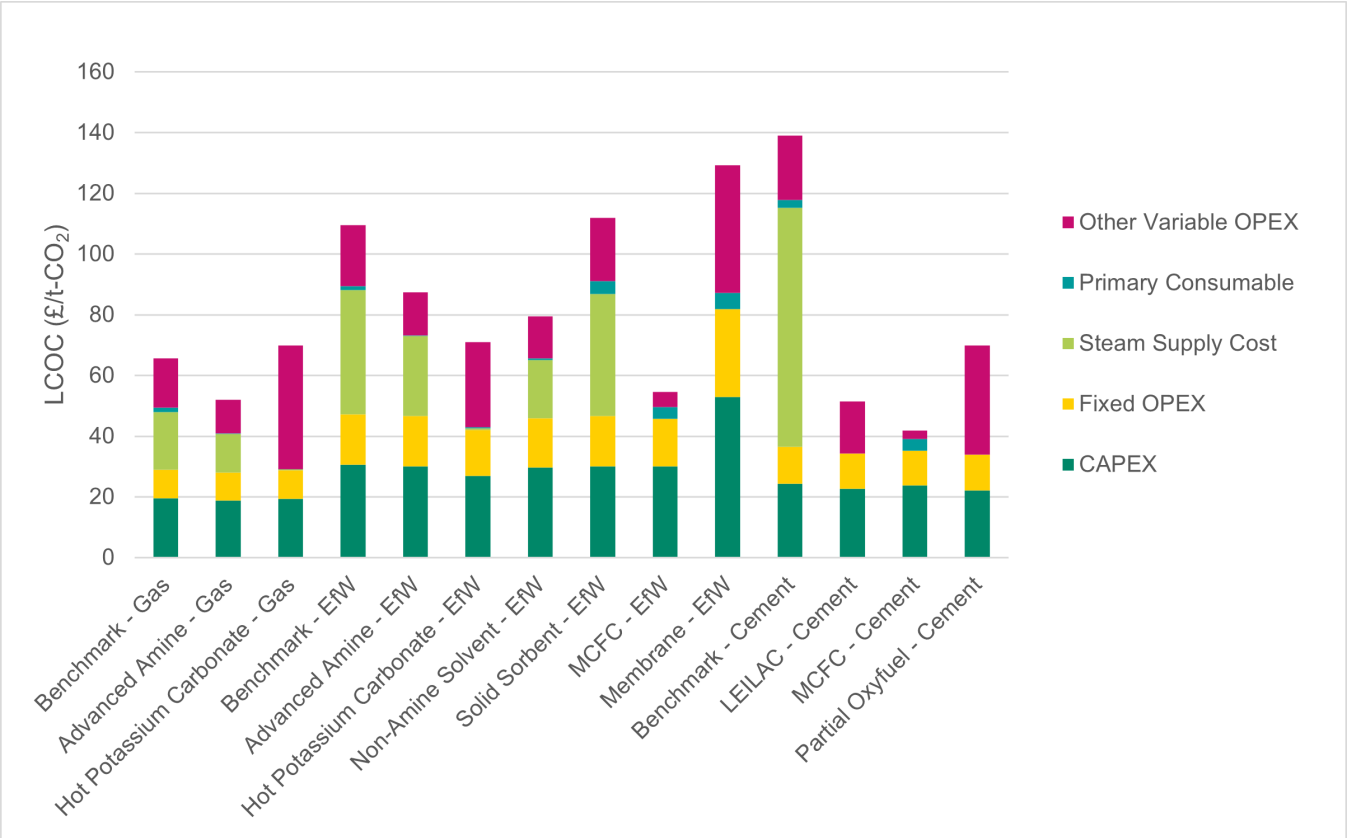

Figure 4: LCOC breakdown for case studies analysed in the study performed by AECOM and The University of Sheffield.

This study was supported by an External Advisory Project Board of industrial and academic representatives covering industry, waste and power sectors (Table 2).

Online industrial workshops were held in September 2021 and January 2022[3] to understand the view of industrial stakeholders. A final workshop is due to be held on 23rd June 2022, for AECOM to present the modelling and outputs of the study. All the underlying reports of the study have been published [with Call 2 in May 2022.]

Table 2: Advisory Board Members

Review of Next Generation Carbon Capture Technology for Industry, Waste and Power Sectors **Representatives on the External Advisory Project Board**	
Anaerobic Digestion and Bioservices Association	Industrial Decarbonisation Research Innovation Centre (IDRIC)
Association for Decentralised Energy	Glass Futures
British Glass	Make UK

[3] Details and recordings of the industrial workshops can be accessed: https://ukccsrc.ac.uk/next-generation-capture-technologies/

Carbon Capture and Storage Association (CCSA) Cast Metals Federation Ceramics Federation Chemical Industries Association Climate Change Committee Energy UK Environmental Services Association IEA GHG R&D Programme	Mineral Products Association Non-ferrous Metal Alliance UKRI- Innovate UK Professor Andrew Barron, University of Swansea Professor Jon Gibbins, University of Sheffield Professor Mathieu Lucuiaud, University of Sheffield (ex-University of Edinburgh) Professor Paul Fennell, Imperial College London

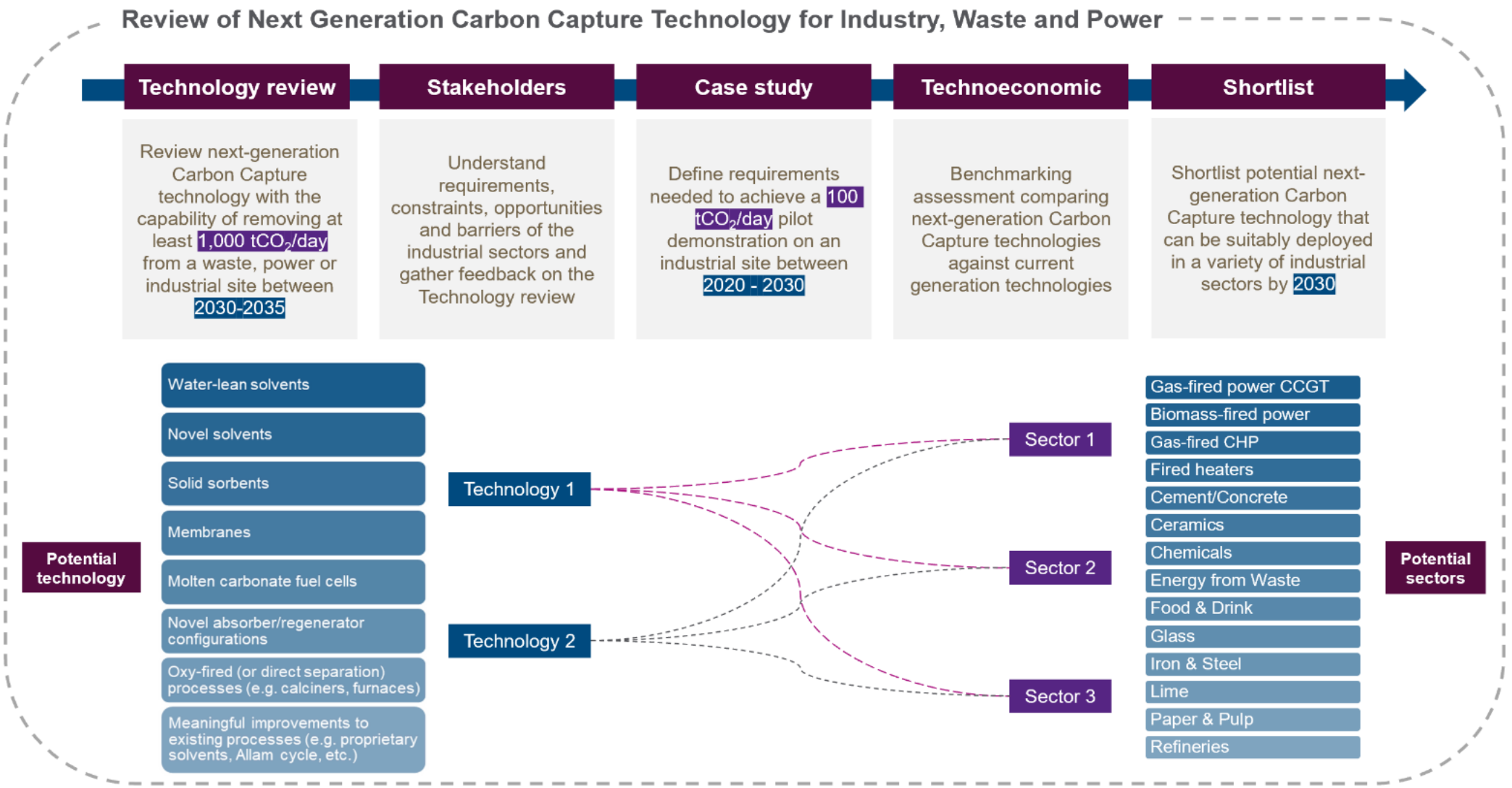

Figure 5: Methodology used in the review of Next Generation Carbon Capture Technology

Call 2

Up to £7.3million in grant funding is available for Call 2 of the CCUS Innovation 2.0 programme. This is divided into three lots:

- **Lot 1, up to £1.8 million, Mid Stage CCUS innovation:** for projects developing and piloting mid-stage CCUS innovation currently at TRL 3-5. For Lot 1, BEIS will consider grant applications of up to £1 million.
- **Lot 2, up to £5.0 million, Late Stage CCUS innovation:** for projects developing late-stage CCUS innovation currently at TRL 6-8. For Lot 2, BEIS will consider grant applications of up to £5 million.
- **Lot 3, up to £500,000, Next Generation Carbon Capture Technology feasibility studies:** for industrial, waste or power site owners to analyse Next Generation Carbon Capture Technologies currently at TRL 3-8, to understand their feasibility for deployment at one of their UK-based sites. For Lot 3, BEIS will consider grant applications of up to £50,000. *[Only UK-based sites with an eligible SIC code will be to apply (see Part 1:7.2.1)].*

Through Lot 1 and 2, CCUS Innovation 2.0 supports novel CCUS innovation through its entire development lifecycle, including technology development, de-risking, and the design, construction and operation of a pilot scale unit. Projects may also include aspects of Pre-Front End Engineering Design (pre-FEED) for the techology's first commercial deployment. However, please note that FEED for a full-scale commercial deployment will not be supported, as this support is provided through the BEIS Industrial Energy Transformation Fund[4].

If any of the Lots are over or under-allocated, BEIS reserves the right to re-allocate the monies available for the different Lots. If a high number of excellent projects apply, BEIS reserves the right to fund more than £7.3 million in this call.

BEIS will consider offering grant funding up to 24 months for Lot 1 and 2 projects and up to 12 months for Lot 3 projects. All projects must finish before 28 February 2025.

For Lot 1 and 2, both industry and academia led projects will be considered if they lead to:

- A significant reduction in the cost of deploying CCUS; and
- A clear route for the intellectual property (IP) to be commercialised following the project.

The Call is eligible for all sizes of organisation. Projects can work with international partners, but at least 50% of the project funded must be conducted in the UK. It is preferred that demonstration of technologies will be at a UK site, but they can be at a non-UK site if this can be reasonably justified. Small and medium size companies that are selected in Lot 1 and 2 will also be offered additional acceleration support (see Part 1:Section 2).

[4] https://www.gov.uk/government/collections/industrial-energy-transformation-fund

Applicants will be expected to demonstrate that their project proposals meet the definition of either Industrial Research, Experimental Development, or Feasibility Study. Funding levels will vary for each project type, according to conditions as set out in Part 1:Section 5.

1.1 Key Knowledge Deliverables (KKDs)

A condition of receiving grant funding is that projects must agree to publish non-confidential project outcomes and learning as Key Knowledge Deliverables (KKDs). Previous BEIS CCUS innovation programmes have been successful in maximising what information can be shared openly with the wider CCUS community, while preserving confidential details (or the competitive position) of its innovation projects.

All project reports or deliverables will be assessed to determine their status as a KKD. The three classifications are:

- deliverable can be published in full;
- deliverable can be published after redactions of commercial information; and,
- deliverable cannot be published (e.g. Non-KKD).

KKDs for successful projects will be agreed with BEIS before the grant agreement is signed.

1.2 Terms & Conditions of Grant Funding

A generic Grant Funding Agreement (GFA) and Grant Offer Letter (GOL) template have been provided in Appendix 4 – Grant Funding Agreement Template and Appendix 5 – Grant Offer Letter Template to give applicants a sense of what terms & conditions BEIS will be providing grant funding. These include:

- BEIS will reimburse its share of eligible costs in arrears, on a milestone completion basis. Evidence will be required that the project has met the milestone and the monies have been fully defrayed.
- A Reasonable Assurance Report will need to be produced (and provided to BEIS) for the full project cost of a milestone, if the incurred expenditure of any milestone claim is £100,000 or more. If the total amount of the grant is £1 million or more, a Reasonable Assurance Report will be required for every milestone. A template for what needs to be included in the Reasonable Assurance Report can be found in the Generic Grant Offer Letter (Appendix 5 – Grant Offer Letter). The production of Reasonable Assurance Reports are not an eligible cost and must be funded by project consortium member(s).
- The value of the final milestone must be at least 10% of total grant which will be paid once the project satisfactorily completes the final milestone. A final Reasonable Assurance Report for the full project costs will be required with the final milestone.
- Projects will provide BEIS with quarterly progress reports by the end of the second week of March, June, September, and December.

- Projects receiving grant funding will submit Key Performance Indicators (see Part 1:1.3) to BEIS for the duration of the co-funded project and for up to 3 years after.

When applying for grant funding, the lead organisation and partners must agree to the T&Cs included in the guidance (Appendix 4 – Grant Funding Agreement & Appendix 5 – Grant Offer Letter).

1.3 Key Performance Indicators & Benefits Plan

By submitting a bid, Grant Applicants agree that BEIS can hold their contact details for evaluation purposes for the duration of the competition, even if their bid is not successful. BEIS may, within that time, contact the Applicant to request their participation in a more in-depth evaluation, exploring issues such as the application process or the development of your technology in the absence of BEIS funding. It is not mandatory for unsuccessful Grant Applicants to participate in such an evaluation.

For projects in receipt of funding, the lead Grant Recipient for each project will be required to collaborate in reasonable evaluation activities, including, but not limited to, completing questionnaires or surveys, participating in interviews and workshops, communicating the learnings from the project, providing costs/sales data and reporting on Key Performance Indicators (KPIs) used by the Net Zero Innovation Portfolio (NZIP), for up to three years after the completion of the funded project.

These KPIs will be agreed with BEIS from the following, or a similar updated, list:

Table 3: KPI List

KPI 1	Number of innovation projects supported by NZIP
KPI 2	Number of projects that have successfully met objectives
KPI 3	Number (and size) of Organisations supported to deliver project (Lead Partner and Other Organisations as named on grant offer/contract
KPI 4	Number of active Business Relationships and Collaborations supported (Formal and Informal, Overall and New)
KPI 5	Advancement of Low Carbon Projects – Technology Readiness Level
KPI 6i	Initial Financial Leverage from private sector to deliver project
& 6ii	Follow-on Funding to take project further forward
KPI 7i A	Reduced Unit Cost of Energy - LCOE
& 7i B	Potential Reduced Unit Cost up to 2032
KPI 7ii A	Increased Energy Efficiency/ Reduced Energy Demand

& 7ii B	Potential Increased Energy Efficiency up to 2032
KPI 7iii A	Increased energy system flexibility
& 7iii B	Potential increased energy system flexibility up to 2032
KPI 8	Number of products (and services) sold in UK and Internationally
KPI 9	Potential Reduction in Carbon Emission Savings of Project up to 2032
KPI 10	Policy Influence

Benefits Management Information provided by the Grant Recipient under Performance Criteria in the application form will be used, where practicable, to provide baseline measures for the identified benefits that the project is aiming to realise. Using the identified measures, the Grant Recipient is required to collaborate with the BEIS Project Officer to complete a benefits plan. The benefits plan will be used to track and report on benefits at quarterly project review meetings.

