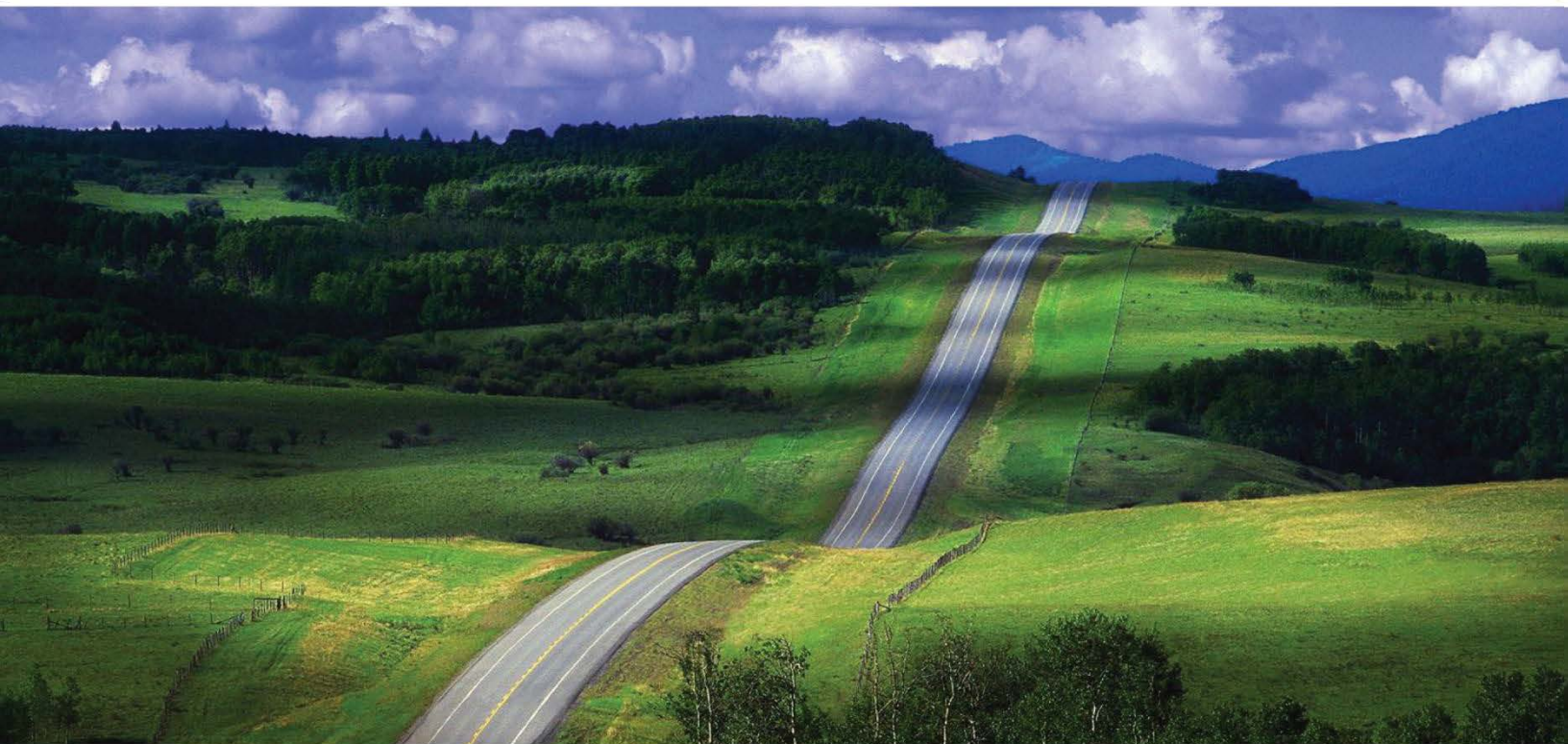


GreenSTEM Program Guide



A pan-Alberta pilot to support high-tech entrepreneurial development and technology company creation.

