The ACT4 Call

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Introduction – ACT joining forces for implementation of CCUS

Accelerating CCUS Technologies (ACT) is an initiative to facilitate the emergence of CO_2 Capture, Utilisation and Storage (CCUS) via transnational funding of projects aimed at accelerating and maturing CCUS technology through targeted innovation and research activities.

This document establishes the terms of the ACT4 call for proposals. Further information can be found on the ACT website: www.act-ccs.eu.

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1. Introduction

This document describes the objectives, scope, and topics of the call, rules for participation, and procedures from proposal to implementation of the projects.

The following timelines are anticipated for the full funding process. Note that ACT reserves the right to alter these timelines:

Action	By Whom	Timing
Proposal Submission Deadline	Applicants	2022 September 12, at 13:00 CEST
Funding Decision Notification	ACT	Late December 2022
Project Commencement	Applicants	February/ March 2023

The ACT4 call is a one-stage process with only full proposals submitted by the above specified deadline. There is no pre-proposal stage, as there was in previous ACT calls.

A matchmaking section is available on the ACT website to support consortium building. Applicants looking for project partners will find a list of potential partners in this section. They should contact their national/regional contact person if they would like to be listed.

2. Call budget

The former ACT consortium was a collaboration between funding agencies from 16 countries and regions. As shown in Table 1, some of these funding agencies have formed a new consortium to make funds available for the ACT4 call. Each national/regional funding agency will only provide funding for national/regional entities.

Table 1. National/regional funding bodies and budget

Participating country/region	Funding organisation	Indicative budget
Canada, Province of Alberta	Emissions Reduction Alberta (ERA)	CAD$ 2.85 million
Germany	Forschungszentrum Jülich GmbH, Projektträger Jülich (FZJ/PtJ)	€ 3 million
India	Department of Science and Technology (DST), Ministry of Science and Technology, Government of India	€ 1 million
Norway	The Research Council of Norway (RCN)	Up to NOK 30 million
United States	Department of Energy (DOE)	US$ 5.4 million (Equivalent to approx. 5 million €)

A project consortium may include partners from countries other than those listed in Table 1 if such partners are fully funded by sources other than ACT.

3. Objective of the ACT4 Call

The goal of ACT is to accelerate and mature CCUS technologies through targeted funding of innovation and research activities.

ACT will address the technological, environmental, social, and economic challenges that will be required to accelerate CCUS. Priority will be given to projects that incorporate or address the European Strategic Energy Technology (SET) Plan Implementation research priorities (link) and/or focus on the Priority Research Directions (PRDs, link) Identified at the Mission Innovation CCUS Challenge Workshop (Houston 2017).

Successful projects shall facilitate the deployment of CCUS in the energy and industrial sectors. The ACT goal of accelerating the time to market for CCUS technology will require industrial involvement in research and innovation activities. Therefore, applications submitted to the ACT4 call must be industrial oriented.

Projects must include higher Technology Readiness Levels (TRLs) of 5 and above, with the goal of advancing the TRL as a result of the project.

The ACT4 Call is open to all CCUS topics as long as the national requirements listed in Annex 1 are met.

Applications within the following subjects are of special interest:

- **Carbon capture:** production of a pure CO_2 stream from combustion and/or processes at the point of emissions.
    - CO_2 captured from hydrogen production facilities, power stations that use biomass or fossil fuels, hard to decarbonise heavy industry facilities (e.g., cement, iron & steel, chemicals), and natural gas processing plants.
    - Examples of carbon capture technologies that could be considered for this Call include without limitation: chemical or physical absorption, cryogenic, membrane separation, chemical or physical adsorption, oxy-fuel combustion, and chemical looping.
- **Carbon capture and transportation networks:** integrated approaches combining multiple capture points and transportation infrastructure to link multiple specific capture sites to a common network.
- **Point-to-point transportation** via pipelines, ships, trains, or trucks with a single input CO_2 stream.
- **Direct carbon conversion:** implementation of a process that directly absorbs carbon into a product at the point of emissions such as the creation of CO_2-based products (e.g., fuels, chemicals, building materials).
- **Permanent Storage:** captured CO_2 is transported to a geological storage site and then injected deep underground where it is permanently stored.
- **Utilization to Storage via Enhanced Oil Recovery (EOR)/Enhanced Gas Recovery (EGR):** the captured CO_2 is transported to an oil-field and is used to stimulate more oil production, with the CO_2 then being stored in the oil-depleted reservoir.
- **Offshore CO_2 storage:** injection of CO_2 into deep geological formations beneath the seabed (e.g., depleted oil and gas reservoirs and saline aquifers) for permanent storage.
- **Clean Hydrogen Production:** low-carbon hydrogen production from fossil sources combined with CCUS.
- **Carbon dioxide removal (CDR):**
    - **Biomass Carbon Removal and Storage (BiCRS)/ Bioenergy with Carbon Capture and Storage (BECCS):** utilisation of biomass as an energy source and the capture and permanent storage of CO_2 produced during the conversion of biomass to energy.
        - Example: Power station fuelled with biomass and equipped with CCS
    - **Direct Air Capture (DAC):** production of pure CO_2 stream from ambient air.