1.4 Definition of Feasibility Study

For the purpose of Call 2 of CCUS Innovation 2.0, Feasibility Study is defined as:

'the evaluation and analysis of the potential of a project, which aims at supporting the process of decision-making by objectively and rationally uncovering its strengths and weaknesses, opportunities and threats, as well as identifying the resources required to carry it through and ultimately its prospects for success.'

For the purpose of CCUS Innovation 2.0, a feasibility study can include any work up to (and including) pre-FEED, meaning any design work and activities on the approved concept in preparation for front-end engineering design (FEED). Please note that FEED for a full-scale commercial deployment will not be supported.

1.5 Definition of Industrial Research

For the purpose of Call 2 of CCUS Innovation 2.0, industrial research is defined as:

'the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services.'

Activities may include:

- the creation of component parts of complex systems;
- the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems; and,

- pilot lines, when necessary for the industrial research and notably for generic technology validation.

1.6 Definition of Experimental Development

For the purpose of Call 2 of CCUS Innovation 2.0, experimental development is defined as:

'acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services.'

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

Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.

Section 2. Acceleration Support

This section is for information regarding support for SMEs.

This scheme will offer acceleration support to successful applicants that meet the definition of Small & Medium Enterprise (SME) Table 4. This is highly recommended for SME grant awardees to help develop their business. Acceleration support is 100% funded by BEIS. This support will focus on helping the applicant to prepare commercial plans and actions that will increase the chance of successfully bringing their innovation to market or reducing the time to market.

Table 4: Acceleration support criteria

Company Category	Staff Headcount		Turnover		Balance Sheet Total
Medium	<250 people	**AND**	≤£45m	**OR**	≤£39m
Small	<50 people	**AND**	≤£9m	**OR**	≤£9m

Micro	<10 people	**AND**	≤£2m	**OR**	≤£2m

Carbon Trust will lead a consortium (Energy Systems Catapult, Eigen Ventures, Mott Macdonald and KPMG) to deliver the Acceleration Support Services on behalf of BEIS. Specialist support will also be provided by clean tech investor Sustainable Ventures, technical consultancy E4tech, product development specialists High Value Manufacturing Catapult, international patent and trademark consultancy Novagraaf, marketing and communications experts Greenhouse and legal specialist dwf.

The starting point for acceleration support is to consider the current stage of commercial preparation and identify (with the applicant) critical next steps, business strengths and gaps, benchmarked for the stage of the individual business across all key acceleration support focus areas:

- market engagement and proposition;
- strategy and sales;
- team and board;
- funding and investment;
- product-service design, development and launch; and
- business processes and controls.

Specialist advisers from Carbon Trust and its consortium will be assigned to support the company in the development of the appropriate knowledge and skills. Three types of support will be available, dependant on company needs:

1. tailored support, including coaching and specialist support across the six focus areas;
2. group training and learning resources, including sector specific masterclasses and techno-market workshops; and
3. access to industry and finance networks, providing companies with investor engagement opportunities, pitch training sessions, facilitated market engagement and networking opportunities

All SME-led proposals that are awarded funding and wish to receive Acceleration Support will need to participate in an Acceleration Support Planning meeting. This planning session will be conducted by The Carbon Trust. Following the planning meeting an acceleration plan will be created outlining the task delivery plan. These plans will be bespoke and based on company needs identified.

BEIS have historically offered acceleration support (previously referred to as Incubation Support) to help grant recipients from the Energy Entrepreneurs Fund (EEF) scheme to

achieve maximum commercial impact from the grant. It is highly recommended that recipients of this funding take up the offer of acceleration support services and co-operate with both the acceleration planning session and the acceleration manager, who will oversee the delivery of the acceleration support. However, unlike the EEF scheme, receiving the identified acceleration support is not a condition of the grant award.

Participants will also be asked to collaborate in monitoring and evaluation activities and to provide feedback on support provided through the programme.

Section 3. Application and Assessment Process

3.1 Lot 1 and 2

The activities listed in Table 5 are applicable to the CCUS Innovation 2.0 Call 2 application and assessment process for Lot 1 and 2. All dates given may be subject to change due to prevailing circumstances (i.e. if a great number of proposals are received than expected, it may take longer than planned to issue conditional successful/unsuccessful letters).

Figure 6: Applicant journey

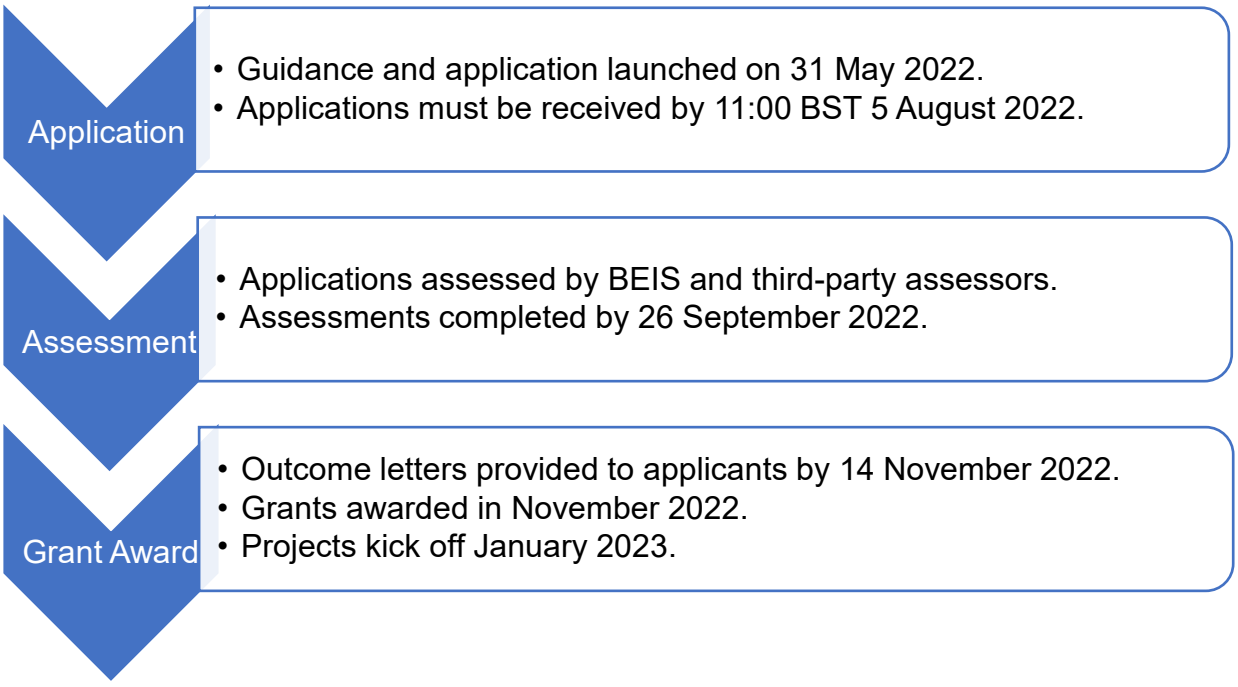

Table 5: Indicative key dates for Lot 1 and 2 for CCUS Innovation 2.0 Call 2 application and assessment process.

Activity	Date
CCUS Innovation 2.0 Call 2 guidance and application window launched	31 May 2022

Industry Engagement Day	14 June 2022
Deadline to submit questions	17 June 2022
Deadline to submit Expression of Interest	17:00 BST 1 July 2022
Anonymised Final Q&A published	1 July 2022
Deadline for Applications	11:00 BST 5 August 2022
Conditional successful/unsuccessful letters	14 November 2022

Lot 1 and 2 Timings: Launch 31 May 2022

As outlined in Figure 6, the CCUS Innovation 2.0 Call 2 process will be undertaken in three key stages comprising application, assessment, and grant award.

Stage 1: Application

Applicants are asked to submit a project application form, with supporting information by **11:00 BST 5 August 2022,** using the **SmartSurvey link** available on the CCUS Innovation 2.0 webpage.

The notes below explain the details of the application process:

- **Questions about the Call:** If you have any questions about the call after reading these guidance notes, please submit them to Industry.Innovation@beis.gov.uk. All questions should be submitted by **17 June 2022**. Questions submitted after this date may not be answered. We will reply to any queries which, in our judgement, are of material significance through an anonymised Q&A sheet published on our website by **1 July 2022.**
- All applicants should take these replies into consideration when preparing their own applications and we will evaluate applications on the assumption that they have done so.
- **Expression of Interest:** All applicants intending to submit an application(s) into the Call should email Industry.Innovation@beis.gov.uk by **17:00 BST 1 July 2022** to confirm that they intend to submit an application. Please can you confirm the following:
    - Organisation name of Lead applicant;
    - If you are applying to:

    - **Lot 1** (up to £1 million grant funding for mid-stage (~TRL 3-5) CCUS innovation projects), or
    - **Lot 2** (up to £5 million grant funding for late-stage (~TRL 6-8) CCUS innovation projects)
- Whilst it is not a prerequisite for applicants who make an application to submit an Expression of Interest, it will help BEIS estimate and allocate resource during the assessment stage.
- **Submission of Application:** The full application for the competition must be submitted online by the deadline: **11:00 BST 5 August 2022**. The online application form will be closed for submissions after this time. A template for the application is available to download with this Guidance.
- Application documents: All application documents must be submitted via the online application form. In the form there are opportunities to upload relevant supporting documents. In some sections, we specify the supporting information we would like to see uploaded. Uploaded documents cannot be in place of answers being provided in the SmartSurvey. The application will be assessed on the answers in the SmartSurvey fields. Uploaded documents should only be of a supporting nature to the main answer.

Submission Content

Each online application must include the following documents:

- Completed Application Form (the online application form can be found via the SmartSurvey link on the CCUS Innovation 2.0 webpage).
- Completed Project Cost Breakdown Form (this will be available to download and should be uploaded in the Finance Section of the assessed criteria in the application form).
- Completed high level project Gantt chart or project schedule for the project proposed needs to be uploaded in the Project Schedule section of the assessed criteria in the application form.
- Completed risk register for the project proposed needs to be uploaded in the Project Risk and Risk Management section of the assessed criteria in the application form.
- **Optional**: additional letters of support from collaborators/partners (where relevant) or other supporting information can also be submitted in the final section before you submit your online application form. Supporting documents should provide substantive information to the proposal. BEIS will accept additional supporting information in the form of further annexes, however, you should not assume that any additional information will be reviewed as part of the selection process and your application should not rely on information cross-referenced within annexes.
- You should endeavour to answer all the questions on the application in full, some questions will be 'mandatory fields' in the form and you will not be able to proceed to the next section until these questions are complete. Incomplete applications and any

containing incorrect information may be rejected. However, BEIS may, at its discretion, request clarification before making a final decision. Any applications or supporting documentation received after the application deadline will not be considered.

Submission Costs:

- You will not be entitled to claim from the Department any costs or expenses that you may incur in preparing your bid, whether or not your proposal is successful.

Stage 2: Assessment

Applications will initially be assessed against the Eligibility Criteria in Part 1:Section 4. **Applications which fail the Eligibility Criteria will not be assessed further. It is essential to ensure that your project meets these criteria before you submit your application.**

Eligible applications will be scored against the assessment criteria described in Part 1:Section 7, by three reviewers, including reviewers external to BEIS operating under the Technical Third Party Support (TTPS) contracts. All reviewers, internal and external, will be required to consider and identify any conflicts of interest in advance of the assessment process. Reviews will only proceed once BEIS is in receipt of reviewers' declared Conflict of Interest forms.

Reviewers will assess against the specific criteria summarised in Table 6 and described in more detail in Part 1:Section 7, and Part 2:Section 1.

Table 6: Lot 1 and 2 Assessed Criteria

Lot 1 & Lot 2
Value and Unique Nature of the Innovation
Cost and Performance of Innovation
Addressable Market of the Innovation
How Project Outcomes will be Commercially Exploited
Project Schedule
Project Risks & Risk Management
Project Cost Breakdown
Case for Public Funding
Experience and Skills

Reviews and scores will be moderated to determine an overall ranking list that will be used to allocate the funding for the Competition. To be eligible to receive funding, an application must also achieve a minimum total score of 60% against these assessment criteria and must not receive a score of '1 – Not Satisfactory' in any criterion. The projects will be funded in ranked order until budget for that Category runs out or all successful applications have been funded (whichever happens first). If there is remaining budget in a Category (due to not enough applications or applications failing to score above the 60% threshold), this will be transferred to a central pot, where all remaining/unfunded projects across the Categories will be combined and ranked in order of merit. Funding will be assigned against order of merit to projects (with a minimum 60% threshold mark) until the central pot of money runs out.

Please note, this programme is being run with internal resource by BEIS, with some additional support from the Technical Third-Party Support (TTPS) contract procured by BEIS to assist with the delivery of the Net Zero Innovation Portfolio (NZIP).

TTPS consists of five contracts (Lots) to provide a breadth of technical expertise, with services provided by:

- Lot 1: Pricewaterhouse Coopers LLP (technical coordination)
- Lot 2: Technopolis (social research and evaluation)
- Lot 3: Mott MacDonald (carbon control and storage)
- Lot 4: AECOM (energy consumption)
- Lot 5: Frazer-Nash Consultancy (energy generation and distribution)

In the event that any of the Lot providers involved in this competition submit a bid for a contract in this competition, they will be excluded from the assessment process to ensure transparency and avoid any conflict of interest. In addition, they will be required to declare and mitigate any actual or perceived conflict of interest in the same way as any other bidder. BEIS reserves the right to exclude any proposals where the bidder has an actual or perceived conflict of interest that cannot be mitigated to the satisfaction of BEIS.

The reviewers will consider the Project Criteria as listed above and will provide feedback and recommendations to BEIS based on these considerations. Those recommendations by the reviewer to BEIS will either be recommendations for funding, recommendations not to fund or the identification of applications where clarification would be needed before funding could be recommended. The eligibility of project cost proposals will be checked at the assessment stage. As part of the assessment process BEIS will seek clarifications, such as, financial and commercial due diligence, project cost breakdown and any aspect of the project as necessary.

After the assessment stage, all applicants will receive a short summary of key feedback regarding their applications irrespective of whether they are successful or not. BEIS aims to have provided all feedback to applicants once all applications have been reviewed and assessed. Feedback will be given at the same time the successful/unsuccessful letters are

sent to the applicants. BEIS will endeavour to provide the successful/unsuccessful letters by **14th November 2022**.

Following notification of a successful application, the company's financial viability will be confirmed (Part 1:6.6). Any funding pre-requisites identified will be conditions of the grant. It will be a requirement before issuing the grant that a clear credible plan exists to raise the required company contribution for the work within three months of grant agreement approval. Where due diligence checks identify any issues with the applicant's project which were not clear from the application documents or which may impact on the successful delivery of the project, BEIS reserves the right not to proceed to the Grant Offer Letter stage.

Successful applicants will be given the opportunity to discuss the Grant Offer Letter with an official from BEIS to explain the conditions of the letter and respond to any queries which the applicant may have at this stage.

Successful applicants will be assigned a project Monitoring Officer (MO). The MO will then become the projects main point of contact with BEIS. MOs are ultimately responsible for reviewing and approving evidence at milestones claims so that invoices may be paid by BEIS finance. Therefore, projects will be required to have regular contact with their MO; the project lead should report progress and raise any issues with project delivery to their MO. It is not uncommon for MOs to meet fortnightly or monthly for a project update.

Stage 3: Grant Award

Lot 1 and 2 contracts are expected to be issued during November 2022 and commence from January 2023 and run for 24 months.

Acceleration Planning: SME proposals awarded funding from CCUS Innovation 2.0 will be offered complimentary Acceleration Support services (see Part 1:Section 2). Successful applicants are under no obligation to accept this service. Applicants wishing to receive Acceleration Support will be invited to an Acceleration Planning meeting. This meeting will include the project team, the team delivering the Acceleration Support, the assigned MO and a representative from BEIS. We endeavour to hold Acceleration Planning meetings before the project kick off to help identify actions that might need to precede the start of the innovation project. In such cases funding may be provide at BEIS' discretion to help carry out these actions and the milestones in the project schedule amended accordingly.