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Alberta 

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GreenSTEM Program Guide

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GreenSTEM

The Government of Alberta, in collaboration with the University of Alberta, University of Calgary, and University of Lethbridge, developed GreenSTEM to offer a new funding model for high-quality technical talent to pursue entrepreneurship, develop the required business skills and move a deep technology concept towards commercialization.

The program supports a pan-Alberta cohort of technically-skilled GreenSTEM Fellows to transform their technical know-how into a business application and prioritize entrepreneurship over other conventional career paths.

What is a GreenSTEM Entrepreneurial Fellowship?

The GreenSTEM pilot is a future-focused entrepreneurial Fellowship which targets high-potential, entrepreneurial graduates (Masters/Ph.D.) of Science, Technology, Engineering, and Math (STEM) disciplines. The program provides a two-year commercialization runway for deep-tech start-up companies from Alberta's research universities. GreenSTEM Fellows are

provided with seed funding, facilitated lab access, mentorship and business skills development, and will be hosted by one of Alberta's research universities: University of Alberta, University of Calgary, or University of Lethbridge.

The pilot will support up to 20 eligible technology innovators over two years, through access to:

- Annual Fellowship stipend (\$60,000, including benefits or \$90,000 to be split between two fellows when applying as a team).
- Up to \$71,000 annual seed budget for technical and business activities (e.g. customer analysis and outreach, IP-related expenditures, access to technical infrastructure/expertise, prototype development, additional training, required travel, etc.).

"Deep technology" or "deep tech" refers to science-based innovation.

Deep-tech or hardware development is generally costly; protracted due to design, testing, fabrication and optimization of the technology; and more challenging to commercialize than conventional goods or software.

Note: Funding for technology development activities is to be spent at publicly-supported research institutes or Alberta facilities. Exceptions will be granted if required services cannot be delivered by an Alberta facility.

- Technology-focused entrepreneurship programming delivered through an introductory kick-off event and Quarterly Cohort Meetings.
- Regular one-on-one mentorship meetings with experienced technical and business mentors, as well as mentorship provided at the Quarterly Events.
- Networking events and opportunities, with participation from academic, industry, and investment community leaders, innovation practitioners, and government.

Note: Managing meetings with self-selected mentors is the responsibility of the Fellow. Meeting schedule, agenda, etc. are at the discretion of the Fellow.

Program Eligibility

There is no cost to apply. To participate in GreenSTEM, applicants must be:

- A graduate of an advanced technical STEM degree program (Masters, Ph.D.) within the last five years.
- The primary technology innovator(s) of a science-based business/product concept, providing direct or indirect emission reduction benefits.
- Able to demonstrate access or reasonable steps toward the legal right to commercialize the underlying intellectual property.
- Willing to commit to the Fellowship as their full-time job. Applicants will not be able to attend full or part-time educational training or maintain monetary-based affiliations with established companies during participation.
- Prepared to relocate to Edmonton, Calgary or Lethbridge for the duration of the program and willing to travel within Alberta for events and meetings.
- A resident of Alberta with the legal right to work in Canada throughout the program.
- Prepared and able to incorporate the venture in Alberta or Canada once accepted, and operate in Alberta for at least three years after the conclusion of the GreenSTEM Fellowship.

GreenSTEM applicants can be individuals or teams of two, with both applicants meeting the eligibility requirements. Teams are expected to form one jointly-affiliated company.

Evaluation and Selection Process

The GreenSTEM application process has four stages.