- **In-situ carbon mineralization:** CO_2 captured, compressed, and stored in reactive geologic formations where CO_2 in the fluid form mineralizes to produce water-insoluble calcium or magnesium carbonates, such as in basalts offshore.

4. Eligibility criteria

The requirements detailed in this section must be met by all applicants. In addition to these general requirements there are specific national/regional funding body rules that must also be followed (see Annex 1). ACT is seeking innovative projects that range from smaller research projects to new or major expansion/upgrades of existing pilot and demonstration facility sites. The projects should include the potential for upscaling to industrial size either in a demonstration or early commercial phase.

Each project proposal must be submitted by a project consortium comprised of at least two eligible applicants seeking funding from at least two participating countries / regions (listed in Table 1) in the ACT4 call.

Each project consortium must have the required expertise to undertake research and development within the specified themes. Each consortium must have a Lead Applicant who serves as the project's main contact point. In addition, Lead Partners from each participating country must serve as primary point of contact at the national level. No project partner can have a share of more than 70% of the project's work plan activities.

As part of the full proposal, all partners must provide a Letter of Intent, it must include an explicit declaration of any financial or in-kind contributions agreed upon, and the partner's role.

Projects funded under this Call must be completed within 3 years. Projects with a shorter timeline that can provide results for accelerating CCUS development are highly encouraged. Projects must commence within three (3) months of receiving ACT funding approval.

A justification of the requested budget will be required as part of the proposal. All costs must be eligible according to the funding bodies' rules (see Annex 1). If in doubt, applicants should consult their respective funding bodies which can advise on funding rules.

In addition to the general rules and procedures outlined in this section, each of the participating funding bodies has specific eligibility criteria that applicants must meet. This includes, but is not limited to, restrictions on the types of organisations that can be funded, requirements on the types of activities that can be funded, national/regional evaluation rules, maximum funding per partner or per project, etc.

We strongly recommend that applicants reach out to the national/regional contact person at the relevant funding bodies (see Annex 1) to confirm their eligibility before submitting a proposal. Projects that are deemed in-eligible will not be considered for funding.

5. Submission

Within the framework of ACT, **a one-stage submission and evaluation procedure** will be adopted.

Applicants must submit their **applications to the ACT's Secretariat** and all ACT funding agencies require **supplementary information at the national level**. Applications must be submitted in English only.

Submission at ACT level

Proposals shall be submitted to the ACT Secretariat via email at act-ccs@rcn.no as a single PDF file. The proposals must be based on the *template* in **Annex 2**.

Submission of a proposal is required before the deadline of 12 September 2022, 13:00 CEST. Late applications will not be accepted under any circumstances.

The applicant will receive a confirmation when submitting your application to the email address above. If you do not receive a confirmation your application has not been corrected submitted.

Curriculum Vitaes (CVs) must be no more than two pages long, with a maximum of three CVs per partner. Letters of Intent (LOI) can be from partnering organizations, funding sources, site hosts, etc. Please combine all CVs and LOIs into a single PDF attachment and email it to the ACT's Secretariat as an annex with the full proposal document. Any documents submitted at the ACT level that are not specifically requested in Annex 2 will not be considered during the evaluation process.

Submission at national level

Submission at national level is required to all funding agencies where funding is requested by the applicants. Details regarding submission at national level is specified in Annex 1: *Specific Funding Agencies' Rules*.

General Conditions

By transferring your full proposal to ACT, you give permission for it to be forwarded to your relevant funding agencies as well as all participating funding agencies involved in ACT4.