3.2 Lot 3

The activities listed in Table 7 are applicable to the CCUS Innovation 2.0 Call 2 Lot 3 application and assessment process. All dates given may be subject to change due to prevailing circumstances (i.e. if the number of proposals received exceeds that estimated, it may take longer than planned to issue the conditional successful/unsuccessful letters).

Figure 7: Applicant journey

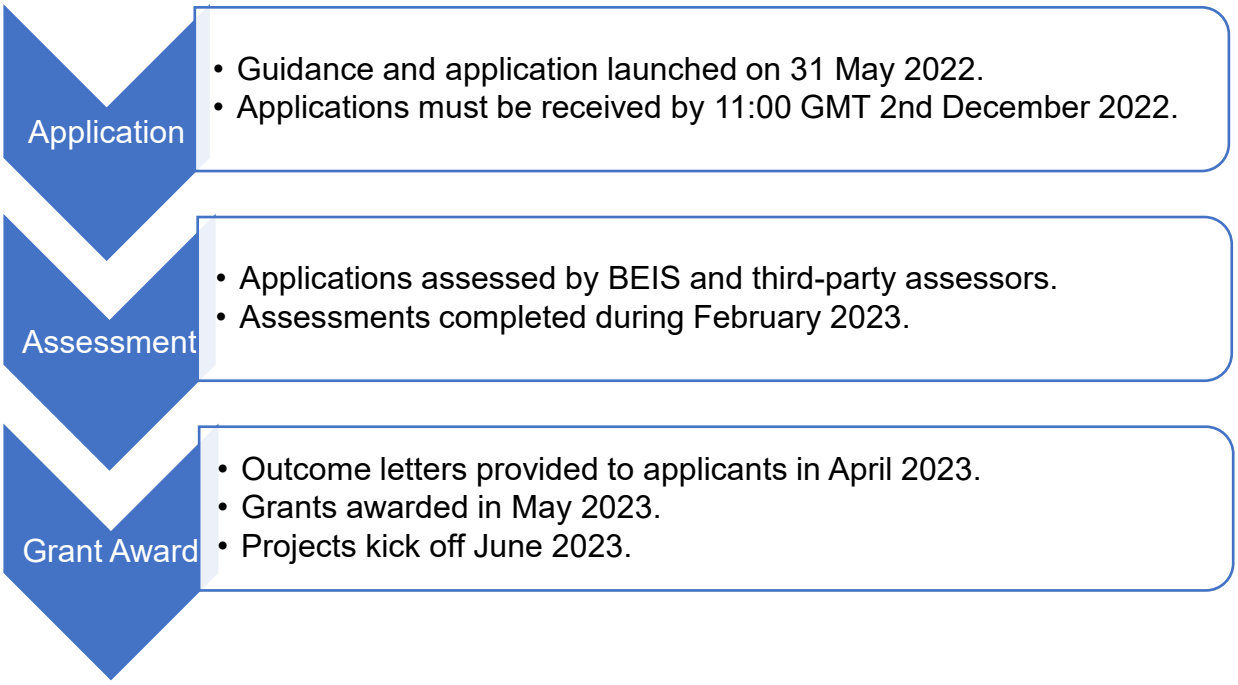

Table 7: Indicative key dates for Lot 3 CCUS Innovation 2.0 Call 2 application and assessment process.

Activity	Date
CCUS Innovation 2.0 Call 2 guidance and application window launched	31 May 2022
Industry Engagement Day	14 June 2022
Review of Next Generation Carbon Capture Technology Study for Industrial, Waste and Power Sectors Workshop	23 June 2022
Deadline to submit questions about the Call	16 September 2022
Deadline to submit Expression of Interest	3 October 2022
Anonymised Final Q&A published	14 October 2022
Deadline for Applications	11:00 GMT 2 December 2022
Conditional successful/unsuccessful letters	April 2023

Lot 3 Timings: Launch 31 May 2022

As outlined in Figure 7, the CCUS Innovation 2.0 Call 2 process will be undertaken in three key stages comprising application, assessment, and grant award.

Stage 1: Application

Applicants are asked to submit a project application form, with supporting information by **11:00 GMT 2 December 2022,** using the **SmartSurvey link** available on the CCUS Innovation 2.0 webpage.

The notes below explain the details of the application process:

- **Questions about the Call:** If you have any questions about the call after reading these guidance notes, please submit them to Industry.Innovation@beis.gov.uk. All questions should be submitted by **16 September 2022**. Questions submitted after this date may not be answered. We will reply to any queries which, in our judgement, are of material significance through an anonymised Q&A sheet published on our website by **14 October 2022**.
- All applicants should take these replies into consideration when preparing their own applications and we will evaluate applications on the assumption that they have done so.
- **Expression of Interest:** All applicants intending to submit an application(s) into the Call should email Industry.Innovation@beis.gov.uk by **17:00 GMT 3 October 2022** to confirm that they intend to submit an application. Please can you confirm the following:
  - Organisation name of Lead applicant;
  - If you are applying to:
    - **Lot 3** (up to £50,000 grant funding for Next Generation Carbon Capture Technology feasibility studies)
  - Whilst it is not a prerequisite for applicants who make an application to submit an Expression of Interest, it will help BEIS estimate and allocate resource during the assessment stage.
- **Submission of Application:** The full application for the competition must be submitted online by the deadline: **11:00 BST 2 December 2022.** The online application form will be closed for submissions after this time. A template for the application is available to download with this Guidance.
- *Application documents*: All application documents must be submitted via the online application form. In the form there are opportunities to upload relevant supporting documents. In some sections, we specify the supporting information we would like to see uploaded. Uploaded documents cannot be in place of answers being provided in the SmartSurvey. The application will be assessed on the answers in the SmartSurvey fields. Uploaded documents should only be of a supporting nature to the main answer.

Submission Content

Each online application must include the following documents:

- Completed Application Form (the online application form can be found via the SmartSurvey link on the CCUS Innovation 2.0 webpage).
- Completed Project Cost Breakdown Form (this will be available to download and should be uploaded in the Finance Section of the assessed criteria in the application form).
- Completed high level project *Gantt chart* or *project schedule* for the project proposed needs to be uploaded in the Project Schedule section of the assessed criteria in the application form.
- Completed *risk register* for the project proposed needs to be uploaded in the Project Delivery section of the assessed criteria in the application form.
- *Optional*: additional letters of support from collaborators/partners (where relevant) or other supporting information can also be submitted in the final section before you submit your online application form. Supporting documents should provide substantive information to the proposal. BEIS will accept additional supporting information in the form of further annexes, however, you should not assume that any additional information will be reviewed as part of the selection process and your application should not rely on information cross-referenced within annexes.
- You should endeavour to answer all the questions on the application in full, some questions will be 'mandatory fields' in the form and you will not be able to proceed to the next section until these questions are complete. Incomplete applications and any containing incorrect information may be rejected. However, BEIS may, at its discretion, request clarification before making a final decision. Any applications or supporting documentation received after the application deadline will not be considered.

Submission Costs:

- You will not be entitled to claim from the Department any costs or expenses that you may incur in preparing your bid, whether or not your proposal is successful.

Stage 2: Assessment

Applications will initially be assessed against the Eligibility Criteria in Part 1:Section 4. **Applications which fail the Eligibility Criteria will not be assessed further, so it is essential to ensure that your project meets these criteria before you submit your application.**

Eligible applications will be scored against the assessment criteria described in Part 1:Section 7, by three reviewers, including reviewers external to BEIS operating under the Technical Third Party Support (TTPS) contracts. All reviewers, internal and external, will be required to consider and identify any conflicts of interest in advance of the assessment process. Reviews will only proceed once BEIS is in receipt of reviewers' declared Conflict of Interest forms.

Reviewers will assess against the specific criteria summarised in Table 8 and described in more detail in Part 1:Section 7 and Part 3:Section 1.

Table 8: Lot 3 Assessed Criteria

Lot 3
Technology choice and study
Technology applicability and addressable
Knowledge dissemination and contribution to deploying next generation CCUS technologies
Project Costs and Finance
Project Delivery

Reviews and scores will be moderated to determine an overall ranking list that will be used to allocate the funding for the Competition. To be eligible to receive funding, an application must also achieve a minimum total score of 60% against these assessment criteria and must not receive a score of '1 – Not Satisfactory' in any criterion. Scoring guidance is detailed at Part 1:7.3 The projects will be funded in ranked order until budget for that Category runs out or all successful applications have been funded (whichever occurs first). If there is remaining budget in a Category (due to not enough applications or applications failing to score above the 60% threshold), this will be transferred to a central pot, where all remaining/unfunded projects across the Categories will be combined and ranked in order of merit. Funding will be assigned against order of merit to projects (with a minimum 60% threshold mark) until the central pot of money runs out.

Please note: this programme is being run with internal resource by BEIS, with some additional support from the Technical Third-Party Support (TTPS) contract procured by BEIS to assist with the delivery of the Net Zero Innovation Portfolio (NZIP).

TTPS consists of five contracts (Lots) to provide a breadth of technical expertise, with services provided by:

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- Lot 3: Mott MacDonald (carbon control and storage)
- Lot 4: AECOM (energy consumption)
- Lot 5: Frazer-Nash Consultancy (energy generation and distribution)

In the event that any of the Lot providers involved in this competition submit a bid for a contract in this competition, they will be excluded from the appraisal of bids process to ensure transparency and avoid any conflict of interest. In addition, they will be required to declare and mitigate any actual or perceived conflict of interest in the same way as any other bidder. BEIS reserves the right to exclude any proposals where the bidder has an actual or perceived conflict of interest that cannot be mitigated to the satisfaction of BEIS.

The reviewers will consider the Project Criteria as listed above and will provide feedback and recommendations to BEIS based on these considerations. Those recommendations by the reviewer to BEIS will either be recommendations for funding, recommendations not to fund or the identification of applications where clarification would be needed before funding could be recommended. The eligibility of project cost proposals will be checked at the assessment stage. As part of the assessment process BEIS will seek clarifications, such as, financial and commercial due diligence, project cost breakdown and any aspect of the project as necessary.

After the assessment stage, all applicants will receive a short summary of key feedback regarding their applications irrespective of whether they are successful or not. BEIS aims to have provided all feedback to applicants once all applications have been reviewed and assessed. Feedback will be given at the same time the successful/unsuccessful letters are sent to the applicants. BEIS will endeavour to provide the successful/unsuccessful letters by **April 2023**.

Following notification of a successful application, the company's financial viability will be confirmed (Part 1:6.6). Any funding pre-requisites identified will be conditions of the grant. It will be a requirement before issuing the grant that a clear credible plan exists to raise the required company contribution for the work within three months of grant agreement approval. Where due diligence checks identify any issues with the applicant’s project which were not clear from the application documents or which may impact on the successful delivery of the project, BEIS reserves the right not to proceed to the Grant Offer Letter stage.

Successful applicants will be given the opportunity to discuss the Grant Offer Letter with an official from BEIS to explain the conditions of the letter and respond to any queries which the applicant may have at this stage.

Successful applicants will be assigned a Project Monitoring Officer (PMO). The PMO will then become the projects main point of contact with BEIS. PMOs are ultimately responsible for reviewing and approving evidence at milestones claims so that invoices may be paid by BEIS finance. Therefore, projects will be required to have regular contact with their PMO; the project lead should report progress and raise any issues with project delivery to their PMO. It is not uncommon for PMOs to meet fortnightly or monthly for a project update.

Stage 3: Grant Award

Lot 3 contracts are expected to be issued in April 2023 and commence from July 2023 running for 12 months.

Section 4. Eligibility for funding

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

4.1 Innovation and technology readiness:

Projects must demonstrate the underlying technology is at an eligible Technology Readiness Level (TRL), these are:

- **Lot 1 and 2**: A TRL of 3-5 and 6-8 for funding of up to £1 million and £5 million respectively, are a guide to the level of maturity of the technology BEIS (and its assessors) are expecting (see Section 7 for further details).
- **Lot 3**: For Next Generation Carbon Capture Studies, that offer up £50,000 in grant co-funding, the underlying technologies must be at a TRL of 3-8.

For the purpose of CCUS Innovation 2.0, BEIS has provided TRL definitions, see Appendix 2 – Technology Readiness Levels (TRLs).

Projects must fall within the definitions of feasibility study, industrial research, or experimental development (Part 1:Section 1) and be eligible under the subsidy requirements (Part 1:Section 5) of this guidance.

4.2 Lot 3 Eligible Site

Lead applicants for Lot 3 must be an owner or operator of a UK-based site that has annual CO2 emissions of over 40,000 tCO2 per year. The business must also be registered under an eligible Standard Industrial Classification (SIC) code, see Part 1:7.2.1.

4.3 Project Status

BEIS is unable to fund retrospective work on projects.

Subsidy intensity including cumulation: The funding levels applied for must be consistent with the appropriate R&D aid intensity levels including consideration of the cumulative effect of other forms of public subsidy, (Part 1:Section 5) and costs must be consistent with the eligible cost criteria (Appendix 1 – Eligible Costs).

4.4 Match-funding

Given the subsidy categories (Part 1:Section 5), applicants will need to have private funding in place to cover the balance of the eligible costs within three months of the grant agreement being approved. Such funding may come from a company's own resources or external private sector investors but may not include funding attributable to any public authority. Before the grant letter is issued, the applicant will need to demonstrate a credible plan to raise the match-funding required for the whole lifetime of the project. This needs to be evidenced - for example by relevant bank statements or letters showing intention to invest into the applicant. If an applicant has not secured match-funding within three months of grant agreement being approved. BEIS will have the right to terminate the grant agreement.

4.5 Project Location

It is preferred that demonstration of technologies will be at an UK site, but can be at a non-UK site if this can be shown to be reasonably justified. Over 50% of the project's costs must be spent in the UK for all three Lots.

4.6 Technology scope

The innovation project must relate to the capture, usage, transport and/or storage of CO2. Technology development can for example focus on the complete carbon capture process, or key underlying equipment used in the CCUS process.

Direct Air Capture is out of scope, as this is the subject of a separate £70 million BEIS GGR programme[5].

4.7 Project duration

For Lot 1 and 2, funding will be offered for up to 24 months.. All projects will end no later than 28 February 2025. All work carried out under the grant must be completed by this date.

For Lot 3, funding will be offered for up to 12 months. All projects will end no later than 30 June 2024. All work carried out under the grant must be completed by this date.

BEIS will be not meet claims for any work carried out on, or after 31 March 2025.

4.8 Key Knowledge Deliverables (KKDs)

A condition of receiving funding from CCUS Innovation 2.0 is non-confidential project outcomes and learning will be published as KKDs (Part 1:1.1).

4.9 Delivering Multiple Projects

Lead applicants can submit (and be awarded) more than one application for grant funding in Call 2 but applications must be materially different. Similarly, consortium member(s) can take part in multiple successful bids. However, if project consortium member(s) are part of multiple successful bids they must be able to deliver on all of them and they must not have applied for funding for the same piece of work more than once. Each individual applicant is limited to £5 million total grant funding for this Call.

4.10 Project Funding

Depending on the funding Lot applied to, projects can only receive up to £1 million (Lot 1), up to £5 million (Lot 2) or up to £50,000 (Lot 3) of grant funding per application. Since BEIS is seeking to maximise the impact of government funding, projects looking for public funding

[5] Direct Air Capture and other Greenhouse Gas Removal technologies competition https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition

intensities that are lower than the applicable maximum are likely to score higher in the assessment process.

4.11 Total Allowable Funding

BEIS will not provide more than £5 million to a single applicant, including if they are delivering multiple projects. Applicants involved in multiple bids will be required to demonstrate their capacity to deliver requirements across each project they are a part of.

4.12 General conditions

Companies of any size are eligible to seek funding.

Applicants who have been successful or unsuccessful under other BEIS grant schemes, such as the Energy Entrepreneur's Fund (EEF) Scheme, may apply for funding from the CCUS Innovation 2.0 programme.