| Stage | Details |
|---------------------------------|---|
| 1. Expression of Interest (EOI) | <p>Applications for the second intake will be accepted from February 24-March 23, 2020.</p> <p>The GreenSTEM steering committee will review all complete applications based on established evaluation criteria. All applicants will be notified of their standing within three weeks of the intake close.</p> |
| 2. Interview | <p>Selected applicants will go through a more thorough screening process, which will include an Entrepreneur Aptitude Test and a follow-on interview with evaluation committee members.</p> <p>Following the EOI or interview, the applicant's academic supervisor and self-identified technical and business mentors may be contacted to gather additional information on suitability of the candidate to the program.</p> |
| 3. Full Project Proposal | <p>Selected applicants will receive a full project proposal (FPP) template. The GreenSTEM project team will be available to answer questions and provide guidance as required. The proposal will require applicants to expand on the high-level work plan identified in the EOI via a schedule of business milestones, project budget and potential project outcomes.</p> <p>The applicant will also be asked to provide refined calculations regarding the GHG emission reduction potential of the technology.</p> |
| 4. Pitch and Networking | <p>The event will serve as a final opportunity for selected applicants to make their case to participate in GreenSTEM.</p> <p>Applicants will also meet and network with industry stakeholders and potential investors.</p> |

Applicants may be contacted by the Program Administrator to provide clarification or further detail on their application.

Unsuccessful applicants will be notified of the decision within three weeks of the close of the associated application stage.

Throughout the process, the applicant/team will be evaluated based on:

- Predisposition towards deep technology entrepreneurship through personal attributes, technical competency, R&D experience, and business acumen.
- Professional or business related experience and/or related knowledge.
- Long-term entrepreneurial mind-set and ambitions.
- Fit of the applicant with the intention and long-term vision of GreenSTEM.

The technology concept will be evaluated based on:

- Alberta fit: mid- to long-term economic, environmental and societal benefits to Alberta.
- Origin and ownership of the underlying intellectual property (IP) and steps required to use related IP.
- Potential for successful market entry in the short- to medium-term.
- Alignment of applicant needs with existing Alberta research and development infrastructure and capacity.
- Clear line of sight to sustainable and quantifiable GHG emission reduction potential.
- Sound methodology for measuring quantitative GHG emission reduction potential.

The project will also be evaluated on:

- In-depth identification of likely, high-impact risks and the development of mitigation or contingency strategies.
- Plans to raise additional capital and collaborate with industry, academia or non-profit partners.

GBA+

Research has shown that women and Indigenous peoples, in particular, are under-represented and highly exposed to bias in Science Technology Engineering Mathematics (STEM) fields and entrepreneurship. While GreenSTEM is not focused solely on supporting the development of female or Indigenous deep-tech entrepreneurs, program design and delivery will be completed with a Gender Based Analysis+ lens to strive for equal representation and equitable access across groups currently identified as underrepresented in STEM fields, the cleantech sector, and industry/entrepreneurship in general. An applicant's self-identification with an underrepresented group may be taken into account during evaluation, or for assessment of the program.

Funding recommendations are based on a competitive, merit-based process in accordance with the criteria outlined above. Complete applications will be assessed by an evaluation committee of internal and external experts with adequate technical and business knowledge.

GreenSTEM Evaluation Committee

The evaluation committee will be comprised of seven experts representing the University of Alberta, University of Calgary, University of Lethbridge, Alberta Innovates, industry, and the business community. EDTT will provide secretariat support. Additional technical advisors may be consulted, when required. All representatives will be subject to the terms of a non-disclosure agreement.

To ensure their objectivity and impartiality, the names of reviewers will not be disclosed.

All recommendations made are at the discretion of the GreenSTEM evaluation committee, with final decisions made at the sole discretion of the Vice President, Research of the host institution.

Eligible and Ineligible Project Expenses

GreenSTEM expenses must be directly attributable to the performance of approved projects. All costs incurred must be critical to the performance of the project, as outlined in the application. A high-level summary of eligible and ineligible expenses is provided in Appendix B.

Eligible costs are deemed to be: actual costs, directly attributable to and necessary for completion of project activities towards commercialization. Cash outlays must be documented through invoices, receipts, or records and may be subject to verification by an independent auditor. Evidence of payment must be maintained for audit purposes. Project budgets must not include items for which funding has been approved from other sources.

Funding for technology development activities is to be spent at Alberta publicly-supported research institutes or facilities, with exception granted if the required services cannot be delivered by an Alberta facility.

