

Climate Impact Research Fund Program Guidelines

Overview

In support of New Brunswick's Climate Action Plan and aligning with federal and provincial goals of shifting to a low-carbon economy, NBIF is pleased to partner with the Province of New Brunswick to offer funding for research that helps address the challenge of climate change. The NBIF's Climate Impact Research Fund will support research that will assist in climate change mitigation (reducing the extent of climate change) or contribute to climate change adaptation (understanding and management of change due to climate change). This fund is open to researchers working in all fields of applied research and aims to support a broad range of solutions addressing climate change. These include those projects with strong potential for the development of new technology that could be scaled-up for implementation in a commercial and/or industrial context, as well as projects that will give a greater understanding of how climate change will impact our natural environment and communities.

The fund consists of two program streams.

The **Climate Mitigation and Cleantech Development** stream will support the development of innovations with the potential to minimize carbon emissions and accelerate a shift to cleaner technologies. This funding will support early stage (TRL 2-5) development of such innovations and create a pipeline of technologies for further development and investment.

The **Climate Adaptation, Environmental, and Social Impacts** stream will support research on climate adaptation, including research that will shape policies and approaches to protect our environment and natural resources. This stream will also support research that addresses the human and social impact of climate change, including impacts on the health of our population, our communities and society.

For both funds NBIF is soliciting applications for projects in the range of 30-90K. Most projects would be completed from 9-18 months, up to a maximum of 24 months. Projects must include a strong HQP component (students or research professionals) as well as engagement with a non-academic partner (e.g., industrial or knowledge-transfer partner).

Program guidelines and criteria for each stream are given below:

1. Climate mitigation and cleantech innovations

Innovations with the potential to improve the environmental sustainability of our economy or mitigate greenhouse gas emissions are essential tools in fighting climate change. This stream of the Climate and Cleantech Research fund is intended to support research toward developing solutions that when implemented would have a tangible impact on sustainability and mitigate climate change. The fund will build a pipeline of New Brunswick innovations that address the needs of the province, but that also could also be exported to address the climate challenge in a global context. We aim to support innovations in cleantech as broadly as possible, and NB researchers are encouraged to explore the potential of their current research to be applied toward challenges that have potential for environmental impact. A detailed list of criteria to consider in applying to the program is below.

Criteria:

Applications will be scored on the following criteria, with each criteria awarded a score from 1-10.

- Does the project detail a plan for the development of innovations that can be broadly described as cleantech or impacting the climate. For this purpose, the definition of cleantech is that put forward by the Government of Canada. This includes: 1) technologies that improve environmental protection and the reduction of pollution and environmental degradation, 2) those technologies that can result in a more efficient use of natural resources, and 3) the creation of products that are significantly less energy or resource intensive than the industry standard. Refer to the appendix below for a non-exhaustive list of technology fields that could be considered cleantech.
- Does the project provide a data-based assessment of the TRL level for the technology? Project should be in TRL of 3-5 and at least TRL 2. Do the project plan and milestones describe how the technology will be moved forward in TRL level or scaled?
- Does the project engage one or more partners (ideally industry but could be non-profits). For projects at earlier TRL development, this could be through technical consultations or advising on potential for commercial development. Is there a plan for engaging the partner in commercialization efforts (e.g., validation work, scale-up, technical consultation, etc.)? Is there a potential for a follow-on project for further development?
- Does the project include a strong HQP component? Will one or more researchers (students or research professionals) be engaged full-time in the project for the duration?
- Do the milestones and plan outlined in the application appear achievable given the personnel and expertise described.
- Does the project include sufficient leveraged funds? At least 1/3 of the project value should be funded from other sources. Existing or new NBIF grants are permissible as leverage.
- Application is well-written and complete. The reviewer can readily assess the project based on the above criteria.

Project duration:

Projects should be completed from between 9-18 months to a maximum of 24 months.

Award amounts:

The maximum amount awarded for a single project is \$90K.

Eligible Expenses:

- Student or research professional salaries
- Small lab equipment purchases or supplies, materials and reagents.
- Costs to travel to collect data or use facilities in the course of the project
- Costs to draft and create intellectual property (patent applications etc.).
- Costs for third-party testing or prototyping
- Knowledge transfer work or engagement with industry

This list is not exhaustive. Please include specifics for proposed expenses in the application budget.

