CLEAN RESOURCES

PROGRAM GUIDE: CONTINUOUS INTAKE PROCESS

ALBERTA INNOVATES OVERVIEW

Alberta Innovates is a catalyst for innovation. As a Government of Alberta corporation and consistent with Government priorities, Alberta Innovates supports research and innovation that leads to economic growth & diversification, enhanced environmental performance, and social well-being.

Alberta Innovates has three core divisions within the Research, Innovation & Commercialization business line, which include Clean Resources (the combined legacy Clean Energy and Bio Sector), Health Innovation, and Investments, as well as two wholly-owned research subsidiaries: InnoTech Alberta and C-FER Technologies.
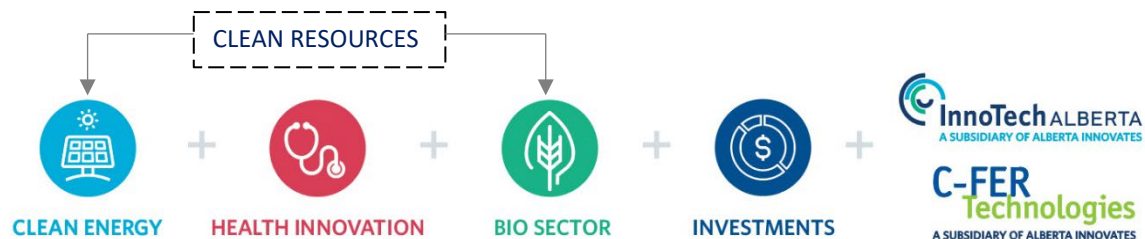

Figure 1: Alberta Innovates Divisions and Research Subsidiaries

Specifically, Alberta Innovates is pursuing a strategic direction that focuses on four emerging technologies that support multiple sectors across the province, see Figure 2 below. A key innovation strategy is to embrace the digital future while leveraging Alberta's existing natural resources and human capacity, while continuing to enhance Alberta's knowledge workforce to ensure sustainable growth in an increasingly digital based economy.

Figure 2: Alberta Innovates Emerging Technology Strategic Focus Areas

CLEAN RESOURCES OVERVIEW

Clean Resources helps technology developers and industry clients accelerate technology development and deployment, grow their businesses, and enhance the competitiveness of the resource sector. We provide scientific and technical insights to the Government of Alberta (GOA) on energy and natural resource development, agriculture, economic diversification, emission reduction, and water/land policies.

Clean Resources has five technology portfolios that utilize continuous intake processes and targeted calls for proposals. This guide pertains to the continuous intake process leveraged by three of the five portfolio areas as listed below. There is a separate guide for the **Agri-Food and Bioindustrial Innovation Program (ABIP).**

- **Advanced Hydrocarbons** supports economic, environmental, and diversification opportunities in Alberta's oil & gas sector. The Advanced Hydrocarbons portfolio consists of two programs: **Cleaner Hydrocarbon Production** and **Innovative Hydrocarbon Products**.
- **Clean Technology** supports diversification of Alberta's economy through the development of clean technology. The Clean Technology portfolio consists of of four areas: **Renewable and Alternative Energy**, **Bioenergy and Circular Economy**, and **Carbon Capture, Utilization and Sequestration (CCUS) and Hydrogen,** and **Critical Minerals and Emerging Technology** .
- **Environmental Innovation** supports economic development, environmental performance and healthy communities through investments in knowledge and technology gaps in two major programs: **Water Innovation Program** and **Land and Biodiversity**.

Together, our efforts are to sustain and grow Alberta's oil & gas, agriculture, forestry, and clean technology industries, add value to enhanced and new energy products, reduce greenhouse gas emissions, and protect Alberta's water and land resources.

CONTINUOUS INTAKE PROCESS

The Clean Resources continuous intake process provides support to the portfolio programs and the corresponding strategic focus areas, shown in Table 1 below. Links to the website have been provided where additional information can be found.

Advanced Hydrocarbons	Clean Technology	Environmental Innovation
Cleaner Hydrocarbon Production • Recovery Technologies • Methane Emission Reductions • Digital Oilfield Innovative Hydrocarbon Products • Partial Upgrading • Bitumen Beyond Combustion (BBC) • Natural Gas Value Add	Renewable and Alternative Energy • Grid Modernization • Electricity Generation • Energy Storage Bioenergy and Circular Economy • Waste Conversion • Renewable Fuels • Circular Economy Carbon Capture, Utilization and Sequestration (CCUS) and Hydrogen • Carbon Capture and Sequestration • Carbon Utilization and Conversion • Hydrogen Critical Minerals and Emerging Technology • Critical Minerals • Rare Earth Elements • Mining and Extraction Technologies • Emerging Technologies	Land and Biodiversity • Biodiversity • Environmental Monitoring • Oil Sands Tailings • Climate Change Adaptation • Abandoned Well Remediation and Reclamation Water Innovation • Water Supply and Watershed Management • Healthy Aquatic Ecosystems • Water Use - Conservation, Efficiency, & Productivity • Water Quality Protection