If after reading the instructions in this Call text, and information at the ACT-website, you still have technical questions about the submission, please contact the ACT Secretariat at the Research Council of Norway (contact details available in Section 9).

6. Evaluation procedure

The proposals will be evaluated at the national level by all funding agencies participating in this call. National evaluation procedures are described in Annex 1.

The relevant funding agencies will make a joint funding decision. The ACT Secretariat at the Research Council of Norway will notify the lead applicants of the decision. **The international funding decision is not appealable.**

All proposals will be evaluated according to the following **three main criteria** and the **sub-criteria** (Table 2), which are applicable in addition to national criteria. Each of the three main evaluation criteria below have an equal weighting. The prompts and instructions found in the template in Annex 2 provides additional detail on the specific considerations within each criterion.

Table 2. Evaluation criteria for ACT

Excellence
▪ In accordance with the objectives of the call text ▪ Clarity and relevance of the project's objectives ▪ Credibility of the proposed technology/concept – including trans-disciplinary considerations, where relevant ▪ Credibility of the proposed project approach ▪ Ambition and innovation potential - e.g., beyond the current state of the art. ▪ Added value of transnational co-operation within CCUS ▪ Scientific merit
Impact (potential impact of the results of the Research and Innovation, R&I, project)
• Expected contribution to the facilitation of the emergence of CCUS (e.g., through cost and risk reduction, involvement of relevant industrial partners, opening niche markets, surmounting major barriers) • Strength of the proposed research data management, exploitation, and dissemination plans (including Intellectual Property Rights management, where relevant) • Impact on any other environmental or socially important impacts (e.g., public acceptance). • Industrial relevance
Quality and efficiency of the implementation of the R&I project
▪ Coherence and expected effectiveness of the project plan, including the appropriateness of task, use of methods, resource allocation and timing ▪ Budget allocation ▪ Strength of management structures and governance procedures, including risk management ▪ Capability of the Lead Applicant (and partners) to deliver the project and to commercialize the technology further - including e.g., suitability of expertise, complementarity, balance of contributions

7. Consortium Agreement (CA)

Successful applicants will enter into a consortium agreement (CA) with their project partners, which will address the following areas:

- Internal organisation and management of the consortium
- Intellectual Property arrangements
- Settlement of internal disputes

The projects can decide for themselves if they prefer one Consortium Agreement signed by all partners or if there should be several separate Consortium Agreements, on in each country represented in the project.

Please note that the CA is for the benefit of the consortium members to regulate the collaboration process and safeguard critical issues, such as Intellectual Property Rights (IPR). Suggestions on how to establish CA are found in Annex 3. However, any type of CA that the project consortium agrees to will be accepted.

8. Project Reporting and Knowledge Sharing

The purpose of this call is to provide valuable information to support investment decisions, policy, and program design for European and non-European countries. Project monitoring and reporting will be in accordance with the rules of the respective funding body. In addition to the requirements of the respective funding body, the consortia (via the Lead Applicant) are required to deliver basic progress reports (in English) to the ACT Secretariat, on a quarterly basis. A mid-term review may be conducted for larger projects.

ACT is committed to encouraging widespread knowledge dissemination from funded projects to maximize the benefit of our participation. Successful applicants will be expected to commit to sharing of knowledge, data, lessons learned and best practices with other recipients at the annual ACT knowledge sharing workshops in either presentation or poster format. Recipients should budget time and costs to attend the annual ACT knowledge sharing workshops.

All partners involved in funded projects must ensure that all study learnings and key outcomes (publications, etc.) include proper acknowledgement of the ACT initiative and the respective funding bodies.

9. Contacts and Further Information

If you have any questions about the general call process or proposal submission, please contact the **ACT Call Secretariat:** Aage Stangeland at ast@rcn.no or +47 958 22 903.

If you have any questions about the rules of specific funding agencies or additional forms, please refer to *Annex 1: Specific Funding Agencies' rules* first.

Additional information, and national requirements, can be obtained by contacting the indicated national/regional contact persons at the participating funding bodies.