Similarly, if a project was unsuccessful in CCUS Innovation 2.0 Call 1, they may reapply in Call 2. Previous applicants will neither be advantaged or disadvantaged by any previous application(s) to BEIS funding.

Applicants will be expected to agree to Appendix 4 – Grant Funding Agreement Template and Appendix 5 – Grant Offer Letter Template.

Section 5. Funding Levels and Subsidy Requirements

DISCLAIMER: While BEIS will operate within the UK-EU Trade and Co-operation Agreement (TCA) requirements and World Trade Organisation (WTO) rules, we may decide to offer lower levels of funding than the maximum permitted under the rules; additionally, the funding rules set out in this Guidance Document for the Call 2 of CCUS Innovation 2.0 are specific to this Competition only.

5.1 Subsidy Control

CCUS Innovation 2.0 will support successful applicants through subsidies awarded in the form of grants towards the eligible costs of the proposal. Since 1 January 2021, public authorities must comply with our international commitments on subsidies in the UK-EU TCA, and other trade agreements, as well as the WTO rules on subsidies[6]. Subsidy rules dictate the types of costs that applicants can claim grant support for, as well as the maximum level of grant funding that they can receive which may differ by organisation type, size, and location.

[6] https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities

5.2 Rules for Subsidies in Scope of the Northern Ireland Protocol

The rules set out in this document apply equally to all applicants from England, Wales, Scotland, and Northern Ireland that are eligible to receive funding. Grants awarded to applicants and partner organisations from Northern Ireland will also be subject to scrutiny from the European Commission in accordance with Article 10 of the Northern Ireland Protocol in the UK/EU Withdrawal Agreement[7].

If the European Commission considers a business or any undertaking to have been incorrectly in receipt of grant funding, that undertaking is likely to be required to repay any aid received to the value of the gross grant equivalent.

5.3 Business Definition:

A business is defined as an organisation undertaking economic activities. As given in Table 9, businesses are categorised as micro, small, medium, or large determined by both their:

- staff headcount; and,
- either turnover or balance sheet total

Table 9: Categories for business definitions.

Company category	Staff headcount	Turnover	**OR**	Balance sheet total
Medium-sized	< 250	≤ £45m		≤ £39m
Small	< 50	≤ £9m		≤ £9m
Micro	< 10	≤ £2m		≤ £2m

The businesses that fall into the categories defined by Table 9 are classed as Small and Medium Enterprises (SMEs). A large business in this context means any enterprise which is not a SME.

5.4 Aid for Research and Development Projects

CCUS Innovation 2.0 programme operates under 'Aid for Research and Development Projects' and is open to:

- all private sector organisations irrespective of size;
- collaborative proposals; and,

[7] https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities/technical-guidance-on-the-uks-international-subsidy-control-commitments#section7

- ‘research organisations’ as defined below. Such applicant(s) will be eligible to lead projects and receive grant funding. However, it is expected that these will be part of a collaborative proposal, preferably with a private sector partner.

These applicant(s) to the scheme will be eligible to receive grant funding for a project under ‘Aid for research and development projects’. The maximum percentage of public funding that can be provided towards eligible project costs for different sized consortium partner(s) is summarised in Table 10 “*Maximum public funding for projects qualifying under ‘Aid for Research and Development’’.*

5.5 Research Organisation Definition:

When referring to research organisations, BEIS uses the following definition:

“‘research and knowledge dissemination organisation’ or ‘research organisation’ means an entity (such as universities or research institutes, technology transfer agencies, innovation intermediaries, research-oriented physical or virtual collaborative entities), irrespective of its legal status (organised under public or private law) or way of financing, whose primary goal is to independently conduct fundamental research, industrial research or experimental development or to widely disseminate the results of such activities by way of teaching, publication or knowledge transfer. Where such entity also pursues economic activities, the financing, the costs and the revenues of those economic activities must be accounted for separately. Undertakings that can exert a decisive influence upon such an entity, for example in the quality of shareholders or members, may not enjoy a preferential access to the results generated by it.”

Within this competition, this means:

- universities (higher education institutions);
- non-profit research and technology organisations (RTOs), including Catapults;
- public sector organisations (PSO);
- public sector research establishments (PSRE);
- research council institutes;
- research organisations (RO); and,
- charities

This list is not comprehensive and is subject to change and exceptions.

Table 10: Maximum public funding for projects qualifying under 'Aid for Research and Development'.

Research Category	Size of Enterprise	Maximum amount of aid towards eligible Project Costs
Feasibility Study	Small	70%
	Medium	60%
	Large	50%
Industrial Research - Single Companies	Small	70%
	Medium	60%
	Large	50%
Industrial Research - Collaborations can be Business to Business; Business and Research Organisation(s); or between Research Organisations.	Small	80%
	Medium	75%
	Large	65%
Experimental Development - Single Companies	Small	45%
	Medium	35%
	Large	25%
Experimental Development - Collaborations can be Business to Business; Business and Research Organisation(s); or between Research Organisations.	Small	60%
	Medium	50%
	Large	40%

The figures represent the maximum aid intensity that BEIS will provide private sector project consortium member(s) under CCUS Innovation 2.0.

5.5.1 Consortium applications:

The lead organisation (Lead Party) will be the recipient of the grant award (the Grant Recipient) and will be responsible for managing payment to the other project partners. If a consortium is not proposing to form a separate corporate entity, the project partners will need to complete a Collaboration Agreement and share with BEIS within one month of the project commencement date.

Consortium members/Subcontractors may be part of multiple applications; however, it is the duty of the lead organisation to manage any arrangements with regards to conflicts of interest with sub-contractors/consortium members where those sub-contractors/consortium members are part of other applications. Where consortium members are part of multiple applications, the lead organisation must ensure that the consortium member has sufficient resources to successfully deliver multiple applications/work packages. The lead organisation must also ensure that funding is not requested more than once across separate applications for the same piece of work.

We welcome university partners when they can add value, but as with other Government funding bodies funding higher education institutions, we will not pay more than 80% of the Full Economic Costs (FEC) calculated using the Transparent Approach to Costing (TRAC) methodology. Any applications requesting items that would ordinarily be found in a department, for example non-specialist computers, should include justification. Where applicable, other Research Organisation that are not higher education institutions, can receive up to 100% funding.

For collaborations containing different sized enterprises or Research Organisations, funding intensity is related to the company receiving the aid. Hence for example, for a collaborative Industrial Research project: a large enterprise consortium member can only be reimbursed up to 65% of its costs, whereas a small enterprise collaborator can be reimbursed up to 80% of its costs. Similarly, for a collaborative Experimental Development project: a large enterprise consortium member can only be reimbursed up to 40% of its costs, whereas a small enterprise consortium member can be reimbursed up to 60% of its costs.

If you are applying as a collaboration, you must also submit a copy of the Heads of Terms for your collaboration agreement. BEIS will review the collaboration agreement before issuing the Grant Offer Letter to ensure that proposed collaborations are viable and robust. For collaborative projects BEIS will only issue a grant to a single legal entity, so collaborative bids will be required to appoint a lead organisation/applicant for grant award.

For the purpose of CCUS Innovation 2.0, projects can include a mix of feasibility study, industrial research and experimental development. For such projects the research activities will be based on their individual thresholds. For example, a small enterprise conducting a R&D project by itself, whose costs includes 15% feasibility study, 25% industrial research and 60% experimental development. The maximum threshold, based on project out-turn costs, would be as given in Table 11.

Table 11: Maximum aid thresholds for research categories, as based on project out-turn costs

Research Activity	Maximum Aid Threshold	Percentage of project	Effective Aid Threshold
Feasibility Study	Up to 70%	15%	10.5%
Industrial Research	Up to 70%	25%	17.5%
Experimental Development	Up to 45%	60%	27%
		Maximum project aid rate	55%

Please note: to be eligible for 'Aid for Research and Development Projects', you will be required to demonstrate that your project activities meet the definition of industrial research, experimental development or feasibility study (Part 1:Section 1).

5.6 Public funding

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

In applying to this Call you must state if you are applying for, or expect to receive, any funding for your project from public authorities (in the UK or elsewhere). Any other public funding will be cumulated with BEIS funding to ensure that the public funding limit and the aid intensity levels are not exceeded for the project.

Whilst BEIS will check the information provided to try and ensure that applicants meet the requirements of the subsidy categories, it is the responsibility of applicants to establish that they fall within the aid rules before submitting applications. BEIS requires applicants to notify them of any change to situation or circumstance during the project.

It is essential to ensure that the total grant funding for the project from public sources does not exceed the permitted percentages stated for the relevant subsidy category. For any breach of aid requirements, please consult the generic grant funding agreement that BEIS will be providing with this Guidance. Grant recipients must adhere to all Subsidy Control obligations set out in Clause 15 of the Grant Funding Agreement. Failure to do so may result in termination and clawback of funding as per Clause 26.

As part of the assessment process, the added value and additionality of public funding will be tested. Applicants will need to demonstrate why public funding is required to deliver this project. Since BEIS is seeking to maximise the impact of government R&D funding, projects

looking for public funding intensities that are lower than the applicable maximum are likely to score higher in the assessment process.

Section 6. Project Plans, Finances and Financial Viability

6.1 Project Plans

Call 2 is looking to provide funding for up to 24 months in Lot 1 and 2, and 12 months in Lot 3.

However, all projects must be complete by 28 February 2025. All projects must submit a detailed Gantt chart, or equivalent project schedule as part of their application, which details the project timeline, the various work packages, and the project milestones.

6.2 Project Lead

There should only be **one lead organisation assigned to each project proposal**. Grant Offer Letters for successful applicants will be made out to the delegated lead organisation and as such BEIS is only responsible for making claim payments to the delegated project lead. Payments to collaboration partners or sub-contractors are the responsibility of the lead organisation.

BEIS require that all partners in a collaborative application have signed a Collaboration Agreement (CA) prior to a Grant Offer Letter being awarded. The CA should as a minimum reference the terms of the GOL and GFA, specify the work division, intellectual property arrangements and a dispute rectification process. BEIS will, in event of a dispute between partners, expect for the dispute to be resolved within the terms of the CA.

6.3 Project Costs

All applicants must complete the CCUS Innovation 2.0 Project Cost Breakdown Form, detailing their expected expenditure and spending profile for the project on a quarterly basis. Further details about this form can be found in Part 2: (Lot 1 and 2) and Part 3: (Lot 3) of this document. You should complete a single form covering your entire project and including all of your partners, clearly identifying which costs relate to which partner.

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

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

While BEIS understands that project costs may be subject to change prior to agreeing a Grant Offer Letter and throughout the course of the project, we do expect the final version of the

Finance Form to be our guide to project expenditure through delivery and costs should not vary significantly from this without prior agreement of the Department.

6.4 Sub-Contract Use

You will be expected to state and justify in your project application the amount of sub-contract funding (if any) within the expected spend of the project. You will be expected to explain the necessity for this spend as opposed to the addition of collaboration partners within the project proposal.

6.5 Overhead Rates

Overheads are additional indirectly incurred costs that are necessarily incurred by the applicant in undertaking the work. BEIS normally calculate overheads as a fixed percentage of all direct labour costs at 20%, but will consider overhead rates in excess of 20% where a strong justification has been provided. The overhead rate is agreed with BEIS before the Grant Offer Letter is issued and cannot be changed during the work.

6.6 Financial Viability Checks

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

Where a business is not required to file accounts with Companies House, other financial information may be requested to enable an appropriate financial viability review to be undertaken. We will be looking for evidence of your ability to resource the project appropriately, so the information we request will be focused on understanding how your business operates in this respect.

Within three months of signing the grant agreement BEIS will ask for credible evidence that you have the funding mechanisms in place to manage your cash flow across the life of your project. This could include letters of credit, letters of intent to invest from individuals or organisations or other such mechanisms. We do not expect you to have cash deposits to cover the entirety of your project at the start. If you do not complete your project due to cash flow problems that you could have anticipated and managed, we may request repayment of any grant already issued to you.

BEIS will not make payments in advance of need. BEIS understands, however, the difficulties which small businesses may face when financing this type of project. BEIS will explore cash flow issues with the applicant as part of developing the financial and milestone profile within the Grant Offer Letter. BEIS will offer flexibility in terms of profiles and payments, within the confines of the requirements for use of public money within which it operates.

6.7 Grant Use

Companies should note that the grant may not be used to subsidise commercial activities and that where BEIS awards a grant for the purpose of the development of commercially usable prototypes or pilot projects, any revenue generated from such commercial use will be deducted

from the grant (and, where the grant has already been paid, will be required to be returned to BEIS).

Section 7. Assessment Process and Criteria

All applications will be considered against the assessment areas and ranked against each other. The online application form and guidance notes are designed to inform you about the types of information you should provide to BEIS for your proposal to be assessed.

7.1 Lot 1 and 2

A TRL of 3-5 and 6-8 for funding of up to £1 million and £5 million, respectively, are a guide to level of maturity of the technology BEIS (and its assessors) are expecting. For the purpose of CCUS Innovation 2.0, definitions for TRLs have been provided to help applicant define what TRL the innovation is at Appendix 2 – Technology Readiness Levels (TRLs). When considering Lot 2 applications for grant-funding of more than £1 million, BEIS assessors will have discretion if they deem a project to be at a lower maturity than its TRL would suggest. If BEIS (or its assessors) consider a Lot 2 application, of more than £1 million, to be at a TRL of below 6. The application will be assessed with the other Lot 1 applications, and if successful, will only be offered up to £1 million grant funding.

We will select projects that offer the best value for money, taking account of the criteria and associated weightings, as given in Table 12.

Table 12: Lot 1 and 2 assessment criteria and associated weightings for applications.

Number	Criterion	Weighting (%)
1.	Value and Unique Nature of the Innovation	15
2.	Cost and Performance of the Innovation	10
3.	Addressable Market of the Innovation	10
4.	How Project Outcomes will be Commercially Exploited	10
5.	Project Schedule	10
6.	Project Risks and Risk Management	10
7.	Project Cost Breakdown	10
8.	Case for Public Funding	10

7.2 Lot 3

The underlying technology studied in the Next Generation Carbon Capture Studies must be at a TRL of 3-8 for co-funding of up to £50,000**.**

We will select projects that offer the best value for money, taking account of the criteria and associated weightings, as given in Table 13.

Table 13: Lot 3 assessment criteria and associated weightings for applications.

Number	Criterion	Weighting (%)
1.	Technology choice and study focus	20
2.	Technology applicability and addressable market	20
3.	Knowledge dissemination and contribution to deploying next generation CCUS technologies	10
4.	Project Costs and Finance	20
5.	Project Delivery	30

Detailed guidance on completing the application form for each criterion (Part 3:Section 1).

7.2.1 Standard Industry Classification (SIC) Code

To be eligible as a lead organisation, projects must carry out an eligible industrial process at a site (or sites) which will be the focus of the application. Industrial processes refer to a set of economic activities as defined by the Standard Industrial Classification (SIC). Businesses registered on Companies House are allocated a 5 digit SIC code at the time of registering. If relevant, projects will need to check their business SIC code to make sure they're eligible. For this competition the industrial process carried out by the lead organisation must fall into the following SIC codes:

Table 14: Eligible industrial activities covered by Lot 3.

Eligible Industrial Processes	SIC Code
Mining & Quarrying	05101 -09900
Manufacturing	10110 - 33200

Electricity, Gas, Steam and Air Conditioning Supply	35110 - 35120
Water Supply, Sewerage, Waste Management and Remediation Activities	36000 - 39000
Transportation and Storage	49100 - 53202
Information and Communication	58110 - 63990

Where relevant, projects will be asked to enter the lead organisations registered SIC code in the application form.

SIC Code guidance can be found on Companies House.

7.2.2 Site

If the lead organisation registered SIC code does not reflect the industrial process carried out at the site of the proposed project, or if it does not have a Companies House record, applicants will be asked to provide further details to evidence eligibility. An example would be a telecoms business with an ineligible SIC code (for example 61100) that owns a data centre with an eligible category of activity (SIC code 63110). In this case, applicants will be asked to provide details of the SIC code which most closely matches the activity at the site that is the focus of the proposed project.

