



FOOD, FARMING, AND FORESTRY CHALLENGE

*\$40 million to accelerate
innovation for sustainable growth*

Online Submission:
ERAadmin.ca

Deadline:
August 27, 2020 at 5:00PM MDT (UTC-6h)

**CALL FOR EXPRESSIONS OF INTEREST
GUIDELINES**

**EMISSIONS
REDUCTION
ALBERTA** 

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Legal Notice

Emissions Reduction Alberta is a registered tradename of the Climate Change and Emissions Management (CCEMC) Corporation and is referred to as ERA throughout this document. By submitting an Expression of Interest (“EOI”), you confirm that you have read, understand, and accept the information contained in this Call for Expressions of Interest and, that each of you, the applicant (the “Proponent”), and any project partners agree as follows:

- a) ERA may at any time suspend, terminate, cancel, withdraw, amend, or alter all or any portion of this request for proposals (“RFP”) EOI stage (“EOI Stage”), including but not limited to the EOI requirements, the EOI selection and review process, and the EOI eligibility criteria.
- b) ERA reserves the unqualified right to accept or reject any or all EOIs for any reason. ERA is not required to accept the highest ranked EOI nor is it required to accept any EOI recommended for advancement to the full project proposal (“Full Project Proposal”) stage (“FPP Stage”) by the applicable ERA evaluators.
- c) The final decision with respect to the projects to be included in the EOI short-list rests solely with ERA Board of Directors (“Board of Directors”). The Board of Directors’ evaluation of EOIs may be based on, but is not in any way limited to, the criteria set out in this RFP. The Board of Directors may consider any criteria determined by the Board of Directors to be relevant to ERA’s mandate, regardless of whether such additional criteria have been disclosed to the Proponent.
- d) EOIs that do not comply with the requirements described in this RFP may be rejected in whole or in part or not considered by ERA. ERA reserves the unqualified right to accept or reject a non-compliant EOI.
- e) This EOI Stage is an invitation for EOIs only. It is not an offer and the submission of an EOI does not create a contract or agreement of any kind between ERA and the Proponent.
- f) No conduct, act, or omission of CCEMC, CCEMC operating as ERA, or its directors, officers, consultants, project advisors, agents, servants, and their respective successors and assigns (collectively the “ERA Parties”) other than a written notice to the Proponent in writing signed by an authorized person for ERA, will constitute an acceptance of an EOI.
- g) Acceptance of an EOI does not create any binding contract between ERA and the Proponent. ERA shall not be obligated in any matter whatsoever to any Proponent until a written contribution agreement (“Contribution Agreement”) between CCEMC operating as ERA and the Proponent has been duly executed relating to an approved FPP.
- h) As between the parties, the EOI and all documents and materials you submit to ERA in connection with the EOI Stage and all intellectual property in and to the foregoing are the exclusive property of ERA immediately upon delivery to ERA. For clarity, this refers to the materials themselves, not to any technology or innovations disclosed or discussed in them. Intellectual property developed during the course of the project will be addressed through the Contribution Agreement and will normally be owned by the Proponent.

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- i) You, the Proponent and any project partners will keep this EOI Stage confidential and will not use, reproduce, or distribute it, any portion of it, or any data, information, drawings, or specifications included in or provided with it except as necessary to prepare an FPP as requested by ERA.
 - j) Neither ERA nor any of ERA Parties will have any liability whatsoever to you, the Proponent or any project partners, or any of them, in connection with this EOI Stage or any EOI prepared in response to it.
 - k) You, the Proponent and any project partners will not make a claim against CCEMC, CCEMC operating as ERA or ERA Parties for any reason whatsoever or howsoever relating to this EOI Stage. You are undertaking the expenditures required to prepare and submit an EOI entirely at your own risk, and you waive any right and release ERA and ERA Parties from any demands, liability, claim or recovery for costs, expenses, or damages incurred whatsoever or howsoever arising out of or relating to this EOI Stage or any EOI prepared in response to it, whether such right or claim arises in contract, negligence or otherwise.
 - l) ERA takes no responsibility for the accuracy of the information supplied during this EOI Stage process by ERA or ERA Parties.

1 Introduction

1.1 ERA

Emissions Reduction Alberta (“ERA”) is a registered tradename of the Climate Change and Emissions Management (CCEMC) Corporation. For 10 years, ERA has been investing the revenues from the carbon price paid by large final emitters to accelerate the development and adoption of innovative clean technology solutions. For more than 10 years, ERA has invested revenues from the carbon price paid by large industrial emitters to accelerate the development and adoption of innovative clean technology solutions. Since inception in 2009, ERA has committed \$542 million to 163 projects worth over \$4 billion that are helping to reduce GHGs, create competitive industries, and lead to new business opportunities in Alberta. These projects are estimated to deliver cumulative GHG reductions of 39.5 million tonnes by 2030.