Table 3. National/regional contact persons

Contact persons	Organisation	Name	Email Address	Phone
Canada - Alberta	ERA	Sanah Dar Justin Wheler	sdar@eralberta.ca jwheler@eralberta.ca	+1 780-429-9327 +1 587-590-3761
Germany	PTJ	Heiko Gerhauser Annette Weiß Tarik Schwarzer	h.gerhauser@fz-juelich.de a.weiss@fz-juelich.de t.schwarzer@fz-juelich.de	+49 2461 61 96830 +49 2461 61 9025 +49 2461 61 9157
India	DST	Neelima Alam Sanjai Kumar Anita Gupta	neelima.alam@nic.in sanjai.k@gov.in anigupta@nic.in	+91-11-26590467 +91-11-26590270 +91-11-26590213
Norway	RCN (ACT coordinator) Gassnova	Aage Stangeland Ragnhild Rønneberg Ingrid Sørum Melaaen	ast@rcn.no rr@rcn.no ism@gassnova.no	+47 95 82 29 03 +47 91 55 86 62 +47 95 19 81 80
United States	DOE – Office of Fossil Energy and Carbon Management (DOE-FECM)	Mark Ackiewicz Darin Damiani Lynn Brickett Amishi Claros Aaron Fuller Andrew Hlasko	mark.ackiewicz@hq.doe.gov darin.damiani@hq.doe.gov lynn.brickett@hq.doe.gov amishi.claros@hq.doe.gov aaron.fuller@hq.doe.gov andrew.hlasko@hq.doe.gov	+1 301 903 3913 +1 202 287 5282 +1 412 260 7345 +1 301 903 7637 +1 240 205 5123 +1 240 449 7863

Annex 1: Specific Funding Agencies' Rules

The funding agencies are listed in alphabetic order.

Canada/Alberta Region

Country/Region	Canada /Alberta Region
Funding organisation	Emissions Reduction Alberta (ERA)
National contact person	Sanah Dar (Project Specialist – Main Contact) TEL: +1 780-429-9327 Email: sdar@eralberta.ca Justin Wheler (Executive Director, Technology and Innovation) TEL: +1 587-590-3761 Email: jwheler@eralberta.ca
Funding commitment	$2.85 million CAD, ~€2 million at current exchange rate. ERA in its sole discretion reserves the right to modify the total funding available under this Call.
Anticipated number of projects with Canadian partners	Approximately 1-3 anticipated. No minimum or maximum specified.
Maximum funding per awarded project	$2.85 million CAD (approximately €2 million)
Eligibility of a partner as a beneficiary institution	ERA funding is open to all categories of applicant, including technology developers, industry, industrial associations, small and medium-sized enterprises (SMEs), research and development (R&D) organizations, universities, municipalities, not-for-profit organizations, government research labs, and individuals.
Eligibility of costs	The maximum funding contribution from ERA for any one project is **$2.85 million CAD**. ERA will match applicant contributions toward eligible expenses on a one-to-one (1:1) basis. The maximum ERA contribution to a single project will be no more than **50%** of the project's eligible expenses. ERA will not match other government funds provided directly for the proposed project (federal, provincial, or international), or future revenue associated with the outcomes of the project such as offset credits or emissions performance credits associated with the project, tax incentives associated with the project (e.g., Canadian SR&ED credits), revenue from sales of the project's end-products (e.g., from offtake agreement), or non-eligible contributions. Applicants must justify the amount of funding requested. For information about eligible expenses and costs, please refer to the ERA *Eligible Expenses and Cost Instructions* document available at https://erims.outcome-plus.com/Content/Files/ERIMS/Files/ERA%20Eligible%20Expenses%20and%20Cost%20Instructions_November%202021.pdf.
Submission of the proposal at the national level	In addition to the ACT proposal, ERA may require applicants to provide supplemental information to support due diligence and portfolio reporting. This information may include detailed budget information, financial report(s), an extended Greenhouse Gas benefits analysis, and/or additional information on the specific alignment with the Alberta market. Supplemental information relates to both the overall project and the component of the project based in Alberta. The final document for the Supplemental Information must be no more than 20 pages in length excluding appendices. Financial reporting will be required for the Alberta-based partner(s) on the project and is mandatory for the project partner that will