We will also ask for the address of the site(s) which will be the focus of the application. If applicants are filling out an aggregated project application, there will be an option to fill in more than one address.

The project or study must relate to an existing industrial site(s) or existing data centre(s) located in the UK. A site is defined as the postcode, or multiple directly adjoining postcodes at which the project takes place. You will be asked to confirm that the scope of the study or project is within the boundary of the lead applicant's site(s).

7.3 Scoring Guidance

We will select projects that offer the best value for money overall based on their assessment against the criteria outlined in this section. Projects will be scored against the assessment criteria set out in the table below. Projects must score a minimum of 60% (based on total score) to be eligible for funding.

Criteria Score	Description
1	**Not Satisfactory:** Proposal does not meet the required standard, with multiple moderate weaknesses or gaps. There is very little evidence that

	the question has been satisfactorily answered and major omissions are evident. Significant additional clarification is needed.
2	**Partially Satisfactory:** Proposal partially meets the required standard, with one or more moderate weaknesses or gaps. There is some evidence that the question has been satisfactorily answered and some omissions are evident. Much more clarification is needed.
3	**Satisfactory:** Proposal mostly meets the required standard, with one or more minor weaknesses or gaps. There is reasonable evidence that the question has been satisfactorily addressed but some omissions are still evident and further clarification is needed.
4	**Good:** Proposal meets the required standard, with moderate levels of assurance. The question has been well addressed with a good evidence base, with only minor omissions or lack of clarity.
5	**Excellent:** Proposal fully meets the required standard with high levels of assurance. There is clear evidence that the question has been completely addressed in all aspects, with question answered clearly, concisely with a strong evidence base. Some limited minor, non-material, omissions or lack of clarity may still be evident.

Section 8. Notification

All applicants will be notified with an outcome letter by email whether their application has been successful, subject to rigorous financial and commercial due diligence of the bid and compliance with the terms and conditions of the Conditional Offer that will be received.

BEIS may wish to publicise the results of Call 2 which would include engagement with the media. At the end of the application and assessment process, BEIS may issue a press release or publish a notice on its website. These may, for example, outline the overall results of competitions and describe some of the projects to be funded.

Some organisations may want their activities to remain confidential and will be given a chance to opt out of any involvement in media relations activity and further case study coverage of projects, should they see this as being absolutely necessary. However, the public description of the project provided in the application will be made available in the public domain if an application is successful. Applicants are not able to opt out of the project description being published.

Any organisation that wishes to publicise its project, at any stage, must contact the BEIS Programme Manager of the CCUS Innovation 2.0 before doing so.

Section 9. Feedback, re-application and right of appeal

A short summary of key feedback based on the summary comments of the Assessment Stage will be provided to all applicants. No additional feedback will be provided and there will be no further discussion on the application.

The feedback from the assessors is intended to be constructive. Comments are not a check list of points which must be answered as the assessors may be different and it is an applicant's decision as to whether the act on the suggestions made.

There is no right of appeal - the reviewers' scores are final - so it is important that applicants make any points they wish to make clearly and concisely in the application form.

Section 10. Confidentiality and Freedom of Information

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

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

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

Section 11. Frequently Asked Questions

As part of the launch documents for Call 2 of CCUS Innovation 2.0, we have issued a set of Frequently Asked Questions (FAQs) (Appendix 6 – FAQs)

Questions about CCUS Innovation 2.0 programme should be sent by e-mail to Industry.Innovation@beis.gov.uk.

Deadline for submitting questions

- **Lot 1** - 17 June 2022
- **Lot 2** - 17 June 2022
- **Lot 3** – 3 October 2022

To ensure an open and transparent competition, answers to questions, and those raised at the Industry Engagement Day on 14 June 2022, will be added to our FAQs. These final FAQs will be published **1 July 2022**.

Please note, we are unable to enter detailed discussions about individual project ideas.

Part 2: Lot 1 and 2

Section 1. Completion of the Application Form

This section aims to guide applicants through the completion of the online Application Form for Lot 1 and 2 of CCUS Innovation 2.0 Call 2. It is important that a response is provided to every question. This guidance is intended to explain what type of information applicants should consider providing to BEIS to best demonstrate the merit of their application.

Applications will be judged based on the information provided in the application form and any supporting information provided. Although questions relating to the call can be asked by **17 June 2022** (Part 1:Section 11), there will not be the opportunity to enter into discussion about your project with the assessors or BEIS. These guidance notes are not intended to be exhaustive; applicants are expected to develop their own responses based on your own skills, knowledge and experience. You are encouraged to be concise and to the point whilst providing all the necessary and relevant information.

Throughout the form there are boxes, in order to answer the question or provide information you should simply click on the box and begin typing or select from the drop-down menu. Questions do have word limits and when the text has reached the word limit you will not be able to add any further information and the text must be edited to fit within the word limit. CVs have a 2-page limit per individual, if individual CVs are longer than 2 pages assessors will not read beyond the second page. CV's should be uploaded as a single file.

All application documents must be submitted via the online application form. In the form there are opportunities to upload relevant supporting documents. In some sections, we specify the supporting information we would like to see uploaded. Uploaded documents cannot be in place of answers being provided in the SmartSurvey. The application will be assessed on the answers in the smart survey fields. Uploaded documents should only be of a supporting nature to the main answer.

Any graphs, diagrams or supporting evidence that you are providing to support your application should be uploaded to your submission.

1.1 Proposal Summary, Contact & Organisation Details

The initial section of the application asks you to provide details about your organisation.

Section	Guidance
Names of Bidder	Provide the name of the lead applicant
Project Title	A brief title that can be used to summarise the project

Project Lot Number	Confirm if you are applying to Lot 1 (Mid-Stage CCUS Innovation) or Lot 2 (Late-Stage CCUS Innovation)
Technology Category	Which of these categories best describes your project: CO2 Capture; CO2 Utilisation; CO2 Transport; CO2 Storage; Full Chain; or CCUS Software.
Estimated Start Date	Select the date you would propose to start work assuming successful funding
Project Duration	Enter the expected duration in months, taking into consideration the project must be complete before 28 February 2025.
Estimated End Date	Select the date you propose to finish the project
Total Project Costs	This figure should match the figure calculated in the Project Cost Breakdown Form. It should be the total value of the project including all eligible costs.
Company contribution	This is the amount of total eligible project costs that you will be paying from your own resources/private sector investment into the project.
BEIS Grant Applied for	This is the amount you will be asking for from BEIS. You should ensure that you do not request a grant higher than the maximum allowed, taking into account all public-sector funding for the project.
Grant Funding requested as percentage of total funding	This is the percentage of total costs that the grant makes up. It cannot be more than you are eligible for as set out in Part 1:Section 5.
TRL at start of project	Select the TRL from the drop-down menu that most accurately represents your technology at the start of the

	project. A list of TRL definitions are provided at Appendix 2 – Technology Readiness Levels (TRLs).
TRL at end of project	Select the TRL from the drop-down menu that most accurately represents where your technology will be at the end of the project. A list of TRL definitions are provided at Appendix 2 – Technology Readiness Levels (TRLs).
Project Summary	This should be a summary description of the project which should set the scene for the assessors and introduce your proposed project. You should use language that can be understood by people without specialist knowledge or expertise. This question is not scored but will be used by assessors to gain a high-level understanding of the project before they start their detailed assessment.

The fields described below appear in the application form in sections 3 to 9 of that document and are included in this table to group the descriptions of high-level paraments together.

Contact Details	Name and details of the person who will be the main point of contact for the application process
Organisation Name	Provide the full registered name of the organisation applying for funding
Registered Address	This is the address where the organisation is registered
County	The county where the organisation is registered
UK Region	The UK region where the organisation is registered
Country	The country where the organisation is registered
Project Location	The location, if it is different from the registered address, where the main activity of the proposed project will be carried out
Organisation Type	Please select from the drop-down menu

Organisation Size	Please select your organisation size
Number of employees (including directors)	Number of staff in your organisation (this will help us confirm the nature of your company)
Number of employees that will be directly involved in the proposed project	State the number of employees from your company that you expect to be directly involved in the project you are proposing.
Organisation Registration Number	Your business registration number as listed by Companies House, or equivalent.
Turnover (in most recent annual accounts)	Please provide your most recent turnover figure from annual accounts and the date of those accounts
Balance Sheet Total (total assets net of depreciation)	Please provide your most recent balance sheet total (total assets net of depreciation) and the date of the calculation.
Organisation maturity	Please enter the age of the business since its formal formation, this includes any periods of dormancy with Companies House.
How is the organisation currently funded?	Please select all the types of funding that are applicable.
Organisation Status	This should be a summary description of your company which should set the scene for the assessors and introduce your company. You should use language that can be understood by people without specialist knowledge or expertise. This question is not scored but will be used by assessors to gain a high-level understanding of the company before they start their detailed assessment.
Does the business have a parent company?	We need to understand if there any significant shareholders in your business. The parent company details should be provided in the Parent Company details section.

Parent Company Details	If you have a parent company, or are more than 25% owned by another enterprise, you must provide the details of that enterprise here.
Which aid category are you applying under?	You must select one of the subsidy categories from the drop-down list. The options are: • Aid for Research and Development projects – Industrial Research • Aid for Research and Development projects – Feasibility Study • Aid for Research and Development projects – Experimental Development For more details on the subsidy requirements, see Section 5 of these Guidance Notes. You must indicate that you comply with the financial obligation rules by providing the relevant information.
If you are applying under Aid for Research and Development projects, is this a collaborative project?	If you are applying collaboratively, please provide details of the partner organisations in the CCUS Innovation 2.0 Partner Form. If you are applying as a collaboration you must also submit a copy of formal Heads of Terms agreed between all the collaborators. Prior to the issuing of a Grant Offer Letter, you will have to submit to BEIS a copy of the collaboration or joint venture agreement that you propose to work under. You should be aware that BEIS will not issue a Grant Offer Letter until they have seen, reviewed and approved a final draft of this agreement. Sub-contracting work to a third party does not classify as a collaboration.

1.2 Eligibility Criteria

See Part 1:Section 4 for guidance on Eligibility Criteria. This section of the application confirms if the application meets the eligibility criteria of CCUS Innovation 2.0.

1.3 Assessment Criteria

1.3.1 Value and Unique Nature of the Innovation (15% weighting)

This section focuses on the CCUS innovation that you are looking to develop, its technological development, value to CCUS deployment, and its novelty in comparison to other technologies.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Question 1: **How valuable and unique is the innovation?** Describe the technology that is the focus of the innovation, and how through this project the cost of deploying CCUS at-scale will be meaningfully reduced. What is the current status of your technology and what has been completed or proven to date? State the current TRL of your innovation, and why your innovation meets this level. Describe when the innovation will be ready for commercial deployment, and what preceding scale-up steps will be required. Describe the problem that your innovation overcomes and its customer value proposition. Describe the competing solutions/technologies to your	You should describe the innovation and technology for which you are seeking funding. This description can be supported by a photograph or schematic as an additional attachment if necessary. The description must be sufficient for the assessors to understand the technology and how it works. You should describe: • The stage of your technology and justify the TRL number selected earlier (TRL levels indicate the level of maturity of the product or process). Using the guidance in Appendix 2 of this document, you should choose the TRL you feel most appropriate to the current state of your technology. The TRL chosen should be supported by the information provided. • What work has been done to date, (lab or bench demos, component tests, development prototypes, engineering or operational prototypes) and over what timescale. • The latest position with the innovation and where it is located. If you were showing the innovation to us today, what would we see? • The unique impact your innovation will have on meaningfully reducing the cost of deploying CCUS,

innovation, and how the uniqueness of your solution is different. Describe if there are additional non-cost aspects (e.g. technology maturity, analogous industrial experience, improved HSE, etc.) that reduce the risk of deploying your technology	or a quicker more widespread deployment of CCUS. • When the innovation will be ready for deployment, and what preceding scale-up steps will be required. • If the technology is applicable to multiple CCUS applications and end uses, and if can be retrofitted to existing processes. • What level of early CCUS deployment might be achievable, following the success of the project. • What adoption rates might be achieved, and how learning can meaningfully affect widescale deployment of CCUS. You should outline any results that you have had to date and any sources of technology you have used. You should demonstrate the level of reliability and current effective run time (if appropriate) of your innovation.

Assessor's questions to consider (guideline):

Question 1: To what extent is the innovation unique and valuable? Is the innovation credible?

For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following:

Is the underlying technology technically feasible? Is the technology that is the focus of the innovation well described and understood?

Is the TRL chosen an appropriate assessment of the technology readiness based on the description and activities to date?

Are the remaining stages of the technology's development and deployment well understood and robust?

How unique is the innovation and what are the comparative benefits against similar technologies?

Is the technology expected to be widely deployable? What impact will the innovation have on reducing the cost of CCU or CCS and how reliable is the evidence provided to support this? Which problem(s) does the innovation solve and how valuable is this solution? Is the innovation well-planned and based on reasonable technical assumptions and/or proven data points? Is the early level of CCUS deployment achievable? Does the innovation have potential for scale-up? How robust is the case for explaining that the additional benefits will appeal to customers and will help to generate value? Have additional benefits, other than cost reduction, been identified?

1.3.2 Cost and Performance of Innovation (10% weighting)

This section focuses on the CCUS innovation that you are looking to develop, the cost reduction potential, its likely performance following the project, its potential impact on the widespread deployment of CCUS.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Question 2. Quantify what the improvement in cost and performance of your innovation is against your competitors. Quantify the expected improvement in cost and performance of your innovation as a result of undertaking the project and in 5 years' time.	You should complete the table setting out the following specifics at the current time, as they are expected to be at the end of the project and as you expect them to be within five years from now: • The unit size of the innovation. • The performance of the innovation (please use a standard industry performance metric, e.g. GJ to capture and compress a tonne of CO2). • Estimated cost to capture and sequester a tonne of CO2.

Describe the technology that is the focus of the innovation, and how it compares against other competitors. Describe how the cost of deploying CCUS at-scale will be meaningfully reduced through this project. Describe what specific cost reduction can be achieved through widespread deployment. Describe what makes you believe that the cost reduction potential of the innovation can be realised. Describe the supporting evidence you have that backs up this argument. Describe how any numbers given can be achieved.	• For CO2 Utilisation projects, the estimated cost reduction of utilising CO2 in a final manufactured end product. • For CO2 Utilisation projects, the reduction of lifecycle emissions of the final manufactured end product. How does your innovation compare to your competitors? For the purpose of technology comparison, when defining the cost and performance of your innovation please assume the captured CO2 must meet the Gathering Network specification in Appendix 3. Please note, Appendix 3 does not necessarily apply to CO2 that is due to be used in a manufactured end product. You should provide calculations to support your claims and explain and justify any assumptions you have made. You should provide supporting evidence to back up the cost and performance pathway anticipated and provide a comparison with existing/competing technologies. You should explain how the cost reduction potential of your innovation will be achieved. You should explore what needs to happen to achieve this, the risks that may prevent it and how these risks might be mitigated. You need to justify what evidence you have that gives you confidence that the cost reductions can be achieved. Your answer should reflect back on any figures provided and you should demonstrate what makes the potential cost reduction possible. You should provide evidence for your statements, including any independent corroboration, and set out any assumptions you have made and their rationale. Supporting evidence accompanying your application should be summarised here and you should reference specific sections of supporting evidence only, as you must not assume that an assessor will be able to read all supporting documents that are submitted.

Assessor's questions to consider include (but not limited to):

Question 2: How far does the innovation show performance/cost improvements over incumbent or competing technologies? How significant are the improvement in performance/cost as a result of undertaking the project; and in 5 years time? How robust is the evidence (or justification) for the improvement in performance/cost against competing technologies and in 5 years time?

For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following:

How does the cost and performance of the innovation compare to currently available technology or its likely competition?

Does the available supporting information give confidence that the innovation will achieve its target cost and performance?

Is the learning and associated cost reduction from early deployment credible?