Table 1: Clean Resources Portfolios that use this Continuous Intake Process

2030 Innovation Targets

In addition to specific focus areas, Clean Resources supports projects that can help contribute to progress towards Alberta's 2030 targets as identified in the Alberta Research and Innovation Framework. The specific 2030 Innovation Targets that are considered through the Clean Resources continuous intake process ("Process") are described in Table 2 below.

The 2030 Innovation Targets are intended to inspire transformational solutions in the following areas of importance:

- emerging technologies
- energy and GHG mitigation
- environment and climate adaptation
- agriculture, food and fibre production

Projects that are aligned with the program focus areas and contribute to 2030 Innovation Targets are prioritized for funding and support through the Process.

Focus Area	2030 Innovation Target
Reduce GHG Emissions	Support Alberta's climate change goals by accelerating solutions to reduce methane emissions by 45% by 2025 and ensure a dynamic portfolio of GHG emission reduction technologies
Increase Value and Market Access	Support the successful commercialization of new value-added products to increase the market value of Alberta's oil and gas exports by 25% and expanding access to market
Improve Oil Sands Efficiency	Oil sands production efficiency and economics improve by decreasing fresh water use by 50%, GHG emissions by 50% on a per barrel basis, and supply cost of bitumen to be globally competitive
Renewable Energy	Renewable sources, like wind and solar, will contribute up to 30% of Alberta's electricity generation
Reduce Waste	50% reduction in organic waste to landfill through innovative technologies which produce value-added products.
Bioindustrial Investment	Industry operating in the value-added bioindustrial sector will attract an additional $3 billion private sector investment in Alberta.
Food and Fibre Sales	Exports from bioindustrial sectors increase by five times while maintaining environmental sustainability. Sales from ingredient, food, and beverage product manufacturing increases from $13.7 billion to $25 billion (2014 base).
Agriculture Productivity	Increase crop and livestock quality and productivity by 30%, while responsibly managing natural resources (2013 base).
Market Trust in Agriculture and Food	Ensure agriculture, food and beverage production meets or exceeds public expectations and values by 10% (2030) (2016 base).
Sustainable Water Management	Safe, secure, and reliable water resources, while enhancing the health of the aquatic ecosystems and improving overall water use efficiency by 30% (2010 base)
Restoring Alberta's Landscapes	Reduce landscape disturbance intensity by 20% and accelerate reclamation of disturbed lands to promote native habitat and species recovery
Conserving Biodiversity	Biodiversity is maintained or enhanced at levels relative to reference conditions
Grow Alberta's Green Economy	Support the Cleantech sector to increase industry sales revenue by 25%, thereby increasing Alberta's global market share by 20%
Advanced Manufacturing and Materials	The value of Alberta's manufacturing sector will increase from $18.8 billion to $40 billion through the development of advanced materials, instrumentation and repurposing jobs (2014 basis)
Digital Economy	The ICT industry in Alberta generates more than $20 billion in annual revenues and the province is the best in Canada for digital literacy and connectivity

Table 2: 2030 Innovation Targets for Clean Resources Programs that use the continuous intake process

APPLICATION REVIEW AND MANAGEMENT PROCESS

The continuous intake application and management process is delivered in three phases. Project applications will be reviewed on their merit and the potential for impacts aligned with program focus areas, strategic priorities, and contribution towards 2030 Innovation Targets. Figure 3 below highlights the three phases of the Process. For more information on the application process and evaluation criteria refer to the Clean Resources Application Guide: Continuous Intake Process ("Application Guide").

PHASE 1
Engagement and Intake

1) **Contact** a Clean Resources Project Advisor ("Project Advisor") to assess if the project scope meets the minimum requirements of aligning with Government of Alberta, Alberta Innovates, and Clean Resources priorities. Use the program links in Table 1, to find the contact information for the appropriate Project Advisor.

2) **Register** on the Alberta Innovates Application Portal ("Portal").

3) **Access, complete and submit** the Clean Resources Continuous Intake Form ("Intake Form") within the *Funding Opportunities* tab on the Portal dashboard.

4) **Intake Form Review** will be led by the Project Advisor, in consultation with the Clean Resources Management Team, to determine if the proposed project will be invited to submit a Detailed Proposal.