	receive funding from ERA. The Supplemental Information document and appendices must be submitted via email to ERA Applications at applications@eralberta.ca. The following areas for CCUS that are NOT eligible for Alberta/Canada are: -Acid gas injection -Offshore CO_2 storage -Projects whose primary focus is point-to-point transportation or sequestration elements. -Commercially proven technologies/processes, business as usual, or to address only financial barriers.
Evaluation process at national level	Proposals will be evaluated by a team of experts with a breadth of knowledge in the areas of science, engineering, business development & growth, financing, and greenhouse gas quantification. The review team uses a standard and transparent set of criteria to evaluate each project's potential to make an important contribution to the achievement of ERA's goals. Projects that are well-aligned with ERA's mandate and demonstrate high potential to achieve the objectives identified in the funding guidelines are selected. See https://eralberta.ca/funding-process/ for more information.
Submission of financial and progress reports at the national level	All ERA funding recipients will be required to provide technical and financial progress reports at key milestones over the course of the project. The schedule of milestones will be determined in collaboration between ERA and funding recipients.
Information available at	https://eralberta.ca
Other	ERA funding is targeted for projects at the technology scale-up, field pilot, commercial demonstration, or commercial implementation stages (TRL 5-9). Applicants are not required to be located in Alberta, but all applicants must demonstrate a clear value proposition for the province. Applicants must demonstrate how the proposed technology or application thereof is an innovative solution for emissions reduction in Alberta. Alberta is home to the Alberta Carbon Conversion Technology Centre (ACCTC), a real-world test bed for carbon capture and conversion technologies. Applicants are strongly encouraged to consider piloting or testing their technology at the ACCTC. See https://innotechalberta.ca/research-facilities/alberta-carbon-conversion-technology-centre-acctc/ for more information. The International CCS Knowledge Centre (Knowledge Centre) offers insight into practical CCS deployment considerations. It is dedicated to advancing the understanding and use of a large-scale CCS/CCU as a means of managing GHG (greenhouse gas) emissions. Applicants may also engage with the Knowledge Centre for assistance with proposal development or project delivery at their own expense. See https://ccsknowledge.com for more information. Shell Quest and Alberta Carbon Trunk Line projects are notable large-scale CCS actions in Canada. Applicants are encouraged to consider leveraging or partnering with commercial-scale projects or infrastructure under development in Canada. See https://www.alberta.ca/carbon-capture-utilization-and-storage-funded-projects-and-reports.aspx for more information.

Germany

Country/Region	Germany
Funding organisation	PtJ, Projektträger Jülich
National contact person	Dr. Heiko Gerhauser E-mail: h.gerhauser@fz-juelich.de Tel.: +49 (0)2461 61 96830 Website: www.ptj.de
Funding commitment	National funding indication: Up to €3 million in national funding depending on final budget allocation
Anticipated number of projects with German partners	2
Maximum funding per awarded project	No hard limit
Eligibility of a partner as a beneficiary institution	The organisations which are eligible for funding as well as the eligibility criteria for cooperation are listed in the national guidelines. Additionally, note that new CO_2 geological storage projects within Germany are not eligible in this call. Research and development on geological storage must be at existing sites in Germany or take place outside of Germany.
Eligibility of costs	For detailed information visit: https://www.ptj.de
Submission of the proposal at the national level	German partners must submit their national partner application in German via easy-Online (https://foerderportal.bund.de/easyonline/) into the national electronic submission system. This applies to both the first stage (=”Skizze”) and the full proposal. The deadline for the “Skizze” is the same as the international deadline. The deadline for the national full proposal will be communicated to successful applicants in a letter. The German application at both stages consists of a form and a submitted text document. The latter (Vorhabenbeschreibung for the full proposal) does not have to contain a translation of the international proposal. Skizzentext and Vorhabenbeschreibung should contain additional information relevant for the German application and only a very brief summary of the international application for context as appropriate.
Evaluation process at national level	
Submission of financial and progress reports at the national level	Yes, scientific and financial reporting according to national criteria.

Information available at	https://www.ptj.de/projektfoerderung/angewandte-energieforschung/technologien-co2-kreislaufwirtschaft https://www.bmwi.de/Redaktion/DE/Downloads/B/bekanntmachung-forschungsfoerderung-im-7-energieforschungsprogramm.pdf?__blob=publicationFile&v=3 The most relevant section for this call is “3.15 Technologien für die CO2-Kreislaufwirtschaft". The requirements of the national call text need to be met in addition to those of the international ACT call text. Failure to do so will result in ineligibility.
Other	We highly recommend contacting the national contact person during the preparation of the project. Not contacting the national contact person may have a material impact on your chance of being selected for funding.