1.3.3 Addressable Market of the Innovation (10% weighting)

This section focuses on the addressable market of the innovation, the potential for market adoption, and the business opportunity that you believe exists.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Question 3. What is the addressable market for your innovation? Describe if your technology is applicable to multiple CCUS applications and end uses, and if it can be retrofitted to existing processes Describe the size and nature of the addressable CCUS market for your innovation	You should outline the business opportunity that you have identified. You should describe the size of the market opportunities that this project might open up, including details of: • Current nature of the specific market(s) at which the project is targeted; • The dynamics of this market including quantifying its current size, value, actual and predicted growth rates; For highly innovative projects, where the market may be unexplored, you should explain:

Describe if your innovation is applicable to other non-CCUS target markets Describe what will be the initial target market(s) for you innovation in the first three years of commercialisation, including the size of this market(s)	• What its size might be, national/global • How the project will seek to explore the market potential • What sources you have used to reassure yourself that sufficient demand exists to justify the investment You should describe the business model and route to market and how this will generate value / revenue. You should explain what you need to do to address the market described in the previous question successfully, within the desired timeframe and cost.

Assessor's questions to consider:

Question 3: Has an addressable market been identified and to what extent are the business opportunity and market problem that this innovation and project address compelling?

For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following:

Has the applicant clearly identified and understood their target market?

Is the innovation applicable to multiple CCUS applications and end uses? Can it be retrofitted to existing processes and sites?

Does the applicant demonstrate a realistic understanding of size and nature of the target market(s) and its potential for growth relevant to the innovation?

Does the venture demonstrate an understanding of the competitive landscape?

Does the innovation have other uses beyond CCUS application that could open alternative target markets?

What is the chance of success in market adoption?

For early TRLs (3-5) they may not be certain which markets will be more appropriate but should be able to describe an anticipated target market. For later TRLs (6-8) justification for market selection would be expected. Does the applicant demonstrate an understanding of the customer value proposition appropriate to its TRL level?

1.3.4 How Project Outcomes will be Commercially Exploited (10% weighting)

This section focuses on the methods for commercial exploitation of the project outcomes, the potential return on investment and the products, processes, or outcomes from the project and how you plan to derive value from them, and your competitors.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Question 4. **How will the outcomes for the project be commercially exploited?** Describe how the outcomes of the project will be commercially exploited. Describe the route for the IP for your technology to be commercialised. Describe the business model that your company will use to generate value from the innovation (i.e. how will you generate revenue?) Describe how you will develop your first commercial project(s) When the technology is commercially deployed, what number of projects or deployment do you envision in the first five	Applicants should list the potential exploitable outcomes of the project such as: • Products or services; • Processes; and, • Applications. You should describe how these outcomes will be exploited including where applicable protection of intellectual property rights, changes to business models and business processes and other methods of exploitation and protection. You should explain your anticipated routes to market, highlighting the initial one(s) and outline your strategy for developing market share. You should explain the projected market share for the project outcome, with justification in the light of any potential competitors. If you have customers or potential customers already in place these should be identified and evidence of their support provided. In addition to the immediate practical exploitation of the outcomes, you should identify and quantify the likely impacts of a successful project on your business and indicate the timelines over which these impacts will be realised. You should provide a potential sales forecast based on the target markets identified previously, showing both sales and revenues.

years of commercialisation.	For highly innovative projects, where the market may be unexplored, you should explain what the route to market could or might be.

Assessor's questions to consider:
Question 4: To what extent is the proposed commercial exploitation of the outcomes for the project realistic? For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following: Does the venture demonstrate an understanding of the competitive landscape? Is the innovation applicable to multiple CCUS applications and end uses? Can it be retrofitted to existing processes and sites? Does the innovation have other uses beyond CCUS application that could open alternative target markets? What is the size and breadth of addressable markets this innovation is applicable for? What is the chance of success in market adoption? Has the applicant clearly identified and understood their target market for the first 3 years of commercialisation and is this credible? Do they demonstrate a realistic understanding of the size and nature of their target market(s)? What is the potential for market growth relevant to the innovation?

1.3.5 Project Schedule (10% weighting)

This section focuses on what work you plan to do during your project, the key milestones and timings and how you propose to manage the project. A project Gantt chart (or similar) should also be submitted as a separate file. The details provided below should match what is provided in the Gantt chart.

Any data or references that might help to support your answers that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance

Question 5. **Describe the Scope of Work, key work packages and milestones for the project.** Describe the technical approach which is being taken to develop and demonstrate the technology. Include an explanation as to why this is the most suitable technical approach. Describe how the components you are proposing to develop are different from those already commercially available, and how this affects your work activity and project schedule. List other individuals / organisations that you plan to contract/work with as part of delivering this project. Describe where the innovation will be at the end of the project and state what TRL you expect to have reached. Please submit a detailed Gantt chart, or equivalent project schedule with your application.	You should describe the programme of work you intend to undertake with the funding. You should provide an overview of the technical approach you propose to take including the main objectives including an estimate of the minimum level of technical or cost performance that the proposed project needs to demonstrate (how big a step is this?). You should include alternate R&D strategies that could be used and explain why the approach you have chosen will provide better outcomes. The timeliness and novelty of the research aspects of the project should be highlighted and explained in an industrial/business context. Identify the key milestones of the project and any interdependencies between the various work packages. Applicants should also outline the key deliverables for the project. Identify any go/no-go decision points in the project (e.g., dependencies on achieving particular performance milestones or component solutions). You should identify who will be carrying activities out (including any collaborators, customers, suppliers, subcontractors, research organisations, certifying bodies, etc.) and outlining the resource and management requirements and highlighting any sub-contracted work and how you propose to manage the project. This includes demonstrating sufficient resource commitment and capability to undertake the project, with clear management reporting lines identified. Using the guidance in Appendix 2 – Technology Readiness Levels (TRLs), you should choose the TRL they feel will be most appropriate to your innovation at the end of the proposed project. You should justify the TRL which you have selected. You should demonstrate the expected level of reliability and effective run time (if appropriate) of your innovation by the end of the project.

	If you were showing the innovation to us at the end of the project, what would we see? You should provide evidence for your statements, including any independent corroboration, and set out any assumptions you have made.

Assessor's questions to consider:
Question 5: How appropriate is the technical approach for the demonstration and development of the technology? Are the project schedule and milestones realistic? For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following: How appropriate is the technical approach for the demonstration and development of the technology? Are the work packages and milestones realistic? (e.g., is it well planned, thought through, costed, under/over ambitious for the timeframe, skills in place or to be recruited). Will the deliverables demonstrate tangible progress/value inflection? Given the stage of the technology development and the context of what the project wants to achieve, give your view of the strength of the industrial/partner relationships that are mentioned in the application (e.g., is there indication that they have the necessary relationships for this next stage of development)? Is the outcome TRL chosen commensurate with the activities and outcomes of the project?

1.3.6 Project Risk and Risk Management (10% weighting)

This section focuses on what are the top challenges to successfully delivering this project and commercialising the technology. What risks will be associated with the work you plan to do during your project, how you propose to mitigate or manage the risks, and how you propose to deal with any unforeseen circumstances. A detailed Risk Register should be submitted as part of the application, using the template provided.

Any data or references that might help to support your answers that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Question 6. **Describe the project challenges, what are the risks associated with the project and how will these be mitigated or managed?** Describe the top 3-5 challenges to successfully deliver this project and commercialise the technology. Please provide a risk register covering: key commercial, technical, resourcing, financial, regulatory, operational, and environmental risks including how these will be monitored and managed. Provide evidence as to why these mitigations are appropriate. Describe plans for dealing with unforeseen circumstances.	You should describe the main challenges to delivering the project, which should link to the risk assessment description. Identify key project management tools and mechanisms that will be implemented to provide confidence that sufficient control will be in place to minimise operational risk and, therefore, promote successful project delivery. This should include the arrangements for managing any significant sub-contractors. In addition to the basic risk register template provided in the application form, you may provide a separate Risk Register for your project. You should consider risks and issues of the following types: • Commercial • Technical • Resourcing • Financial • Personnel / Health and Safety • Regulatory • Operational • Environmental BEIS recognises that projects of this type are inherently risky. However, it seeks assurance that the projects it funds have adequate arrangements for managing this risk. In the summary risk register, describe the main risks, and then rate as High/Medium/Low (H/M/L) for both impact and probability. Describe whether each described risk can be accepted, transferred, or mitigated. Assign the residual risk to the project as: • Red

	• Amber-Red • Amber • Amber-Green • Green

Assessor's questions to consider:
Question 6: What are the risks associated with the project and how will these be mitigated or managed? For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following: What risks are associated with the project, from a technical, project, and environmental perspective? Does the applicant identify the main risks in the risk register and score them appropriately and honestly? What are the likelihood and impact of the identified risks and are their assessments realistic? Are the monitoring and mitigation activities proposed for each risk appropriate and realistic? What governance frameworks are in place to deal with unforeseen risks/issues? Has the applicant demonstrated sufficient resource commitment and capability to deal with these risks?

1.3.7 Project Cost Breakdown (10% weighting)

This section focuses on the finances and expected costs of the project. The Project Cost Breakdown Form should also be downloaded, completed, and submitted as part of the application. Part 2:Section 2 provides further guidance to completing the Project Cost Breakdown Form. The numbers provided in the application form should match those within the Project Cost Breakdown Form.

Any data or references that might help to support your answers that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Total company contribution	This is the amount of total eligible project costs that you (and any partners / collaborators) will be paying from your own resources/private sector investment into the project.
Source of company contribution	Please state the source of your company contribution to the total costs (your match funding). If you have partners / collaborators, include their contributions here as well.
Amount of BEIS grant applied for	This is the amount you will be asking for from BEIS. You should ensure that you do not request a grant higher than the maximum allowed, taking into account all public sector funding for the project.
Other Public sector funding applied for	Please provide full details of other funding that you are currently applying for or have already applied for or received in relation to this particular project. This data is important as other public sector support is counted as part of the grant you can receive for the project and total subsidy contribution. Do not include grants that have been used to reach this point in the development process and are now completed. Please include this information in 1.1.
Total project value	Please add total company contribution, amount of BEIS grant applied for and other public sector funding applied for to give the total value of the project
Grant funding requested as a percentage of total funding	Input percentage calculated in the Project Cost Breakdown Form. *N.B. This figure must be compliant with the relevant subsidy category under which you are complying.*
Project Start Date and End Date	Please indicate when (subject to approval) you would expect to be able to start your project, and when you expect it to complete. Please be aware that there are restrictions on project length and make sure your project completes within the maximum time allowed.

	The start date should only be considered as an indication. Should you start your project before final approval any costs will be incurred at your own risk, will not be eligible for grant, and will not be included in project costs you can claim against.

Section/Field	Guidance
Question 7. Provide a summary of the main areas of spend within the project, making clear the level of contribution from the business and the level of funding required from BEIS. This should include: • Why you consider these cost to represent fair market value; • The expected source of any company contribution; and • A breakdown of costs between your organisation and any partners/collaborators	Please provide a narrative description of the anticipated project costs, making clear the level of contribution from the business and the level of funding required from BEIS. This should match the details provided at the start of the application form as well as within the Project Cost Breakdown Form, with any supporting information and explanation provided in this section of the application form. This is the section where you can describe the breakdown of costs between your organization and any partners / collaborators. You should attempt to demonstrate that: • The budget you are proposing is realistic for the scale and complexity of the project. • If applicable financial commitment from other sources is demonstrated for the balance of the project costs. • The budget breakdown is realistic and consistent with what is being proposed. • The spend profile matches the work packages and project schedule. Please state the amount of sub-contract funding (if any) within the expected spend of the project and justify the necessity for this spend as opposed to the addition of collaboration partners. Please state the amount of funding requested for academic partners (if any) and justify this spending using the Transparent Approach to Costing (TRAC) methodology to calculate 80% full economic costs.

	Guidance on eligible costs is provided in Appendix 1.

Assessor's questions to consider:
Question 7: How appropriate is the proposal financially? Is the overall budget realistic and justified in terms of the aims and methods proposed? Do the project costs provide fair market value? For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following: How well thought out and appropriate are the project financial plans? Is the overall budget realistic in terms of the aims and methods proposed? Is the project's match funding realistic? (If required) Is the case for sub-contract funding well made as opposed for sub-contractors being consortium partners? (If required) Is the case for academic partner spend well justified?

1.3.8 Case for Public Funding (10% weighting)

This section follows on from section Part 2:1.3.7 and focuses on what sources of funding you have already considered and what is the justification for the funding that you require.

Any data or references that might help to support your answers that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Question 8. **Please provide a summary of your funding and spending history on the innovation to date; and evidence to show**	You must provide a clear breakdown of previous funding and spend on your innovation, including any grants or awards received, and how these have been deployed to achieve the current maturity and technology status of your innovation. You will need to demonstrate the added value of public funding for your proposed project. To

that your innovation warrants use of public money. Provide the total invested in the innovation to date, itemised by category e.g.: Grant funding, own cash invested, external funding received/invested, non-cash investment i.e. personnel resource etc. Provide a high-level breakdown of how funds have been spent to date and what has been achieved. Describe the other sources that you have approached to raise funds for this project. Name the other organisations and companies that you have contacted. Please list all grant funding received to date and currently being applied for: include funding body, project/activity funded, amount, and date. Describe why your innovation needs public funding from CCUS Innovation 2.0	demonstrate this, you will need to provide evidence that: There will be an increase in your total Research & Development spend on CCUS technologies in the UK; and either: • Why you are not able to wholly fund the project from within your business's own resources; or • How BEIS's funding would allow you to undertake the project differently or more quickly and why this would be beneficial to the UK. Please provide full details of other public funding that you have received, including but not limited to grants and investments, received to date, in relation to this, or related, projects. Related projects mean any projects using resources or assets (including intellectual property) which are being used by this project. You must include any grants that have been used to reach this point in the development process and are now completed or close to completion and any for which an application is underway or in progress. You should describe other sources of funding you have explored to fund this project and the outcome of these discussions. Public funding should not be the first option for your project.

Assessor's questions to consider:
Question 8: To what extent has the applicant demonstrated value for money on historic spend to date on this innovation? How strong is the case for added value of public funding? For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following:

Has appropriate progress been demonstrated in the innovation given the level of funding received to date? Can the innovation be funded by other means? How strong is the case for public funding and is this justified? Have alternative sources of funding been explored and explained? What added value does public funding bring to the development of the innovation?

1.3.9 Experience and Skills (15% weighting)

This section focuses on the experiences, skills and track record of your business and its personnel.

Section/Field	Guidance
Question 9. **Please summarise:** The company's relevant experience in delivering projects and successfully commercialising technology. Describe relevant experience of the key personnel in the project. Describe what the roles and responsibilities of key personnel involved are for this project. Please demonstrate that you have all the necessary industry and supply chain relationships in place to deliver this project.	You should highlight the experience of your management and delivery team and key personnel within your organization (and any partner organisations) that are involved in the project. This should focus on experience in project management, technology commercialisation, business development and raising finance (i.e., loans, equity finance). You should detail any track record individuals involved or your business has in undertaking and exploiting the results of research and development projects, to show your capability to develop and exploit the technology. If you feel the Acceleration Support aspect of the scheme might be able to provide additional skills or knowledge necessary for the successful completion of the project you should highlight these in this section. You should detail and explain any industry or supply chain relationships which are necessary, or which will help you to deliver this project. You should demonstrate sufficient resource commitment and capability to undertake the project, as described in Question 5 and 7, with clear management reporting lines identified.

Assessor's questions to consider:
Question 9: To what extent does the organisation and delivery team have the right skills and experience to deliver the projects intended benefits to time and quality? Can any skills gaps be addressed by the acceleration support? For this aspect of the proposal assessors will consider a range of questions. These will include (but not be limited to) the following: Has the delivery team been described? Does the business have the right, available mix of skills and experience to deliver the project successfully? Have all the partners/sub-contractors been described? Is appropriate use being made of sub-contractors where in-house skills are either insufficient or not available in the right timeframe? Where sub-contractors are being used, does the management team have experience of managing external contractors? Are there any skills gaps, if so, is the applicant aware of them? How will any skills gaps be addressed? Can any skills gaps be addressed by the acceleration support? Are industry / supply chain relationships adequate to deliver the proposed project? N.B. please consider within context of the TRL of venture and expected team experience/size for a venture of that TRL.