A portion of the annual seed budget will be required to offset costs associated with traveling to GreenSTEM quarterly meetings and the kick-off and closing events. Travel expenses will be monitored by the host institution to ensure that they are reasonable.

Stipends will be dispersed regularly (bi-weekly or monthly) in accordance with the host institution's administration. Seed funding will be dispersed to successful Fellows on a reimbursement basis and in line with each milestone, based on evidence each milestone has been achieved, over the two-year pilot timeframe.

Reporting Requirements

Throughout the term of the program, GreenSTEM Fellows will be required to provide the following:

At quarterly meetings:

- Quarterly reports on progress to date, updates on quarterly planning, and forecasted budget requirements for the next quarter.
- Information on business/technical competencies and knowledge that Fellows would like to improve throughout the program.
- Feedback on program design, delivery and content, including recommendations for improvement.

To the GreenSTEM program lead:

- Amount and sources of leveraged funding.
- Calculations for GHG emissions reduction potential.
- Receipts and invoices for reimbursement or repayment under the seed budget.
- Final report evaluating value of GreenSTEM resources provided and outcomes realized through program participation (entrepreneurial evolution, economic/societal/environmental benefits, connections/collaboration with industry, investors, etc.).
- Ongoing contact with GreenSTEM program leads at the institution and the Government of Alberta for a period of five years (to follow entrepreneurial or technical progress of Fellows and/or companies, and emissions reduction quantification).

Important Note: Withdrawal

The Fellow is required to immediately notify the University Program Administrator if the project cannot be completed or the team has ceased operations. If the Fellow withdraws from the program, the Fellowship will be terminated. The Fellowship may also be terminated by the Program Administrator based on evaluation of the Fellow's willingness to participate and contribute to program elements and/or technical/business performance. Program Administrators will work with identified fellows to support them in getting their projects back on track prior to any action being taken.

Additional Information

Fund stacking:

GreenSTEM Fellows are encouraged to pursue additional funding or financing opportunities over the course of the Fellowship. Leveraging from federal and provincial funding agencies (for example, NSERC, Alberta Innovates, Mitacs, etc.) is highly desirable. All funding sources must be disclosed, including those from non-government entities and the private sector. Please note that receipt of funding under some programs may limit your eligibility in applying for GreenSTEM, such as those that may be interpreted as part- or full-time employment.

GreenSTEM funding provided directly to Fellows **will not count towards provincial contribution maximums for other provincial funding programs and does not limit the amount of stacking towards the applicant's contribution**. The stipend and seed funding are intended to be used as the Fellow/company's individual contribution when applying for funding programs that require matching contributions from the entrepreneur or company.

Recognition:

Program participants who wish to make a public announcement about their involvement in the program are asked to notify the Government of Alberta or the host university in advance.

Program participants are also asked to share the content of their announcement so the Government of Alberta can ensure program details are accurately represented. The Government of Alberta reserves the right to make public announcements on the progress or success of the program. Company details will not be included in Government of Alberta announcements unless the program participant has granted permission. For additional inquiries or coordination of announcements, please contact the program team.

Appeal:

All decisions are final. Applicants may seek feedback on their application.

Freedom of Information and Protection of Privacy

The [Freedom of Information and Protection of Privacy \(FOIP\) Act](#) applies to any information that is provided to the Government of Alberta. This information may be subject to disclosure pursuant to the *FOIP Act* in response to an access to information request.

