
PROGRAM GUIDE: Building With BioFibre

PROGRAM OVERVIEW

Background

Alberta Innovates is a catalyst for innovation. Alberta Innovates supports research and innovation that lead to economic growth and diversification, environmental stewardship and social well-being. To achieve these goals, Alberta Innovates provides a robust research and innovation system that lays the foundation for discovery excellence, creates new skilled jobs, and helps Alberta to build a prosperous society positioned for national and international success.

Building With BioFibre is a new funding call targeting development in Alberta's bioindustrial sector. Focusing on emerging technologies that utilize fast-growing and short-rotation resources will support the economic development of the bioindustrial sector. In Alberta, hardwood species account for approximately 40 per cent of the total forest resource and are underutilized for their potential as an available and sustainable fibre resource. In addition, Alberta's abundant agricultural residual fibres and industrial crops could provide options as alternative or complementary raw materials for structural or furnishing applications.

The construction industry is experiencing its own green revolution across the entire building life cycle from design, building, operation, to demolition. Some examples include eco-friendly and energy-efficiency materials, numerical controlled machinery, robotic assembly and automated production lines, building information modeling/management (BIM), rapid prototyping, prefabrication, and componentization. This trend is also in response to the growing demands for environmentally friendly products and their sustainable applications, which further provide opportunities to transform Alberta's value-added sector.

This Building With BioFibre funding call offers Applicants the following scope of research and innovation to explore cross-sectoral opportunities that include both:

- **Underutilized Biofibre Feedstock:** Novel utilization of hardwood, agriculture residual fibre, and/or industrial crop resources to advance technological innovation, build capacity and enhance value-added capabilities; and
- **Green Construction:** Development of green construction alternatives using biocomposite materials and/or advancement of prefabrication through automation and digital technologies to increase productivity, improve efficiency, reduce environmental impact, and achieve a low-carbon future throughout the building lifecycle.

Program Details

Alberta's bioindustrial sector thrives at the intersection of agriculture, forestry, manufacturing, and construction. The Building With BioFibre funding call is designed to accelerate development and deployment of innovative products, processes, technologies and applications from Alberta's plentiful but underutilized biofibre resources, and further lead to new business opportunities and markets for the Alberta bioindustrial sector. Examples of potential areas of interest for this funding call include but are not limited to:

- Novel utilization for underutilized Alberta biofibre feedstock in green construction;
- Innovative prefab building components with underutilized Alberta biofibre feedstock;
- Advanced production using digital technologies, lean manufacturing, robotics and automation to industrialize wood-based building systems; and
- Innovative solutions for sustainable construction technologies and practices to optimize wood building envelope and thermal performance for net-zero-ready (NZR) design.

Please note that bioenergy, biochar and biofuel applications are out of scope for this funding opportunity.

Alberta Innovates is making available up to \$2 million Canadian Dollars (CAD) over 24 months to support Projects that align with the Building With BioFibre funding call. Alberta Innovates will contribute up to 50 per cent of total project costs to a maximum contribution amount of up to \$250,000 per Project.

Proposed Projects should have a clear and direct pathway to make tangible impacts on sustainable economic, environmental, and social prosperity in Alberta. Development of Project technologies should be able to either show direct measurable benefits or reasonably quantify enabled/indirect benefits in at least one of the following outcomes, although multiple outcomes are encouraged:

- Development of a new product/process
- Increased productivity
- Waste utilization
- Improvement in competitiveness
- GHG emission reduction

The Alberta Innovates Building With BioFibre funding opportunity is making available up to \$2,000,000 CAD in total to supports Projects that provide potential development pathways for underutilized Alberta biofibre feedstocks or innovative green construction processes. Projects must demonstrate economic, environmental and social benefits for Alberta. Funding for individual Projects will be a maximum of \$250,000 CAD.

HOW THE PROGRAM WORKS

Eligibility

(a) Applicant Eligibility Criteria

This funding call is open to technology developers, industry, industrial associations, small and medium-sized enterprises (SMEs), research and development (R&D) organizations, post-secondary institutions, municipalities, not-for-profit organizations, government research labs and individuals, who are legally able to execute the Investment Agreement. Applicants are not required to be based in Alberta, but all Applicants must demonstrate a clear value proposition for the province.