PHASE 2
Detailed Proposal

This Phase is by invitation only. The review process is highly competitive and only the highest-quality projects will be considered for funding.

Funding requests are split into the following two application types:

1) Low Dollar - Projects $200K or UNDER.

Low dollar funding decisions may take ~3 months.

2) High Dollar - Projects OVER $200K.

High dollar funding requests may take 4 - 6 months due to the more detailed information required within the online proposal.

If the review is positive, a funding recommendation will be made to senior management and may include adjustments to the funding request and / or funding conditions.

PHASE 3
Project Management

Successful applicants will execute an agreement with Alberta Innovates to proceed with the Project.

Agreement will include details regarding:
- Alberta Innovates' participation in project management activities;
- Reporting on progress to milestones and budget on an agreed to timeline during the term of the Agreement; and
- Reporting on progress to outcomes on an agreed to timeline during the term of the Agreement and annually for five years after that term.

Project payments are based on milestone achievement and progress reporting.

This Phase timeline is project dependent.

Figure 3: Continuous Intake Application Review and Management Process

During the distinct phases of the *Phase 1 - Engagement and Intake* and *Phase 2 - Detailed Proposal* review process, Alberta Innovates leverages internal staff with subject-matter and business expertise and external expert reviewers to evaluate applications submitted. Alberta Innovates retains the sole right to determine the evaluation process and does not disclose the names of its external reviewers to ensure their objectivity and impartiality. All external parties are subject to confidentiality, non-disclosure and conflict of interest policies set by Alberta Innovates.

All decisions made by Alberta Innovates are final, non-appealable and binding on the Applicant. Failure to inform the Applicant of the determination regarding an application, within the timelines provided above will not result in any obligation or liability of Alberta Innovates to the Applicant. Alberta Innovates may also, in its sole and absolute discretion, provide feedback to the Applicant.

Timeline for Typical Application and Review Process
The time to develop, submit and have an application reviewed by Clean Resources Project Advisors ("Project Advisor") varies from project to project. This can depend on the level of financial support requested due to the varying levels of approval required.

A Project Advisor will work with applicants to ensure that the application submitted is ready for review at the appropriate level and indicate key timelines to be aware of during the application process. As stated in Figure 2, the Detailed Proposal application is by invitation only and access to the Detailed Proposal application will be given once the Intake Form has been reviewed and approved to advance to Phase 2.

ELIGIBILITY CRITERIA & FUNDING

Applicant Eligibility Criteria
The Process is open to all categories of lead applicant, including technology developers, industry, industrial associations, small and medium-sized enterprises, research and development (R&D) organizations, post-secondary institutions, municipalities, not-for-profit organizations, government research labs, and individuals. Applicants are not required to be based in Alberta but must demonstrate a clear value proposition for the province.

Partners and/or End-Users
Applicants are not required to have a project partner; however, technology development projects must clearly demonstrate that a market exists for commercialization of the technology and knowledge generation projects must clear demonstrate the value proposition for the end user of the knowledge solution. End-users must be identified and are preferably engaged with the project. Letters of support and/or confirmation of contributions from interested end-users are strongly encouraged to accompany the application.

Applicants with strong end-user partnerships and/or funding from other organizations are preferred. Collaboration between multiple organizations is encouraged to enhance and leverage the value proposition by demonstrating opportunities for technology validation, commercialization, and sharing of results.

Applicants are encouraged to engage and include Alberta's post-secondary and research institutions in the project consortium where appropriate. It is desirable for projects to attract and train highly qualified

personnel who can increase Alberta's innovation capacity. When the applicant is not based in the province it is especially encouraged to have Alberta-based partners.

Project Eligibility Criteria

Projects within the Process can be either for innovation-commercialization or knowledge generation, see *Project Type Definitions* below. All projects must be aligned with Government of Alberta's priorities, including the 2030 Innovation Targets, as shown in Table 2, and Alberta Innovates' strategic and business priorities. Alberta Innovates' Business Plan, found here, provides further information on the strategic and business priorities.

Funding made available through this Process is provided to support execution of projects with well-defined objectives, milestones, deliverables, and timelines. Applicants must clearly delineate the scope of the project for which funding from the Process is being requested and the economic, environmental, greenhouse gas emissions reduction, and innovation potential associated with that scope of work. Any related work outside the scope of the project (e.g. before the project term or in parallel with the project) may be discussed in the application but should be clearly indicated as such.

There are no restrictions on the number of applications 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 that best align with Alberta Innovates' strategic priorities and 2030 Innovation Targets.