1.2 Document Scope

This Call for Expressions of Interest (“Call”) is inviting project proposals to be evaluated in a competitive funding process. The process is divided into two stages, the Expression of Interest (“EOI”) stage and the Full Project Proposal (“FPP”) stage, followed by Contribution Agreement development and execution. These instructions provide information about the EOI stage only. Information specific to the FPP stage will be available when FPP invitations are made, which will address preparation and evaluation of FPPs for applicants who are successful at the EOI stage. An overview of ERA’s funding process can be found on the ERA website at: <http://eralberta.ca/apply-for-funding/#era-funding-process>.

Note: Applicants who have questions about the EOI process or who wish to discuss their potential submission with ERA are invited to email applications@eralberta.ca. Inquiries will be directed to appropriate personnel within ERA.

2 Call for Proposals Scope

2.1 Focus Area

Agriculture, agri-food, and forestry have been essential to Alberta throughout the province’s history. Alberta now produces over 40% of Canada’s total cattle inventory, 33% of the country’s wheat, 32% of its canola, and half of its barley. In 2018, the agriculture and forestry sectors employed over 100,000 Albertans, and the province’s agri-food exports reached a record \$11.6 billion.

These industries are expected to experience considerable impacts from climate change over the coming decades, in addition to ongoing pressures related to global competitiveness. There also exists significant potential for Alberta’s biological sectors to be leaders in emissions reductions,

sustainability, and provide opportunities for recovery in the aftermath of the current COVID-19 crisis and economic recession. Alberta's farmers, ranchers, foresters, and other bio-industry workers are well positioned to increase land stewardship initiatives and leverage natural solutions to help Canada and the world meet sustainability objectives.

In 2017, Alberta emitted over 43 MtCO₂e from agricultural, agri-food and forestry operations combined¹. This represents over 28% of Canada's total emissions from these sectors and presents a significant opportunity to reduce emissions. Additionally, there is strong consensus that the potential for emissions abatement within natural sectors exceeds their emissions footprint, highlighting the capability for these industries to become net carbon sinks.

Technology innovation, adoption of novel practices, and other nature-based solutions have significant potential to drive economic, environmental, and social benefits for Alberta's biological industries. At the same time, several barriers exist that must be addressed to maximize this potential. These include access to capital, availability of innovation adoption capacity, alignment with the regulatory and market landscape, and availability of robust and scientifically recognized data regarding the efficacy of various solutions. Following in-depth engagement with various stakeholders, ERA is confident that this funding opportunity will act as a catalyst for overcoming some of these barriers in order to accelerate commercialization and deployment of solutions for Alberta's biological industries.

This Call is seeking innovative solutions for GHG emissions mitigation, abatement, and sequestration across Alberta's food, farming, and forestry industries. Examples of potential areas of interest for this Call include but are not limited to:

- Land use changes for GHG mitigation and sequestration, including innovation relating to soil carbon content, soil health, water use, etc.;
- Quantification and measurement techniques for productivity improvement, enhanced sustainability & biodiversity, and/or GHG monitoring as a critical enabler for GHG reductions;
- Advanced genetics and omics for crops and livestock;
- Solutions for improved nutrient management including novel fertilizers and improved practices;
- Novel techniques for tillage, seeding, harvesting etc.;
- Advanced cultivation techniques including vertical/containerized farming, hydroponics, and greenhouse technologies;
- Digitization and automation for enhanced production and resource management;

¹ Information retrieved from Canada's Official Greenhouse Gas Inventory (GHG_Econ_Can_Prov_Terr.csv) and includes Pulp and Paper, Agriculture, On Farm Fuel Use, Crop Production, Animal Production, and Forest Resources.

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- Solutions for biological methane emissions;
 - Improved forest management and silviculture;
 - Novel utilization of short-rotation forest species, including land reclamation, green construction, or new forestry products; and
 - Deriving coproducts and value-added opportunities from agricultural and forestry residues.

Opportunities that are considered out of scope for this Call include:

- Business-as-usual technologies and practices such as off-the-shelf energy efficiency upgrades, commercial power generation (renewable or otherwise), basic afforestation, and others.
- Projects that do not involve a clear technology or solution to be tested or deployed, such as fundamental research projects, standalone engineering studies, development of offset protocols, or similar. These elements may be included as part of an ERA project that fits the intent of the Call, but not as standalone projects. Eligibility of expenses pertaining to these activities will be considered during the proposal adjudication process.