Application Fields in Portal

1. Executive summary
2. Provide a description of the research including timeline and expected milestones.
3. Describe how the technology or innovation qualifies as cleantech or contributes to climate mitigation? Refer to the definition of cleantech: 1) technologies that improve environmental protection and the reduction of pollution and environmental degradation, 2) those technologies that can result in a more efficient use of natural resources, and 3) the creation of products that are significantly less energy or resource intensive than the industry standard. Refer to the appendix below for a non-exhaustive list of technology fields that could be considered cleantech.
4. Describe the potential for commercialization and provide an assessment of current technology readiness level.
 - a. Please describe any industry partners who have been engaged or who could be engaged during this project.
 - b. Describe the potential for intellectual property creation.
5. Describe the team and their capacity to conduct the proposed work. How many HQPs will be engaged in the work? Describe the learning opportunity for the HQPs participating in the project.
6. Amount requested from NBIF
7. Budget table
8. Sources of leverage funding

2. Climate Adaptation, Environmental, and Social Impacts

While developing new technologies that can mitigate climate change are important, strategies for effective adaptation to our changing climate are equally important. Climate change poses numerous threats to the province's natural environment and resources, the communities where we live, and the health of our people. A broad, holistic approach to understanding climate change impacts and appropriate adaptation strategies will help New Brunswick proactively work to mitigate the changing climate's negative economic and social effects on our province. Projects supported in this stream will have one or more of the following: 1) potential to minimize the effects of climate change on the environment or improve our capacity to adapt to environmental changes, 2) improve approaches or inform better policy around environmental protections and resource stewardship, and 3) address challenges climate change presents to human health and society.

Criteria:

Applications will be scored on the following criteria, with each criteria awarded a score from 1-10.

- Does the project describe research that can broadly be categorized as contributing to our understanding of climate change impacts or ways in which New Brunswick can implement adaptations to minimize effects of climate change? All aspects of climate change impacts can be considered, including affects on our environment and natural resources, impacts on communities and on human health.
- Does the application articulate the need for research in the proposed space and make the case for how the research will support economic, social, or health policy adaptations?
- Does the project engage one or more partners for knowledge transfer (either private or public sector) who would be positioned to use results or data resulting from the research? Partners could include a government agency, a municipality, a health authority, *etc.*? Is there a potential for a follow-on project? Does the project include a strong plan for knowledge transfer of research outcomes?
- Does the project include a strong HQP component? Will one or more researchers (students or research professionals) be engaged full-time in the project for the duration?
- Do the milestones and plan outlined in the application appear achievable given the personnel and expertise described.
- Does the project include sufficient leveraged funds? At least 1/3 of the project value should be funded from other sources. Existing or new NBIF grants are permissible as leverage.
- Application is well-written and complete. The reviewer can readily assess the project based on the above criteria.

Project duration:

Projects should be completed from between 9-18 months to a maximum of 24 months.

Award amounts:

The maximum amount awarded for a single project is \$90K.

Eligible Expenses:

- Student or research professional salaries
- Small lab equipment purchases or supplies, materials and reagents.
- Costs to travel to collect data or use facilities in the course of the project
- Costs for third-party testing or data collection
- Knowledge transfer work and engagement with partners

This list is not exhaustive. Please include specifics for proposed expenses in the application budget.

Application Fields in Portal

1. Executive summary

2. Provide a description of the research including timeline and expected milestones.
3. Describe how the research will contribute to the understanding of climate change impacts or ways in which New Brunswick can implement adaptations to minimize effects of climate change? Areas of impact to be considered could include (but are not limited to) environmental, natural resources, communities, human health.
4. Describe a plan for knowledge transfer for the results obtained from this research. Describe the need for this work and why it will have impact.
 - a. Please describe any partners (public or private) who have been engaged or who could be engaged during this project.
 - b. Describe the potential for policy change resulting from this work.
5. Describe the team and their capacity to conduct the proposed work. How many HQPs will be engaged in the work? Describe the learning opportunity for the HQPs participating in the project.
6. Amount requested from NBIF
7. Budget table
8. Sources of leverage funding