Projects or portions thereof that have received funding or funding approval from other programs at Alberta Innovates might not be eligible for continuous intake programs funding, therefore be sure to consult with a Project Advisor. Applicants may request support for a new phase of development or demonstration that builds on and sufficiently advances a previously funded project.

Eligible Stage of Development

The Clean Resources continuous intake process prioritizes technology or knowledge development projects. Technology projects should demonstrate an advancement along Technology Readiness Level (TRL) and are typically within TRL 3 – 7. The TRL definitions can be found here. Knowledge projects will be expected to demonstrate potential contributions to improved best practices, operations or policy.

Eligible Project Locations

All projects supported through the Process must demonstrate a clear and justified value proposition in Alberta. Technology solutions can originate from anywhere globally but must address challenges and opportunities of importance to Alberta. Projects that will be researched, piloted, demonstrated, and/or implemented in Alberta with long term Alberta-based infrastructure / resources will be prioritized.

Funding Considerations

Project funding can be up to and typically does not exceed $2 million per project from the Process. The continuous intake programs normally support 25 – 50% of total project costs, with remaining funding from other project partners and other funding agencies (including cash and in-kind support). The Process encourages co-funding of projects with other funding agencies and does not limit the amount of stacking towards the applicant's contribution.

All applicants are expected to provide a portion of the funding towards a project, which can include cash and in-kind contributions from project partners or other sources of funds.

Eligible and Ineligible Expenses

In the Process, Alberta Innovates' funding can be applied to expenses directly attributable to the performance of agreed upon projects. All costs incurred must be critical to the performance of the project, as outlined in the application.

Alberta Innovates only funds reasonable costs incurred as defined in the investment agreement after the agreement has been executed. A high-level summary of eligible and ineligible expenses is provided in Appendix A.

Project Type Definitions

Knowledge Generation: Projects in this area focus on the development of knowledge to address a gap or bring new insights to help advance a technical, process or policy innovation. Projects may gather new scientific data and information that enable economic, environmental and social benefits for Albertans by informing policy and regulatory development, furthering understanding of emerging technology trends and opportunities, enhancing citizen engagement in the generation of new knowledge, and exploring market sector challenges and barriers to implementing technology. A key objective for these projects is to develop a plan to share the knowledge generated with appropriate stakeholders and end-users and ensure progress towards desired outcomes.

Innovation-Commercialization (Technology Development): Projects in this area focus on developing or advancing technology/innovation solutions that will be used by the applicant, their partners and/or identified end-users to advance commercialization and broad deployment of the solution in Alberta. The outcomes of the projects or the commercialization pathway of the technology/innovation solution should have direct impact resulting in economic, environmental and social benefits.

PERFORMANCE MANAGEMENT AND EVALUATION

Over the life of a project, the Process employs an active project management philosophy, regularly monitoring performance and supporting the applicant to reach project outcomes. Funding is tied to outcomes and achievement of results, and submission of progress reports. For this reason, Clean Resources funds on a milestone completion basis. This means that the applicant is expected to complete a task and submit a progress report before Alberta Innovates advances the next tranche of funds. Progress reports will be reviewed by the assigned Project Advisor.

Regular project update meetings will be held with the applicant and the assigned Project Advisor to assess progress towards milestones. These Steering Committee Meetings can include other funding partners and funding agencies as necessary.

All investment agreements outline the intended outcomes of the program. The Clean Resources Program and Project Specific performance metrics developed during the application phase will be incorporated into the investment agreement and tracked over the course of the project. During the agreement execution phase, the performance metrics will be ratified in consultation with the Project Advisor. The applicant is responsible for reporting on all required metrics to Alberta Innovates on the agreed to schedule. A sample of Clean Resources performance metrics are listed below.

Once projects are completed, Alberta Innovates continues to collection information from clients for up to five-years to assess the economic, environmental and social benefits realized for Albertans.

Sample of Clean Resources Performance Metrics
- $ invested in Alberta Innovates' Emerging Technology Strategic Focus Areas: Data-Enabled Innovation, Digital Transformation for Business Innovation, Clean Technology, Innovative Production and Distribution
- # of patents filed
- # of students/sector HSQP trained
- # new policies created
- # of spin off companies
- # of jobs created during the project, # of jobs created from future deployment or implementation
- # of GHG emissions reductions during the project, # of GHG emissions reductions from future deployment or implementation

HOW TO APPLY FOR FUNDING

In the Process, Intake Forms can be submitted at any time. For more information on the application and evaluation criteria refer to the Application Guide.