1.4 Public Statement

This section provides a public statement that BEIS can use for publicity purposes.

Section/Field	Guidance
Public statement	This should be a brief summary of the project which should describe your company and project. You should use language that can be understood by people without specialist knowledge or expertise. It should explain why the project is innovative and describe the key aims and

	objectives. BEIS reserves the right to amend the description before publication if necessary but will consult you about any changes. This should not contain reference to any intellectual property as this description will be made available in the public domain if the application is successful. This question is not scored.

Section 2. Completion of the CCUS Innovation 2.0 Project Cost Breakdown Form

You will need to complete the financial details in the Financial Summary section of the application form and also complete the CCUS Innovation 2.0 Project Cost Breakdown Form. The information in both sections should be consistent.

You should only submit one project cost breakdown form for the project, which should combine the costs of all project partners. Within the project cost breakdown form and the application, you should make clear how funds will be split between partners.

The CCUS Innovation 2.0 Project Cost Breakdown Form consists of 8 worksheets:

- Summary
- Project Location
- Labour and Overhead costs
- Material costs
- Capital equipment costs
- Sub-contract costs
- Travel and subsistence costs
- Other costs

Each of these sheets can be accessed by using the scroll bar at the bottom of the worksheets.

Within the spreadsheet there are grey cells which are auto-calculating based on data in the manual entry cells, information should not be entered into these. All blue cells are manual entry boxes or drop-down boxes into which data can be input; Each tab provides example in the first row on how to fill out the form. Additional guidance on exactly what information should be input often be found by clicking into cells.

Guidance on eligible costs is provided in Appendix 1 – Eligible Costs of these guidance notes.

Guidance on what needs to be entered in some fields is provided within the sheet when you click on the box.

Worksheets only need to be completed if you have costs in those categories, so for example, if your project has no planned capital equipment or sub-contract costs, the form will assume these entries are £0 and calculate without them.

2.1 Project Quarterly Breakdown Worksheet

This worksheet provides the breakdown of all costs across the duration of the project. It represents the spending profile you expect for your project. In entering this information, you should ensure that the profile is consistent with the timings of the various work packages you are proposing within the project schedule.

You must ensure that the total, in the spreadsheet, for each category matches the total that has been calculated on the individual worksheets.

Part 3: Lot 3

Section 1. Completion of the Application Form

This section aims to guide you through the completion of the online Application Form for Lot 3 of CCUS Innovation 2.0 Call 2. It is important that a response is provided to every question. This guidance is intended to explain what type of information applicants should consider providing to BEIS to best demonstrate the merit of their application.

Applications will be judged based on the information provided in the application form and any supporting information provided. Although questions relating to the call can be asked by **3 October 2022** (see Part 1:Section 11), there will not be the opportunity to enter into discussion about your project with the assessors or BEIS. These guidance notes are not intended to be exhaustive; applicants are expected to develop their own responses based on your own skills, knowledge and experience. You are encouraged to be concise and to the point whilst providing all the necessary and relevant information.

Throughout the form there are boxes, in order to answer the question or provide information you should simply click on the box and begin typing or select from the drop-down menu. Questions do have word limits and when the text has reached the word limit you will not be able to add any further information and the text must be edited to fit within the word limit. CVs have a 2-page limit per individual, if individual CVs are longer than 2 pages assessors will not read beyond the second page. CV's should be uploaded as a single file.

All application documents must be submitted via the online application form. In the form there are opportunities to upload relevant supporting documents. In some sections, we specify the supporting information we would like to see uploaded. Uploaded documents cannot be in place of answers being provided in the SmartSurvey. The application will be assessed on the answers in the smart survey fields. Uploaded documents should only be of a supporting nature to the main answer.

Any graphs, diagrams or supporting evidence that you are providing to support your application should be uploaded to your submission.

1.1 Proposal Summary, Contact & Organisation Details

The initial section of the application asks you to provide details about your organisation.

Section/Field	Guidance
Names of Bidder	Provide the name of the lead applicant
Project Title	A brief title that can be used to summarise the project

Project Lot Number	Confirm that you are applying to Lot 3 (Feasibility Studies)
Estimated Start Date	Select the date you would propose to start work assuming successful funding
Project Duration	Enter the expected duration in months, taking into consideration the project must be complete before 28 February 2025.
Estimated End Date	Select the date you propose to finish the project
Total Project Costs	This figure should match the figure calculated in the Project Cost Breakdown Form. It should be the total value of the project including all eligible costs.
Company contribution	This is the amount of total eligible project costs that you will be paying from your own resources/private sector investment into the project.
BEIS Grant Applied for	This is the amount you will be asking for from BEIS. You should ensure that you do not request a grant higher than the maximum allowed, taking into account all public-sector funding for the project.
Grant Funding requested as percentage of total funding	This is the percentage of total costs that the grant makes up. It cannot be more than you are eligible for as set out in Part 1:Section 5.
Project Summary	This should be a summary description of the project which should set the scene for the assessors and introduce your proposed project. You should use language that can be understood by people without specialist knowledge or expertise. This question is not scored but will be used by assessors to gain a high-level understanding of the project before they start their detailed assessment.

The fields described below appear in the application form in sections 3 to 9 of that document and are included in this table to group the descriptions of high-level paraments together.

Contact Details	Name and details of the person who will be the main point of contact for the application process
Organisation Name	Provide the full registered name of the organisation applying for funding
Registered Address	This is the address where the organisation is registered
County	The county where the organisation is registered
UK Region	The UK region where the organisation is registered
Country	The country where the organisation is registered
Project Location	The location, if it is different from the registered address, where the main activity of the proposed project will be carried out
CO2 Emissions	I confirm that the project lead organisation is the owner/operator of a UK-based site with CO2 emissions of 40,000 tCO2 per year or greater.
Standard Industry Classification (SIC)	I confirm that my business is registered at Companies House, and have a SIC code registration that is on the list of eligible SIC codes required for Lot 3 applications. What Standard Industrial Classification (SIC) code is the lead organisation registered under? *Follow SIC Code guidance Part 1:7.2.1* Please provide the full SIC code the lead organisation is registered under?
Organisation Type	Please select from the drop-down menu
Organisation Size	Please select your organisation size
Number of employees (including directors)	Number of staff in your organisation (this will help us confirm the nature of your company)

Number of employees that will be directly involved in the proposed project	State the number of employees from your company that you expect to be directly involved in the project you are proposing.
Organisation Registration Number	Your business registration number as listed by Companies House, or equivalent.
Turnover (in most recent annual accounts)	Please provide your most recent turnover figure from annual accounts and the date of those accounts
Balance Sheet Total (total assets net of depreciation)	Please provide your most recent balance sheet total (total assets net of depreciation) and the date of the calculation.
Organisation maturity	Please enter the age of the business since its formal formation, this includes any periods of dormancy with Companies House.
How is the organisation currently funded?	Please select all the types of funding that are applicable.
Organisation Status	This should be a summary description of your company which should set the scene for the assessors and introduce your company. You should use language that can be understood by people without specialist knowledge or expertise. This question is not scored but will be used by assessors to gain a high-level understanding of the company before they start their detailed assessment.
Does the business have a parent company?	We need to understand if there any significant shareholders in your business. The parent company details should be provided in the Parent Company details section.
Parent Company Details	If you have a parent company, or are more than 25% owned by another enterprise, you must provide the details of that enterprise here.

Which aid category are you applying under?	You must select one of the subsidy categories from the drop-down list. The options are: • Aid for Research and Development projects – Feasibility Study For more details on the subsidy requirements, see Section 5 of these Guidance Notes. You must indicate that you comply with the financial obligation rules by providing the relevant information.
If you are applying under Aid for Research and Development projects, is this a collaborative project?	If you are applying collaboratively, please provide details of the partner organisations in the CCUS Innovation 2.0 Partner Form. If you are applying as a collaboration, you must also submit a copy of formal Heads of Terms agreed between all the collaborators. Prior to the issuing of a Grant Offer Letter, you will have to submit to BEIS a copy of the collaboration or joint venture agreement that you propose to work under. You should be aware that BEIS will not issue a Grant Offer Letter until they have seen, reviewed and approved a final draft of this agreement. Sub-contracting work to a third party does not classify as a collaboration.

1.2 Eligibility Criteria

See Part 1:Section 4 for guidance on Eligibility Criteria. This section of the application confirms if the application meets the eligibility criteria of CCUS Innovation 2.0.

1.3 Assessment Criteria

1.3.1 Technology choice and study focus (20% weighting)

This section focuses on what technologies will be the focus of your Next Generation CCUS study, the process to down-select them, and how important these technologies might be to your industrial sector and wider UK industry.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

High marks will be awarded where the CCUS-technology selection process is well described and justified and is supported by appropriate evidence.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Please describe which next generation CCUS technology(ies) will be the focus of your study and how they are an improvement on current state-of-the-art CCUS technology. If the technology(ies) of the study are yet to be decided, please describe what aspects and improvements of next generation CCUS will be the focus and why these are important to your site(s) and your wider industrial sector. Please describe the process you will, or have, gone through to shortlist the chosen technology(ies). Please provide evidence of the anticipated environmental impact and safety implications of the technology(ies) considered in the study.	When describing how next generation technology might be an improvement, where appropriate, please reference this against the findings of the BEIS/AECOM review (to be published concurrently with this guidance document). If there is no current application of CCUS within the target sector, please develop the case. Please also base any comparison on common industrial metrics, for example reduction in energy requirement in GJ/tCO2 captured, levelised cost of capture in £/tCO2 captured, etc. Please note next generation CCUS technologies that are focussed on by these studies must be between a TRL of 3 to 8 (see Appendix 2 – Technology Readiness Levels (TRLs) definitions). Furthermore, although the main aim of these studies focusses on next generation carbon capture technologies applicable to particular industrial sites, the study can include next generation CCUS technologies (within your site battery limit) that focus on improving CO2 compression, polishing, liquefaction, etc. When describing the down-select process please state if this will include parametric analysis, what weighting will be used, and why particular parameters might be important to your site(s) or wider industrial sector. When addressing this criterion please consider emissions to air/land/water, toxic chemicals, any rare materials/catalysts used, as appropriate.

1.3.2 Technology applicability and addressable market (20% weighting)

This section focuses on how applicable the underlying CCUS technologies that will be studied are to your industrial sector and wider UK industry. This includes the potential addressable market in UK and internationally.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

High marks will be awarded where the CCUS-relevant characteristics are comprehensively described and evidence is provided that the technology and knowledge is widely applicable across similar industrial sites.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Please describe the site(s) that will be the focus of the study, the industrial processes and equipment that are currently used, and how this might affect the deployment of CCUS technology within the boundaries of your site. Please include a justification as to why CCUS is more appropriate in this application that other decarbonisation technology approaches. Please describe if your UK-based site(s) are characteristic for your wider industrial sector. If applicable, please confirm how similar your UK and non-UK sites are to one another. Please describe how applicable these next generation technologies might be to other sites within your industrial sector and sites in other sectors. Where possible, please try to estimate, with appropriate justification(s), the addressable market (e.g. number of sites (both within the UK and internationally), total	Please describe your site(s) in language for a non-technical audience. When describing your sites please include an attachment showing pictures, site layouts simplified block flow diagrams, etc. When describing how applicable these next generation technologies are to other industrial sites and sectors, where possible, please indicate the potential addressable market size for these particular technologies (e.g. number of sites, total annual addressable emissions, etc.) for UK or wider. Please describe if your site(s) are characteristic for your wider industrial sector or if the equipment commonly used within your industrial sector is very variable. If applicable, can you also confirm if the next generation CCUS technologies are also applicable to your non-UK industrial sites.

annual addressable emissions, etc.).	

1.3.3 Knowledge dissemination and contribution to deploying next generation CCUS technologies (10%)

This section focuses on how the learning from your Next Generation CCUS study will be shared and disseminated, and how as a company you can contribute to the deployment of these next generation CCUS technologies.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

High marks will be awarded for a detailed, specific and effective dissemination strategy, as well as where the sector/site could contribute through demonstration of technologies.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
The publication of Key Knowledge Deliverables (KKDs) is mandatory for CCUS Innovation 2.0 funded projects. Please describe how you will share the key learning from your study and contribute to widening the commercial deployment of next generation CCUS technologies between 2030 and 2035. Please indicate what prior experience your company, and project partners, have sharing information and cooperating with other companies in your industrial	When describing how the learning from your study will be shared with wider UK industry please can you confirm the areas of learning you think will be of most value to other industrial sites, and how much of this information you will be freely available to share. Please indicate how confidential information might be removed or redacted, but the value of the study findings still preserved. When describing how your site(s) can contribute to the deployment of next generation CCUS technology please indicate how your sites might be suitable for pilot-testing, or scaling up the demonstration of the technology. Please confirm what scale (e.g. tCO2 captured per day) pilot testing might be appropriate and what size might full-scale demonstration be if you hosted this at your site. Please describe how the implementation of the CCUS technology at the site considered would contribute to the

sector and wider industrial community. If applicable, please indicate the number of sites you own/operate, in the UK and internationally, that if successful could be candidate sites for commercially deploying these next generation CCUS technologies. Please confirm how demonstration of the technology at your site will be applicable for future users of the technology, for example concentration of CO2 in your flue gas, impurities, etc.	Net Zero decarbonisation expectations as defined by the Industrial Decarbonisation Strategy

1.3.4 Project Costs and Finance (20%)

This section focuses on the methods for commercial exploitation of the project outcomes, the potential return on investment and the products, processes, or outcomes from the project and how you plan to derive value from them, and your competitors.

This section focuses on the finances and expected costs of the project. The Project Cost Breakdown Form should also be downloaded, completed, and submitted as part of the application. Part 3:Section 2 provides further guidance to completing the Project Cost Breakdown Form. The numbers provided in the application form should match those within the Project Cost Breakdown Form.

Any data or references that might help to support your answer that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Attachments Required • Project Cost Breakdown Form. *All projects must provide this with an application. If not applicable returns with "N/A" are sufficient.*	Applicants are expected to provide a summary of the main areas of spend within the project, making clear the level of contribution from the business and the level of funding required from BEIS. This should include: • robustness of the project costs estimates i.e. whether the proposed eligible project costs are realistic & justified in terms of the project schedule and sufficient to yield the deliverables sought;

	• why the project considers these cost to represent fair market value • the expected source of any company contribution • a breakdown of costs between the primary project organisation and any partners/collaborators Highest marks will be awarded to projects that can demonstrate that they can deliver a workable solution (including the use of modelling or demonstration) and that the proposed public-sector contribution to the eligible project costs: • will represent good use of public funding by supporting projects whose costs are realistic and justified and are likely to secure the expected project aims and deliverables. • will represent good value for money and a fair balance of risk and benefits for BEIS, including no element of profit in the project costs.

1.3.5 Project Delivery (30%)

This section focuses on what work you plan to do during your project, the key milestones and timings and how you propose to manage the project. A project Gantt chart (or similar), Work Package Summary, Project Milestone Summary, Risk Register and CV's should also be submitted as separate files. The details provided below should match what is provided in the Gantt chart.

Any data or references that might help to support your answers that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Any data or references that might help to support your answers that cannot be included in the application form should be provided to BEIS as a separate attachment. These may include for example tables of data, diagrams.