Note: Applicants must demonstrate how the proposed opportunity is an innovative solution for emissions reductions in Alberta. This may include aspects such as first-of-kind demonstration of novel solutions, or innovative adaptation of solutions that have been implemented elsewhere but have not been deployed in Alberta. ERA funding will not be provided to address only a financial barrier or for projects that involve the implementation of business-as-usual technology.

2.2 Project Structure

Funding made available through this process is provided for completion of projects with well-defined objectives, milestones, deliverables, and timelines. Applicants must clearly delineate the scope of the project for which ERA funding is being requested and the GHG reduction potential associated with that scope of work. Any related work completed concurrently or before the project term but outside the scope of the project may be discussed in the proposal but should be clearly indicated as such.

2.3 Stage of Development

EOIs are invited for projects that advance innovation to the stages of field testing, field piloting, commercial demonstration, or first-of-kind commercial implementation, as described below:

- **Field Test/Pilot:** At this stage, the solution is ready to be field tested in an operational environment. Projects in this category include scale up of prototypes to representative pilot scale and subsequent in-field testing of pilot units.
- **Commercial Demonstration:** At this stage of development, the solution approaching the final commercial product and is ready for testing at near-commercial scale. Projects in this category include demonstration of near- or fully-commercial scale systems/techniques in an operational environment.

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- **First-of-Kind Commercial Implementation:** At this stage, the solution is ready for first-of-kind commercial deployment. Projects in this category will involve design, construction, and operation of the technology or practice in its final commercial form, with the intent to operate the solution for its full commercial life.

For clarity, projects may begin at an earlier stage of development as long as they reach one or more of the above stages within the scope of the project and the timelines outlined below. Applicants are responsible for providing a clear line of sight from the current level of development through to piloting, demonstration, and/or deployment within the scope of the ERA-funded project.

2.4 Project Location

All projects supported through this Call must demonstrate a clear and justified value proposition for reducing GHG emissions in Alberta. Technology solutions can originate from anywhere globally, but must be field tested, piloted, demonstrated, or implemented in Alberta. Projects that involve multiple sites are eligible for funding under this Call.

2.5 Eligible Applicants

This Call is open to all categories of lead applicant, including farmers and ranchers, innovators, technology developers, Indigenous communities, 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. Applicants are not required to be located in Alberta, but all applicants must demonstrate a clear value proposition for the province.

Collaboration between multiple organizations is eligible and encouraged for this opportunity. Collaboration between partners can often represent a strong value proposition by demonstrating opportunities for technology validation, commercialization, and sharing of results. This Call is focused on advancing technology solutions. As such, involvement from technology providers/developers is critical.

Applicants are encouraged to partner with Alberta's post-secondary and research institutions, Indigenous communities, co-operative organizations, and municipalities where appropriate. These partnerships can offer significant benefits, including the attraction and training of highly skilled workers, increasing Alberta's innovation capacity, engagement of local communities, and leveraging complementary resources.

There are no restrictions on the number of EOIs that can be submitted by any applicant. However, applicants are encouraged to be selective and bring forward only the most promising and highest quality applications.

Projects or portions thereof that have received ERA or CCEMC funding are not eligible to receive further ERA funding for the same development. However, applicants may request support for a new phase of development that builds on and sufficiently advances a previously-funded project.

3 Terms of Funding

3.1 Total Funds Available

The total funding available for projects supported through this Call is up to **\$40 million** Canadian Dollars (\$CAD), subject to the discretion of ERA and the availability of funds.

3.2 Cost Sharing

The minimum funding request to ERA for any one project is **\$250,000 CAD**, and the maximum is **\$5 million CAD**. ERA will only match contributions toward eligible expenses on a one-to-one (1:1) basis. As such, the maximum ERA contribution to a single project will be no more than **50%** of the project's eligible expenses. ERA may, at its sole discretion, consider reducing this requirement for projects where strong justification is provided.

ERA will only match unencumbered cash contributions to the project for 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. However, the presence of these revenue sources does not disqualify a project from eligibility and may be noted in the EOI, as the merits of these contributions will be taken into consideration during the evaluation.

For information about eligible expenses and costs, please refer to the ERA *Eligible Expenses and Cost Instructions* document available on <http://eralberta.ca/apply-for-funding>.