To start the application process, contact a *Project Advisor* to assess if the project scope meets the minimum requirements of aligning with Government of Alberta's priorities, including the 2030 Innovation Targets, as shown in Table 2, and Alberta Innovates' strategic and business priorities. *Project Advisor contact information for each program can be found using the links in Table 1*. The Project Advisor can provide guidance on completing the Intake Form and / or connect applicants with additional funding programs that may be available.

Once an initial discussion between the applicant and the Project Advisor has occurred and it has been determined that the project scope meets the minimum requirements, the applicant will begin the application process through the Alberta Innovates Application Portal.

At each stage of the application process and throughout the life of the investment agreement for successful applications, Project Advisors employ an active project management philosophy. The Project Advisor will be the applicant's primary point of contact with Clean Resources over the course of the application process and will be available to answer questions during preparation of the submission. Applicants are encouraged to contact their Project Advisor as needed for assistance and response to enquiries.

CONFIDENTIALITY AND INFORMATION DISCLOSURE

Alberta Innovates is committed to protecting the confidentiality of application details. External experts who act as reviewers must sign a confidentiality agreement.

Project details are kept confidential during the application process. Following funding announcements, Alberta Innovates will publicly share a non-confidential summary of approved projects. Clean Resources does require public reporting of the final project outcomes and learnings, but business/competitive confidentiality is maintained.

As a provincial corporation, Alberta Innovates is subject to the protection and disclosure provisions of the Freedom of Information and Protection of Privacy (FOIP) Act. Personal information is collected pursuant to Section 33(c) of the Freedom of Information and Protection of Privacy Act as it relates to and is necessary for the program.

TRUSTED PARTNERS

Clean Resources works closely with other funding organizations, usually provincially or federally funded, that share the goals and outcomes of Alberta Innovates and Clean Resources. These *Trusted Partners* adhere to strict confidentiality guidelines. During the application process, the applicant will be asked if Alberta Innovates can share the application with our *Trusted Partners* for the sole purpose of determining their interest in funding the project with us. If the *Trusted Partner* is interested, they may request additional information.

Trusted Partners include, for example, Emission Reduction Alberta (ERA), Sustainable Development Technology Canada, and Natural Resources Canada. The *Trusted Partners* program is continuously reviewed, and partners may change from time to time.

EQUITY, DIVERSITY AND INCLUSION

The Alberta research and innovation (R&I) ecosystem is stronger and more sustainable when it is broadly reflective of the overall diversity of our community. Alberta Innovates strives to ensure all interested and qualified parties have an equitable opportunity to participate and contribute. Historically, there have been several groups/populations that have been under-represented in the Alberta R&I landscape including:

- Women entrepreneurs/researchers;
- Indigenous entrepreneurs/researchers;
- Remote/small community entrepreneurs/researchers; and
- Immigrant entrepreneurs/researchers.

We are guided by the principles of:

- Equity – our processes support equal access across all demographics; and
- Diversity – both internal and external participants to our processes are comprised of a varied composition of demographics;
- Inclusivity – our processes proactively work to include underrepresented segments of the R&I landscape.

As part of its commitment to Equity, Diversity and Inclusion (EDI), Alberta Innovates will:

- Collect data in the application process on a voluntary basis to better understand diversity;
- Provide application navigation support to applicants from under-represented groups; and
- Integrate an EDI focus into its due diligence processes including striving to have diverse review committees to foster unbiased decision making.

APPENDIX A: SUMMARY OF ELIGIBLE AND INELIGIBLE EXPENSES

Category	Eligible Expenses	Ineligible Expenses
Labour	✔ Salary and benefits for individuals who are specifically working on the project	✖ Overhead costs charged to employee labour rates ✖ Professional training & development ✖ Professional fees unless directly related to the project
Materials	✔ Reasonable material costs	
Capital Assets & Software	✔ Capital improvements ✔ Capital equipment ✔ Software or information databases *Note: Eligible costs will be pro-rated to the project time frame based on the asset's expected economic life*	✖ Acquisitions of land or buildings ✖ The undepreciated value of eligible capital costs which extends beyond the project timeframe
Travel	✔ Travel, including mileage, low economy airfare, meals, and accommodation for the purposes of executing the project	✖ Passport or immigration fees ✖ Reimbursement for airfare purchased with personal frequent flyer programs ✖ Commuting costs between place of residence and place of employment
Sub-contractors	✔ Services or products of another entity	✖ Costs associated with applying for government grants and programs ✖ Provisions for contingencies, technical or professional journals ✖ Routine testing and maintenance
Other	✔ Costs which Alberta Innovates pre-approves in writing as an eligible expense	✖ Collection charges, allowance for interest on debt, fines and penalties ✖ Federal and provincial income taxes, goods and services taxes ✖ Expenses for projects or activities outside the approved project scope