Section/Field	Guidance
Please provide a high-level Gantt chart or outline project schedule listing the key tasks and timescales.	This criterion will be used to assess the expected effectiveness and efficiency of the feasibility study looking at a range of factors, including:

Please provide a work package summary outlining each work package with a brief description including key tasks and how the duration of the work packaged has been determined. Please provide a project milestone summary outlining each milestone with a brief description including deliverables. Describe the top 3-5 challenges to successfully deliver this project. Submit a risk register covering the key risks (these might include commercial, technical, resourcing, financial, regulatory, operational, and environmental risks), please include how these will be monitored and managed. Outline plans for dealing with unforeseen circumstances Outline the key roles for each partner and the proposed governance arrangements between the partners to ensure effective project delivery. Please provide details below of the relevant skills, qualifications and experience of main project team members, including descriptions and evidence of previous relevant work carried out. CVs of key personnel are to be uploaded, each of a maximum of 2 pages in length. Demonstrate a strong commitment of all participating organisations for consortium bids.	• the completeness and quality of the proposed project delivery schedule • 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. • the project's access to the necessary skills and facilities. • the capacity, experience and capability of the project team Highest marks will be awarded to applicants who have taken all reasonable steps to maximise the likelihood of successfully delivering the projects aims in the time allotted. High scoring applications will, for example: • present well thought-out, robust, credible, project schedule • have clear, concise and logical work package descriptions • show a realistic and robust approach to risk management • not be heavily dependent for success on external factors beyond the project's direct control • guarantee access to any necessary specialist facilities, operational knowledge and skills, or other resources required to execute the project • have a strong technical delivery team with proven experience of successfully delivering comparable projects For the risk register, use the following headings as a minimum

Highlight any identified skill gaps and how these will be addressed.	• Risk description • Likelihood (low, medium, or high) • Impact (low, medium, or high) • Mitigations identified • Risk Assessment (Enter Red, Amber-Red, Amber, Amber-Green or Green) **Attachments Required** • Project Schedule (Gantt Chart) • Summary description of the proposed Work Packages • Project Milestone Summary • Key personnel CVs (should be no longer than 2 pages)

Section/Field	Guidance
Total company contribution	This is the amount of total eligible project costs that you (and any partners / collaborators) will be paying from your own resources/private sector investment into the project.
Source of company contribution	Please state the source of your company contribution to the total costs (your match funding). If you have partners / collaborators, include their contributions here as well.
Amount of BEIS grant applied for	This is the amount you will be asking for from BEIS. You should ensure that you do not request a grant higher than the maximum allowed, taking into account all public sector funding for the project.
Other Public sector funding applied for	Please provide full details of other funding that you are currently applying for or have already applied for or received

	in relation to this particular project. This data is important as other public sector support is counted as part of the grant you can receive for the project and total subsidy contribution. Do not include grants that have been used to reach this point in the development process and are now completed. Please include this information in 1.1.
Total project value	Please add total company contribution, amount of BEIS grant applied for and other public sector funding applied for to give the total value of the project
Grant funding requested as a percentage of total funding	Input percentage calculated in the Project Cost Breakdown Form. *N.B. This figure must be compliant with the relevant subsidy category under which you are complying.*
Project Start Date and End Date	Within the Guidance a programme schedule has been provided. Please indicate when (subject to approval) you would expect to be able to start your project, and when you expect it to complete. Please be aware that there are restrictions on project length and make sure your project completes within the maximum time allowed. The start date should only be considered as an indication. Should you start your project before final approval any costs will be incurred at your own risk, will not be eligible for grant, and will not be included in project costs you can claim against.

1.4 Public Statement

This section provides a public statement that BEIS can use for publicity purposes.

Section/Field	Guidance
Public statement	This should be a brief summary of the project which should describe your company and project. You should use language that can be understood by people without specialist knowledge or expertise. It should explain why

	the project is innovative and describe the key aims and objectives. BEIS reserves the right to amend the description before publication if necessary but will consult you about any changes. This should not contain reference to any intellectual property as this description will be made available in the public domain if the application is successful. This question is not scored.

Section 2. Completion of the CCUS Innovation 2.0 Project Cost Breakdown Form

You will need to complete the financial details in the Financial Summary section of the application form and also complete the CCUS Innovation 2.0 Project Cost Breakdown Form. The information in both sections should be consistent.

You should only submit one project cost breakdown form for the project, which should combine the costs of all project partners. Within the project cost breakdown form and the application, you should make clear how funds will be split between partners.

The CCUS Innovation 2.0 Project Cost Breakdown Form consists of 8 worksheets:

- Summary
- Project Location
- Labour and Overhead costs
- Material costs
- Capital equipment costs
- Sub-contract costs
- Travel and subsistence costs
- Other costs

Each of these sheets can be accessed by using the scroll bar at the bottom of the worksheets.

Within the spreadsheet there are grey cells which are auto-calculating based on data in the manual entry cells, information should not be entered into these. All blue cells are manual entry boxes or drop-down boxes into which data can be input; Each tab provides example in the first row on how to fill out the form. Additional guidance on exactly what information should be input can often be found by clicking into cells.

Guidance on eligible costs is provided in Appendix 1 – Eligible Costs of these guidance notes.

Guidance on what needs to be entered in some fields is provided within the sheet when you click on the box.

Worksheets only need to be completed if you have costs in those categories, so for example, if your project has no planned capital equipment or sub-contract costs, the form will assume these entries are £0 and calculate without them.

2.1 Project Quarterly Breakdown Worksheet

This worksheet provides the breakdown of all costs across the duration of the project. It represents the spending profile you expect for your project. In entering this information, you should ensure that the profile is consistent with the timings of the various work packages you are proposing within the project schedule.

You must ensure that the total, in the spreadsheet, for each category matches the total that has been calculated on the individual worksheets.

Appendix 1 – Eligible Costs

BEIS will only provide the grant to cover eligible costs incurred and defrayed in the period between acceptance of the BEIS grant and the deadline specified in the grant offer letter for completion of the project.

The definition of eligible costs includes the applicant's own costs, eligible costs incurred by consortium members and eligible costs incurred by companies connected to any of these. The cost of work contracted to connected companies, to consortium members or to companies connected to consortium members should be on the basis of eligible costs.

Costs must be denominated in GB pounds. Applicants should indicate where conversion has been made to GB pounds from other currencies and indicate the rate and assumptions used.

List of Eligible Costs

Eligible costs are defined as the following:

- Personnel costs: researchers, technicians and other supporting staff to the extent employed on the project;
- Costs of instruments and equipment to the extent and for the period used for the project. Where such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible;
- Costs for buildings and land, to the extent and for the duration period used for the project. With regard to buildings, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible;
- Costs of contractual research, knowledge and patents bought or licensed from outside sources at arm's length conditions, as well as costs of consultancy and equivalent services used exclusively for the project; and,
- Additional overheads and other operating expenses, including costs of materials, supplies and similar products, incurred directly as a result of the project.

List of Ineligible Costs

Under no circumstances can the grant be claimed or used:

- For activities of a political or exclusively religious nature;
- In respect of costs reimbursed or to be reimbursed by funding from other public authorities or from the private sector;

- In connection with the receipt of contributions in kind (a contribution in goods or services as opposed to money);
- To cover interest payments (including service charge payments for finance leases);
- For the giving of gifts to individuals, other than promotional items with a value no more than £10 a year to any one individual;
- For entertaining (entertaining for this purpose means anything that would be a taxable benefit to the person being entertained, according to current UK tax regulations);
- To pay statutory fines, criminal fines or penalties; or,
- In respect of VAT that you are able to claim from HM Revenue and Customs.

Staff Costs

BEIS would not normally expect to see contractors in key posts, e.g. CEO, FD, etc included in applications. Exceptionally, where BEIS is willing to provide a grant which covers the cost of staff in key posts, the day rate attributed to each member of key staff within the project must be agreed with BEIS at the outset and cannot be varied without written agreement.

Appendix 2 – Technology Readiness Levels (TRLs)

Technology Readiness Levels (TRLs) are an indication of the maturity stage of development of particular technology on its way to being developed for a particular application or product. Below are some broad definitions of the TRLs used by BEIS for CCUS Innovation 2.0.

Research	Description
TRL 1 – Basic Research	Scientific research begins to be translated into applied research and development.
TRL 2 – Applied Research	Basic physical principles are observed, practical applications of those characteristics can be 'invented' or identified. At this level, the application is still speculative: there is not experimental proof or detailed analysis to support the conjecture.
Industrial Research (guideline)	
TRL 3 – Proof of technical concept	Experimental proof of critical technical functions and validation of feasibility for application. Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include showing the performance of critical technical features or components are feasible (even if not yet integrated or representative of real-life environment). This stage is beyond “discovery science” (TRL1) and applied research (TRL2) and investigates a novel technological or scientific advance with some category of application in mind. The scientific principles of the novel or innovative aspect are already characterised with hard experimental data points that enable prediction of performance, but the science is not necessarily in the final engineered format. In this stage, analytical and experimental studies measure parameters of interest, characterise properties and performance, and validate the theoretical predictions. For

	example, with new materials or combinations of materials, a range of formulations or combinations may be tested to explore the boundaries of performance and to select a combination with the necessary properties for commercial exploitation. System components are not yet fully integrated e.g. the lab demonstration of a new photovoltaic material may show desired properties in a controlled atmosphere but applications will require a suitable encapsulation method. Technology principles may be demonstrated in computer models and computer simulated environments where appropriate. A key output from this stage is to identify how results differ from the expected or necessary performance for future applications and where improvement is necessary.
TRL 4 – Lab and Test Bench Demonstrations	Lab and Test Bench Demos of sub-systems & key components. Modelling & experimentation with parameters representing future conditions. Application proof-of-concept. Modelling and experimentation with data or parameters that represent future conditions (cf. TRL4). "Bench" demonstrators' show that the core technology components or subsystems based on the lab research could be engineered in practice, behave as predicted, and results indicate that the performance needed for a future application is achievable albeit with further optimisation. Bench demonstrations may focus on the key innovative component of the proposed system/product or demonstrate an entire system with simulated inputs or use of substitute subsystems. For large scale technologies the "bench" demonstration may be at smaller scale and would include tests of scale models in tanks and tunnels. If new manufacturing methods will be required, the feasibility of these will be investigated at this stage.
TRL 5 – Development Prototypes	The system, sub-system, components, or sub-scale units are integrated with reasonably realistic supporting elements so it can be tested in a simulated or representative environment. Critical cost assumptions are carefully investigated, and the feasibility of the proposed manufacturing process is tested. A new manufacturing step may require a separate "product development" process for the manufacturing

	equipment. Prototype components and sub-systems are developed and improved to show that all the proposed technical components can provide the performance which will be required for future application (including: longevity, reliability, energy efficiency). Representative hardware and software components are tested in way that realistically simulates anticipated operating conditions or allows realistic predictions to be made. A relevant environment may be: laboratory test rigs with simulated use conditions, a controlled operational environment, or basic field tests. A test rig for new component technologies may be a version of the end-product. Intended functionality, size/form factor, and performance features are known at this stage. Successful development prototypes (components) become the basis for a demonstration prototype for full field tests.
Experimental Development (guideline)	
TRL 6 – Engineering or Demonstration Prototype	Full-scale system in representative conditions - Engineering Prototype. Representative full-scale prototype system is tested in a relevant environment. Proof-of-application. Critical cost factors and new manufacturing capability are refined at this stage e.g. use of cost effective materials, demonstration that new components can be manufactured, demonstration of any new manufacturing steps or processes. Not all secondary interfaces or user features are (necessarily) available yet. Representative prototype is demonstrated in a relevant environment to prove engineering feasibility. The component/sub-system designs selected at previous stage are validated. Demonstration prototypes are typically fitted with a range of monitoring/measurement systems and operated in real-life systems and conditions with continual adjustment to confirm or optimise performance claims. Core functionality, size/form factor, and benefits of the proposed product should all be demonstrable but not all end-user features or interfaces are necessarily available at this stage. Some thirdparty measurement validation or tests are usually best done at this stage (particularly to validate improved performance over other technologies or to confirm any

	necessary certification and approvals that need to be obtained).
TRL 7 – Operational Prototype (Alpha Product)	Near or at planned operational system, requiring demonstration of an actual system prototype in an operational environment. Prototype for prolonged use at “tame” client or user site. All planned functions, interfaces integrated for monitored trials under the developer’s control. Alpha product prototypes are at or close to the proposed final product configuration which can be fully tested in an “in-house” trial in operational or client-like environments with integration to all systems or interfaces which will be experienced in-use. Alpha trials should validate in-use performance and also test the following: integration to all other relevant systems, features needed to support proposed installation and maintenance procedures, exposure to all other influences likely to be experienced in the “user-environment”, etc. All the manufacturing steps will be tested at this stage and repeatable samples provided. Third party specialist tests would be done at this stage if not possible earlier. Prototypes may have minor re-designs following alpha tests but should not be subject to major re-designs if earlier stages have been completed properly. “In-house” means the developer runs and the trial and has access to the system(s) during the trial. Performance is not public but Alpha tests could be at "tame client" sites. Companies would not typically expect to sell prototypes at this stage.
TRL 8 – Production Prototype (saleable Beta product)	System Incorporated in Commercial Design - Production Prototype (or process). Development is complete, final design and feature set, limited release to appropriate number of clients, all fulfilment procedures trialled and documented. Trials under client / users control and operation. Technology is proven to work - technology design for production or roll-out is completed and qualified through test and demonstration. Development complete, final design and feature set, limited market release to appropriate number of clients, all fulfilment procedures trialled and user documentation complete. Saleable product. (cf. TRL 8 / 9)

	A beta or pre-production prototype is the configuration which the venture expects to sell repeatedly. These designs are finalised to a product specification and ready for repeat production. Client trial would validate: all the features and functions of the system perform as needed under expected conditions. A full product beta test includes trialling sales processed (to some extent by signing up “beta-clients”), delivery and installation procedures, integration and commissioning procedures, instructions for use, monitoring, support and maintenance procedures. Suppliers will provide short-runs of components or assembled product. There needs to be a sufficient number of beta-sites to validate the product or solution is repeatable and reliable. At the end of a successful beta test the company should be in a position to sell the product to a client for reliable on-going use. Repeated sales may be measured in 10’s or 1000’s depending on the technology and the cost of making iterations or improvements to the product design. However, by the above staged process, when the “beta” product prototype is prepared the venture has confidence that they could make repeated sales which will not require a re-call or levels of remedial support that would hamper the company’s future progress.
TRL 9 – Marketable Product	Marketable Product: proven in repeated use - Product being sold in market, scaling up sales volumes. Actual application of technology is in its final form - Technology proven through successful operations.

Appendix 3 – CO2 Specification

For the purpose of innovation projects funded by CCUS Innovation 2.0 BEIS is providing an indicative carbon dioxide specification. This is for the sole purpose of helping projects when developing novel CCUS technology to have a sense what CO2 specification their technology might have to meet to transport and store CO2 via pipeline or ship.

When a technology developer commercially deploys their technology it will have to meet the CO2 specification of the T&S or shipping infrastructure.

Composition	Units	Gathering Network	Export Pipeline	Ship
Pressure	barg	25-30	90-110	5-10 15-20 45-72
Temperature	°C	25-30	25-30	-55 to -41 -30 to -19.5 10 to 30
Carbon dioxide, CO2	% mol	> 96	> 96	Still to be determined
Total non-condensable gases (N2+Ar+O2+H2+CH4+Other Hydrocarbons)	% mol	< 4	< 4	Still to be determined
Total methane & other hydrocarbons	% mol	< 2	< 2	Still to be determined
Hydrogen, H2	ppmv	5000-7500	5000-7500	≤ 50
Carbon Monoxide, CO	ppmv	1000-2000	1000-2000	≤ 100
Water, H2O	ppmv	30-50	30-50	≤ 30

Oxygen, O2	ppmv	10-100	10-100	≤ 10
Hydrogen Sulphide, H2S	ppmv	5-200	5-200	≤ 10
Sulphur Oxides, SOx	ppmv	10-50	10-50	≤ 10
Nitrogen Oxides, NOx	ppmv	10-50	10-50	≤ 10
Amines	ppmv	2-10	2-10	≤ 10
Ammonia	ppmv	10-50	10-50	≤ 10
Aldehydes	ppmv	≤ 20	≤ 20	≤ 20
Glycol	ppmv	≤ 10	≤ 10	≤ 10
Mercury	mg/m3	≤ 0.03	≤ 0.03	≤ 0.03
Total Cadmium & Thallium	mg/m3	≤ 0.03	≤ 0.03	≤ 0.03

Appendix 4 – Grant Funding Agreement Template

Separate document.

Appendix 5 – Grant Offer Letter Template

Separate document.

Appendix 6 – FAQs

Separate document

This publication is available from: www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-innovation-20-competition-call-2

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