All corporate Applicants must:

- have a physical presence in Alberta, or intend to create a physical presence in Alberta;
- be a legal entity:
 - incorporated in Alberta; or
 - incorporated federally or in another jurisdiction AND extra-provincially registered in Alberta; or
 - a General Partnership, Limited Partnership or Limited Liability Partnership AND registered in Alberta.

All Applicants must:

- be in good financial standing with Alberta Innovates and its subsidiaries InnoTech Alberta and C-FER Technologies; and
- demonstrate the relationship between the Applicant and the Project Partner(s) does not create a conflict of interest.

Collaboration with Project Partners is highly encouraged, and Projects that can demonstrate end-user engagement, capacity building, and formal partnerships will receive additional consideration for funding.

*Please note, Alberta Innovates will perform a corporate search and may also seek bankruptcy and litigation searches.

(b) Project Partner Eligibility Criteria

The Project Partner(s) is (are) required to satisfy the following criteria:

- demonstrate a need or potential for use by Alberta industry or other end-users;
- demonstrate the relationship between the Applicant and the Project Partner(s) does not create a conflict of interest;
- be in good financial standing with Alberta Innovates and its subsidiaries InnoTech Alberta and C-FER Technologies;
- an industry or other end-user Project Partner is recommended but not required for post-secondary institution applicants; and
- federal funding agencies (e.g., NSERC, NRCAN, etc.) are considered eligible Project Partners.

(C) Project Eligibility Criteria

Funding provided under this funding call is for the completion of projects with well-defined objectives, milestones, deliverables, and timelines. Applicants must clearly delineate the scope of the project funding requested and the scope of that work.

To qualify for funding all Projects must:

- align with the Building With BioFibre funding call objectives;
- be structured with critical “go/no go” milestones;
- Start between [Technology Readiness Level](#) 3 to 7;
- be completed within the 24-month term; and
- submit to other criteria that Alberta Innovates may develop from time to time.

Program Objectives and Performance Measurement

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, this funding call 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 performance indicators tracked over the course of the Project and the responsibilities of the Applicant to report on outcomes subsequent to the completion 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. Alberta Innovates has a common set of performance metrics it monitors, both at the individual Project level and for the funding call. These are highlighted on the next page.

Once Projects are completed, Alberta Innovates continues to monitor performance for five (5) years to accurately evaluate the economic, social and environmental benefits realized for the province.

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Objectives and Performance Metrics



PROGRAM PERFORMANCE INDICATORS

- Increased use of renewable resources
- Increase value of Alberta's bioindustrial sector
- Attract capital investment and promote economic diversification
- Reduce environment impact through reduction of GHG emissions
- Improve export potential of bioindustrial products

SHORT TERM



PROGRAM SHORT-TERM OUTCOME

- Development of new products and processes
- Increase productivity
- Waste utilization
- Talent development
- Increase in employment and revenues
- Improvement of competitiveness

LONG TERM



BENEFITS FOR ALBERTA

- Stabilization of fibre supply
- Enhancement of value-added sectors
- Increased employment for the bioindustrial sector
- Economic diversification
- Market expansion
- Reduce GHG emission
- Grow Alberta's Green economy



APPLICANT OBJECTIVE

- Technology development and validation
- Reduce innovation risk
- Enable collaboration beyond individual organization
- Facilitate access to highly qualified personnel (HQP)
- Attract partner funding for technology and demonstration

How Funding Works

(a) Project Funding

A successful Applicant through this funding call can receive up to but not exceeding **\$250,000** in Canadian Dollars (CAD).

The funding call supports up to 50 per cent of the total project cost, with the remaining funds coming from the Applicant and/or other Project partners (including cash and in-kind support). For Projects involving researchers from post-secondary institutions, leveraging with participation of federal funding organizations (e.g., NSERC, NRCan, etc.) is highly desirable.

Funding will be allocated to successful applicants at the end of each project milestone, based on proof of milestone for a period of up to 24 months. **All projects must be completed by March 31, 2024.**

Alberta Innovates encourages co-funding of Projects with other funding agencies and does not limit the amount of stacking towards the applicant's contribution.

(b) Eligible and Ineligible Expenses

Alberta Innovates only funds reasonable costs incurred subsequent to a signed Investment Agreement between Alberta Innovates and an Applicant. Any costs incurred prior to signing of the Investment Agreement, or costs greater than market prices are deemed ineligible. Please refer to our standard form Investment Agreement found on our program [web page](#) for further information and an in-depth description of eligible and ineligible costs. The chart on the next page provides a summary of eligible and ineligible expenses.