<p>Note: Applicants must justify the amount of funding requested. ERA may choose at its sole discretion to award project funding for less than the requested amount.</p>

3.3 Project Term

The maximum project length for projects funded under this Call is **three (3) years** from project initiation. For this Call, successful applicants may request a delayed start date of up to twelve (12) months after funding approval. This flexibility is provided to allow for alignment with ongoing operational timelines and seasonal considerations.

3.4 Project Initiation

ERA will only contribute toward go-forward project costs incurred after the date of ERA funding approval. Project-related costs incurred prior to ERA funding approval will be considered out of scope, will not be considered eligible project costs, and are not eligible for fund matching from ERA. Furthermore, no disbursements will be made prior to execution of a contribution agreement with

ERA, and any project costs incurred prior to execution of a contribution agreement will not be reimbursed by ERA in the event that an agreement is not executed.

3.5 Trusted Partner Funding Leverage

ERA is working in partnership with other funding organizations in Alberta and across Canada. In some cases, there may be an opportunity for ERA to share applicants' proposals with trusted partners and explore possibilities to leverage funding available from these organizations.

During the submission process, applicants will have the opportunity to have their submissions shared with ERA's trusted partners. Please note that ERA will only share these applications for the purposes of exploring further funding leverage and with partners where ERA has a non-disclosure agreement in place. An applicant's preference regarding whether to allow sharing of their application will not influence ERA's assessment of their proposal.

ERA's *Food, Farming and Forestry Challenge* is well-aligned with current and future funding programs through the Agriculture Funding Consortium (AFC) and the Canadian Agri-Food Automation and Intelligence Network (CAAIN). ERA will work with AFC and CAAIN to explore co-funding opportunities and reduce administrative burden for applicants. ERA will also work to align with the research priorities and opportunities identified by the new Results Driven Agriculture Research (RDAR) organization.

4 Submission Details

4.1 Submission Deadline

The deadline for submission of EOIs in response to this Call is **Thursday, August 27, 2020 at 5:00 PM Mountain Daylight Time (UTC-6h)**. Late submissions will **not** be accepted. Applicants are encouraged to complete their submissions well in advance of the deadline. Furthermore, ERA will not accept partial or incomplete submissions. All required content must be uploaded and inserted into ERA's Emissions Reduction Information Management System ("ERIMS") at <http://www.eraadmin.ca/> and the submission must be finalized by completing all necessary online steps in order for the EOI to be considered complete. Applicants will receive an automatically-generated email confirming receipt of the EOI upon submission.

If any prospective applicant has a strong opportunity that is aligned with this Call but cannot meet the timelines of the Call, we encourage you to reach out to ERA to explore whether other funding mechanisms might be available in the future through ERA or its partnership network.

4.2 Funding Process Timelines

The following timelines are anticipated for the full funding process. Note that ERA reserves the right to alter these timelines or cancel the Call.

Action	By Whom	Timing
EOI Submission Deadline	Applicants	August 27, 2020
EOI Shortlist Notification	ERA	October 2020
FPP Submission Deadline	Applicants	December 2020
FPP Oral Presentation	Applicants	January/February 2021
Funding Decision Notification	ERA	March 2021

4.3 Submission Content

EOIs must be submitted using the ERIMS at www.eraadmin.ca. Users must create an account and complete all mandatory forms to submit an application. Each submission must consist of the following:

- **Expression of Interest Document:** This document will form the basis of ERA's evaluation, and must fully address each of the evaluation criteria.
- **Letters of Support (Optional):** Letters of support from partnering organizations, funding sources, site hosts, etc., may be uploaded as an appendix to the EOI document.
- **Online Information:** In addition to the documents outlined above, applicants are also required to enter general information about the project into the ERIMS online system.

Note: Only the required documents and information described above will be reviewed. Any additional attachments, materials or information appended to the required documents will not be considered during the evaluation.

4.4 Submission Standards

A response template will be provided on the ERIMS for the EOI document during the application process. Applicants must use the response template to ensure that all necessary information is provided in a consistent and practical manner. Applications that fail to use the template may not be considered.

The final EOI document must be uploaded in PDF format and may be no more than eight (8) letter-sized (8.5" x 11") pages in length, including all text, graphics, and tables. **Any extra pages beyond the limit will be removed from the document and will not be considered by the evaluators.** The document must use Calibri (or Arial) 11-point font with a minimum of 1.0 line spacing. Margins must be no smaller than 2.54 cm (1"). Only one document may be uploaded per submission.

Note: The page limit does not include optional letters of support.