Information collected by the Government of Alberta is collected in accordance with section 33(c) of the *FOIP Act* for the purposes of administering the GreenSTEM program, assessing, evaluating and promoting the GreenSTEM program, and use in research and statistical analysis. Use and disclosure of personal information is limited by the privacy protection provisions in the *FOIP Act*. For questions concerning the collection and use of this information, please contact the GreenSTEM program team at:

6th Floor, Phipps-McKinnon Building
10020-101A Avenue, Edmonton, Alberta, T5H 3G2
(780) 644-4353

Contact information

Please review the Frequently Asked Questions document. If your question is not answered, direct specific questions regarding this guide or GreenSTEM to:

Alberta Economic Development and Trade GreenSTEM program team:

- Jessica Ambler, Jessica.Ambler@gov.ab.ca
- Jeff Bell, Jeff.Bell@gov.ab.ca

Appendix A: Program Timelines

| Timeline | Event |
|--------------------|--|
| Fall 2018 | Intake #1: Application and Evaluation Process |
| January 2019 | GreenSTEM Kick-Off Session (Group 1) - Edmonton |
| May 2019 | Cohort Event #1 - University of Calgary |
| September 2019 | Cohort Event #2 - University of Alberta |
| January 2020 | Cohort Event #3 - University of Calgary |
| Winter/Spring 2020 | Intake #2: Application and Evaluation Process |
| April 2020 | Cohort Event #4 - University of Alberta |
| July 2020 | Cohort Event #5 - University of Calgary Kick-Off Session (Group 2) - Calgary |
| October 2020 | Cohort Event #6 (Group 1) - University of Alberta Cohort Event #1 (Group 2) - University of Alberta |
| January 2021 | GreenSTEM Finale (Group 1) - Calgary Cohort Event #2 (Group 2) - University of Calgary |
| April 2021 | Cohort Event #3 - TBD |
| July 2021 | Cohort Event #4 - TBD |
| October 2021 | Cohort Event #5 - TBD |
| January 2021 | Cohort Event #6 - TBD |
| April 2021 | Cohort Event #7 - TBD |
| July 2022 | GreenSTEM Finale (Group 2) - TBD |

Appendix B: Example Eligible and Ineligible Expenses

| | Eligible Expenses | Ineligible Expenses |
|---|--|--|
| Fellow's limited benefit coverage | Basic package, if benefits package is not directly provided with Fellowship stipend | Extended benefits package beyond the basic are at own cost |
| Direct business start-up and continuing operational expenses (e.g. incorporation, legal fees, administrative or financial services) | ✓ | Professional fees unless directly related to the project Costs associated with applying for government grants and programs Provisions for contingencies, technical or professional journals Office space, telephone bills or capital assets |
| Market, customer and investor identification and support expenses | ✓ | Professional fees unless directly related to the project |
| Reasonable direct intellectual property protection (patent and trademark) expenses | ✓ | |
| Prototype development expenses including: infrastructure utilization, component and consumables | ✓ | Overhead costs charged to employee labour rates Provisions for contingencies Capital equipment worth more than \$5,000. |
| Professional training and development directly related to the project | If directly related to skill gaps (business or technical) and necessary to meet milestones | Degree, certificate or certification programs |

| | | |
|--|--|--|
| <p>Travel*</p> <p>(expenses will be monitored)</p> | <p>Reasonable travel expenses, including mileage, bus or low economy airfare, and accommodation for the purposes of executing the project or attending cohort meetings</p> | <p>Passport or immigration fees</p> <p>Costs relating to meals, entertainment, hospitality and gifts</p> <p>Reimbursement for airfare purchased with personal frequent flyer programs</p> <p>Commuting costs between place of residence and place of employment</p> <p>Fines or violations</p> <p>Conference fees outside of Alberta</p> |
| <p>Other</p> | <p>Costs which the host institution's GreenSTEM administrator pre-approves in writing as an eligible expense</p> <p>Contributions to leverage additional funding for the project or related labour</p> | <p>Collection charges, allowance for interest on debt, fines and penalties</p> <p>Federal and provincial (personal or corporate) income taxes, goods and services taxes</p> <p>Expenses for projects or activities outside the approved project</p> <p>Meal expenses not associated with travel or business meetings with stakeholders from outside the company.</p> <p>Alcohol.</p> |

* All expenses are at the discretion of the University of Alberta, University of Calgary and University of Lethbridge. Eligible and ineligible expenses may differ from those outlined above (including travel) depending on your host university. Please engage with the program manager at your university for more details.