Summary of Eligible and Ineligible Expenses

Category	Eligible Expenses	Ineligible Expenses
Labour	<ul style="list-style-type: none"> ✓ Labour costs for those individuals specifically identified as working on the Project 	<ul style="list-style-type: none"> ✗ Overhead costs ✗ Professional training & development ✗ Professional fees unless directly related to the Project
Materials	<ul style="list-style-type: none"> ✓ Reasonable material costs which can be specifically identified for use in the Project 	
Capital Assets & Software	<ul style="list-style-type: none"> ✓ Capital improvements ✓ Capital equipment ✓ Software or information databases <p><i>Note: Eligible costs will be pro-rated to the Project time frame based on the asset's expected economic life</i></p>	<ul style="list-style-type: none"> ✗ Acquisitions of land or buildings ✗ The undepreciated value of eligible capital costs which extends beyond the Project term
Travel	<ul style="list-style-type: none"> ✓ Travel, including mileage, low economy airfare, and accommodation for the purposes of executing the Project 	<ul style="list-style-type: none"> ✗ Passport or immigration fees ✗ Costs relating to meals, entertainment, hospitality and gifts ✗ Reimbursement for airfare purchased with personal frequent flyer programs ✗ Commuting costs between place of residence and place of employment
Sub-contractors	<ul style="list-style-type: none"> ✓ Services or products of another entity 	<ul style="list-style-type: none"> ✗ Costs associated with applying for government grants and Programs ✗ Provisions for contingencies, technical or professional journals ✗ Routine testing and maintenance
Other	<ul style="list-style-type: none"> ✓ Costs which Alberta Innovates pre-approves in writing as an eligible expense 	<ul style="list-style-type: none"> ✗ 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

HOW TO APPLY



STEP 1 Application

This is a one stage application process. Applications will be submitted electronically using the Alberta Innovates online intake system; the link can be found on the Alberta Innovates website along with the competition timelines.

All proposals need to be submitted by 12:00 p.m. MST on December 20, 2021.



STEP 2 Evaluation

The evaluation process is highly competitive and only the highest-quality projects will be considered.

An approved Full Proposal may require adjustments to the funding request from Alberta Innovates and/or conditions that must be met to obtain funding.

In February 2022, Alberta Innovates will announce the funded projects and notify applicants accordingly.



STEP 3 Project Management

Successful Applicants will execute an Investment Agreement with Alberta Innovates to proceed with the activities of the Project.

Alberta Innovates will provide on-going management, receiving and evaluating Applicants' reporting of milestones and payments on each milestone based on achievement of the objectives

Alberta Innovates continues to require information from the Applicant for five years following the completion of the Project in order to measure long-term benefits.

EVALUATION PROCESS

Alberta Innovates leverages internal staff and external expert reviewers to evaluate the 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 both confidentiality, non-disclosure, and conflict of interest policies set by Alberta Innovates.

The assessment criteria and all investment decisions are at the sole discretion of Alberta Innovates.

TERMS AND CONDITIONS

This funding call guide is intended as a high-level overview of the Building With BioFibre Program. It provides interested Applicants with a roadmap of what to expect over the lifecycle of a Project, from the Application stage, during the Project and post-completion. Should you have any questions about this guide or what is expected, please contact Alberta Innovates. Please be aware Alberta Innovates may modify this guide from time to time in keeping with any changes to the funding call.

Alberta Innovates will only correspond in writing and provide copies of the Application to the person named in the application form as the one authorized to speak for the Applicant.

Once we have evaluated and approved an Application for funding, Alberta Innovates will require the Applicant to sign our standard form Investment Agreement. A copy of the Investment Agreement is available on the Building With BioFibre [web page](#).

The Investment Agreement sets out in detail the roles, responsibilities and obligations of the various Parties to ensure a successful Project. Alberta Innovates will not provide any funding until the Investment Agreement has been signed by all Parties.

Alberta Innovates will only fund Applicants who have satisfied all eligibility criteria. Meeting the eligibility criteria does not guarantee access to funding, and all funding decisions will be made by Alberta Innovates at its sole discretion.

EQUITY, DIVERSITY AND INCLUSION (EDI)

Alberta Innovates believes the Research and Innovation ecosystem is stronger and more sustainable when it is broadly reflective of the overall diversity of our community and therefore embraces the principles of Equity, Diversity and Inclusivity.

CONTACT INFORMATION

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