5 Evaluation

5.1 Evaluation Criteria

EOIs will be evaluated on the following criteria. Each of the evaluation criteria is assigned a relative weighting. Applicants are encouraged to place more emphasis on the higher-weighted criteria.

Criterion	Description	Weight
Innovation Opportunity	Proposals will be evaluated on the strength of the proposed solution and alignment of the opportunity with the call for proposals, including: the novelty of the technology or practice; the competitive advantages relative to existing technologies and practices; and the expected advancement over the course of the project.	25
Implementation Plan	Proposals will be evaluated on the strength of the project implementation plan, including achievability of the work plan, the plan to obtain financing for the project, the capacity of the project team, and the strength of support from project partners, where applicable.	20
GHG and Non-GHG Benefits	Proposals will be evaluated on the potential for GHG reductions in Alberta by 2025, 2030, and beyond. Socioeconomic, environmental, and sustainability benefits will also be considered. This includes benefits directly/immediately from implementation of the project, from future commercial implementations (e.g. adoption at existing sites, new deployments), and from broader adoption across the industries of interest.	35
Market and Value Proposition	Proposals will be evaluated on the opportunity for commercialization and widespread market adoption of the innovation in Alberta, including the value proposition of the solution, alignment with market needs, the plan for knowledge transfer/sharing, and the expected pathway toward commercial deployment.	20

Note: The size of opportunity and potential for widespread GHG and economic benefits will be taken into consideration during project selection. ERA reserves the right to consider optimal portfolio balance and strategic mandate alignment when selecting proposals for funding.

5.2 Screening Criteria

In addition to the evaluation criteria described above, projects may be screened out based on one or more of the following factors:

- Insufficient GHG reduction potential;

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- Insufficient relevance to Alberta and/or insufficient project activity in Alberta;
 - Risk of detrimental side effects (e.g. environmental impacts);
 - Insufficient information provided;
 - EOI not written in English;
 - EOI not sufficiently readable or comprehensible;
 - EOI does not conform to the submission standards;
 - Proposed project is inconsistent with the intent or scope of this Call;
 - Proposed development is assessed to be business as usual.

5.3 Next Steps

Some applicants whose EOIs are well aligned with ERA’s mandate, the goals of the Call, and the evaluation criteria will be invited to submit a detailed FPP. Further information regarding FPP submission will be made available at the time FPP invitations are made.

All applicants who submit an EOI through this Call will be notified of ERA’s decision when the EOI review process is complete. Applicants whose proposals are not accepted may arrange a short debrief phone call with ERA to receive feedback. Information about arranging a debrief phone call will be provided in the notification letter.

5.4 Note on Proposal Quality

This is a highly competitive process, and not all projects will be shortlisted. Success at the EOI stage depends on the quality of the EOI submitted. Only the highest quality EOIs will be invited to submit FPPs. In this regard, “quality” means both the quality of the proposed project relative to the evaluation criteria and the quality of the written proposal (clarity, completeness, etc.).

6 Intellectual Property

Intellectual property will be addressed through a Contribution Agreement between ERA and each successful applicant, and will be specific to the circumstances of each project. However, a few general principles apply:

- Background IP (patents, copyright, software) and third-party technology remains with its original owner(s);
- ERA retains rights to project results, including without limitation the technical data, reports, analysis, and discussion;
- Project outcomes, results, and learnings will normally be made publicly available at the conclusion of the project; and
- Project technology (based on patent disclosures) developed as a part of the co-funded activities will be owned by the successful applicant and its partners, in accordance with the

IP arrangement between project partners. However, successful applicants will be expected to commercialize and/or make the technology available through reasonable commercial terms for the benefit of Alberta.

7 Confidentiality

ERA is subject to the *Freedom of Information and Protection of Privacy Act*, RSA 2000, c.F-25 in the course of performing duties and functions and exercising powers delegated to it. All data and records in the custody or under the control of ERA that are required in the performance of duties or functions or the exercise of powers delegated to ERA are subject to the *Records Management Regulation*, Alberta Regulation 244/2001.

Subject to the requirements described above, ERA is governed by a comprehensive Privacy, Data Security and Confidentiality Policy (the “Policy”). The Policy requires that any and all information concerning the business affairs of ERA and its directors, officers, employees and applicants is to be kept private, secure and confidential. Confidential information that is collected, used or disclosed by ERA will be handled in a manner that recognizes both the right of the individual to have his or her confidential information protected and the need of ERA to collect, use and disclose such information for purposes that are reasonable.

To read the entire Policy, visit <http://eralberta.ca/privacy>.