India

Country/Region	India
Funding organisation	Department of Science and Technology (DST), Ministry of Science and Technology, Government of India https://dst.gov.in/carbon-capture-utilisation-and-storage-ccus
National contact person	Primary Contact 1: Dr Neelima Alam, Email: neelima.alam@nic.in , Phone No.: +91-11- 26590467 Primary Contact 2: Dr Sanjai Kumar Email: sanjai.k@gov.in , Phone No.: +91-11-26590270 Secondary Contact: Dr. Anita Gupta, Email: anigupta@nic.in , Phone No.: +91-11-26590213
Funding commitment	1 Million Euro (Equivalent Indian Rupees: Approx. Rs 8 Crore)
Anticipated number of projects with Indian partners	Max. 2 projects (The numbers can be modified for the suitable project within the funding limit)
Maximum funding per awarded project	Maximum funding for Indian partners for awarded project will be restricted to maximum 0.5 Million Euro.
Eligibility of a partner as a beneficiary institution	• The proposals are to be led by faculties/scientists working in regular position in recognized Academic Organizations/Public funded R&D Institutions/Laboratories, Central and State Government autonomous organizations in partnership with other academic/R&D organisation, DSIR recognized SIRO organizations, Central and state autonomous organisations, industry association, industries etc. • The proposals submitted with well-defined and synergistic institute - user - industry partnership are encouraged. • All Indian partners in a single project must be separate legal entities. However, there can be more than one investigator from the same entity. • Participating Indian companies must: 1) Be incorporated in India under the Companies Act 1956/2013. 2) Have at least 51% stake of the Company be owned by Indian citizens. 3) Have been in operation for at least 3 financial years before the closing date for application. 4) Be registered under relevant provisions of Good & Services Taxation (GST) Act. 5) Have required expertise and capacity to technically contribute to the proposed project. 6) The maximum funding for Industry will not be more than their MSME definition based on Investment in plant and machinery for manufacturing Sector and Investment in equipment for Service Sector (MSMED Act 2006 or their consecutive amendments). 7) Industry may receive up to 50% of the DST approved budget cost and the remaining 50% contribution in cash shall mandatorily come from them. 8) The person-hours of existing workforce, utilization of facilities etc. will not be counted as industry contribution. 9) Indian industry/association may receive their part of the eligible costs on a "**Reimbursement Basis"**, for costs already incurred on a proportionate basis. **Companies need to provide the following with the First Stage application:** ✓ Evidence they have the resources and finances to undertake the project. ✓ An audited copy of their submitted annual accounts for the last three fiscal years.

Eligibility of a partner as a beneficiary institution (cont)	**Please note:** • Sole proprietors and partnership firms are not eligible for support under this programme. • Companies headquartered and owned outside India and their subsidiaries in India, or vice versa, are not eligible to receive funding directly or indirectly.
Eligibility of cost	Indian applicant must comply the **Department of Science & Technology (DST), India Rules and Regulations,** . Unless agreed otherwise: • Subcontracting is to be capped at a maximum of 20% of the India budget. • All India grant costs, including sub-contracts, should be incurred within the India. • Project management costs cannot be sub-contracted.
Submission of the proposal at the national level	The applicant is required to submit a full copy of the proposal to the Department of Science and Technology at onlinedst.gov.in. This proposal must be identical to what has been submitted to ACT and needs to be submitted immediately after submission to ACT secretariat. The dates for such submission and requirement for additional documentation will appear on DST website.
Evaluation process at national level	YES. Proposals will be evaluated according to standard procedure of DST.
Submission of financial and progress reports at the national level	Technical and financial reporting by Indian participants will be required according to rule and regulations and formats of DST at periodical intervals as to be specified on DST website.
Information available at	https://dst.gov.in/carbon-capture-utilisation-and-storage-ccus
Other	All the funded projects would be bound by guidelines stipulated by the Department of Science and Technology from time to time. The detailed guidelines for this call will appear on DST website, which will supersede anything stated here. The applicants may approach the national contact for specific queries at any stage of the project.

Norway

Country/Region	Norway
Funding organisation	**The Research Council of Norway (RCN) and Gassnova (GN)**
National contact person	Dr. Aage Stangeland The Research Council of Norway Tel: +47 95 82 29 03 E-mail: ast@forskningsradet.no Website: www.rcn.no Dr. Ingrid Sørum Melaaen Gassnova Tel:+ 47 951 98 180 E-mail: ism@gassnova.no Website: www.climit.no , www.gassnova.no
Funding commitment	Up to NOK 30 M national funding
Anticipated number of projects with Nor wegian partners	Between 2 and 5
Maximum funding per awarded project	Maximum NOK 15 M per project.
Eligibility of a partner as a beneficiary institution	1. The call is open to approved Norwegian research organisations, actors from public sector entities, non-governmental organisations, actors from the business sector, and other private organisations. 2. The main Norwegian partner must be either a. an approved Norwegian research organisation or b. a Norwegian company that has been issued an enterprise number under the Norwegian Register of Business Enterprises and that carry out economic activity in Norway. 3. The Norwegian team must include at least one approved Norwegian Research organisation. 4. The Norwegian team must include at least one Norwegian end-user as a project partner.
Eligibility of costs	All applications for project support must contain a complete budget according to standard procedures at the Research Council of Norway. Details available from this link. Research organisations can apply for up 100 percent financial support and companies can apply for up to 50 percent financial support. The maximum funding rate must be according to state aid guidelines as described at the RCN web site, see this link.
Submission of the proposal at the national level	Submission at national level is required. An application covering Norwegian activities must be submitted to the Research Council of Norway by following instructions from this link.
Evaluation process at national level	Proposals will be evaluated according to standard procedures at RCN or Gassnova. Details are available at the RCN web and the CLIMIT web. All proposals will be assessed by external referees or experts at Gassnova.

Submission of financial and progress reports at the national level	Scientific and financial reporting is required, following the standard national procedures at the Research Council of Norway and Gassnova.
Information available at	www.climit.no, www.rcn.no, www.gassnova.no
Other	The Norwegian sub-project of applications submitted to ACT must comply with the CLIMIT Program Plan.

United States of America

Country/Region	United States (US)
Funding organisation	Department of Energy-Office of Fossil Energy and Carbon Management (DOE-FECM)
National contact person	Mr. Mark Ackiewicz (Director, Office of Carbon Management) Tel: +1 301 903 3913 Email: mark.ackiewicz@hq.doe.gov Mr. Darin Damiani (Carbon Transport and Storage Senior Program Manager) Tel: +1 202 287 5282 Email: darin.damiani@hq.doe.gov Mrs. Lynn Brickett (Director, Point-Source Carbon Capture Program) Tel: +1 412 260 7345 Email: lynn.brickett@hq.doe.gov Mrs. Amishi Claros (Carbon Conversion Program Manager) Tel: +1 301 903 7637 Email: amishi.claros@hq.doe.gov Mr. Aaron Fuller (Carbon Conversion Program Engineer) Tel: +1 240 205 5123 Email: aaron.fuller@hq.doe.gov Mr. Andrew Hlasko (Point Source Carbon Capture Program) Tel: +1 240 449 7863 Email: andrew.hlasko@hq.doe.gov
Funding commitment	US $5.4 million (Equivalent to approximately 5 million €). U.S. DOE-FECM funding would come from the Point Source Carbon Capture Program, Carbon Transport and Storage Program, FECM Direct Air Capture, and the Carbon Utilization/Conversion Program. Any point source capture projects addressing industrial emissions cannot partner with refineries for fuel production nor natural gas processing. No projects applying for US DOE funds can support Enhanced Oil Recovery (EOR) and Enhanced Gas Recovery (EGR).
Anticipated number of projects with US participation	Up to 10 projects total (up to 3 projects in carbon capture, 2 projects in carbon utilization, 3 projects in carbon storage, 2 projects in CDR).
Maximum funding per awarded project	Projects are limited to US ~$540,000 or $500,000 € per proposals. Any projects that exceed this limit will be eliminated from consideration.
Eligibility of a partner as a beneficiary institution	Research on point source carbon capture, carbon storage, utilization/conversion, and direct air capture is solicited. Specific research related to industrial decarbonization is suggested. Additionally, reactive capture, an approach where both capture and utilization are done without a separate need for regeneration will also be considered. US proposals are open to DOE national laboratory participants only. However, ggeologic storage proposals are also open to the prime recipients of the US DOE's on-going Regional CCUS Initiative projects (DE-FE0031830; DE-FE0031836; DE-FE0031837; DE-FE0031838).
Eligibility of costs	Subject to DOE and FECM requirements for national laboratory field work proposals (FWPs) and the terms and conditions of the Regional CCUS Initiative project cooperative agreements identified above.
Submission of the proposal at the national level	Yes, in draft format prior to submission date. Purpose is to show alignment of the full proposal with DOE-FECM goals and objectives. US National Laboratories must also submit a FWP to DOE, similar to other projects with DOE-FECM.

Evaluation process at national level	Proposals will be evaluated in accordance with DOE-FECM review procedures for US National Laboratory field work proposals.
Submission of financial and progress reports at the national level	Yes, scientific and financial reporting according to standard DOE policy.
Information available at	www.energy.gov/fecm/office-carbon-management
Other	Contact one of the national contacts if there are specific questions.

Annex 2: Template for full proposal

1. **Publishable summary of the project (**max. 1 page**)**
2. **Scientific, technological, and commercial objectives and challenge (**max. 1 page**)**

Give evidence relating to the scientific, technological, and commercial objectives and challenges of the project, outlining:

- *Overall aims and objectives of the projects,*
- *Key targets to be achieved in the project*
- *Technology Readiness Levels including a short justification*
- *Scientific, technical, and commercial challenges*

3. **Technical and scientific description of the project** (max. 8 pages)

Describe:

- *State-of-the-art*
- *Innovation of your approach*
- *Technical milestones and expected results*
- *Methodologies and technologies utilised to obtain goals*
- *Recent research relevant to the project undertaken by the consortium partners*
- *Clear definition of the national subprojects (detailed description of activities performed in each country)*

4. **Outline of Work Plan (**max. 8 pages**)**

Please outline the following clearly:

- *Project structure*
- *Individual work package description with person-months per work package and partner*
- *Milestones, deliverables, and time schedule, including Gantt chart*
- *Role of each partner; relevant expertise, resources, workforce, costs*
- *Monitoring and management of the project*

5. **Relevance to ACT objective of accelerating and maturing CCS technology and transnational added value (**max. 1 page**)**

Please outline:

- *Relevance of the project to the ACT objective of accelerating and maturing CCS technology*
- *Scientific/technical/industrial/commercial expertise of the consortium partners which is relevant for the success of the project*
- *Value of national subprojects*
- *Added value of transnational cooperation*

6. Risks and mitigation measures (max. 1 pages)

Please outline for your project the most relevant risks (technical, economical, commercial, organizational, and political), their severity, and preventive and mitigation measures.

7. Budget and financing plan (max. 1 page)

Please add all budgets and financing tables submitted at national level and fill in the tables below.

Partner	Country	Currency	Total cost	Funding request from ACT	Own financing	Financing from other sources	Total financing
Partner 1							
Partner 2							
Partner 3							
Partner 4							
Partner 5							
Partner 6							
Please add rows if needed							
Sum							

Please split the ACT funding request on relevant funding agencies in the table below

Country	Funding agency	Currency	Funding request
Canada - Alberta	ERA		
Germany	PTJ		
India	DST		
Norway	RCN		
United States	DOE – Office of Fossil Energy		
Sum			

Annex 3: Consortium Agreement (CA)

A Consortium Agreement (CA) must be established between the consortium members to regulate the collaboration process and safeguard critical issues, such as Intellectual Property Rights (IPR).

There are several possibilities for establishing a signed CA and all the alternatives listed below can be considered:

- The CA can be based on any template suitable for all project partners.

- If a CA that is acceptable to all Consortium members cannot be developed, one alternative will be signed Letters of Commitments (LoC) from all partners. There might be a need for national CAs alongside such LoCs (Letter of Commitment) (there are some countries where a CA is a formal need). The wording in the LoC can be based on Letters of Intents (LoI) that must be submitted together with the application. Signed LoCs together with a separate IPR agreement can also be a workable solution.

- Another alternative is a simplified CA together with a separate document on how to handle IPR. Such a CA could be only a few paragraphs stating that all partners will collaborate as described in the application submitted to ACT.

- If project partners find it difficult to agree on one CA covering all partners, ACT will accept that a project operates with several CAs (e.g., one for European partners and another for non-European partners).

- The DESCA model is a template designed to fit European countries and could quite easily be used by projects having only European partners.

- A revised DESCA model can be used for projects with partners outside Europe. Wordings and terms difficult to accept for some partners can be deleted or changed if all project partners agree.