

Net Zero Emerging Concepts and Technologies (ECT) Research Program

Frequently Asked Questions

updated May 12, 2023

What is the Net Zero Emerging Concepts and Technologies Research Program?

- The **Net Zero Emerging Concepts and Technologies (ECT) Research Program** is a three-year grant program that will support made-in-Nova Scotia solutions to reduce greenhouse gas emissions and help the province adopt new technologies. The program's focus is on R&D that will help Nova Scotia meet its 2050 net-zero emissions target.
- We're targeting the creation of new concepts and technologies now so Nova Scotia will be ready to mitigate the final remaining GHGs that must be eliminated to achieve net-zero emissions, post-2030.
- This program will support technology development and intellectual property creation in Nova Scotia, for the benefit of Nova Scotians. If we leave it up to other jurisdictions to come up with these solutions, we'll be buying their technology instead of selling them ours.
- The program is focused on fostering collaboration among Nova Scotians to develop innovative solutions needed to reach the province's net-zero target while creating economic development possibilities locally and through export of Nova Scotian ideas.

The ECT Research Program has two research streams:

- **Stream 1:** Targets early-stage conceptual thinking and will attract projects that create made-in-Nova Scotia GHG reduction technology and approaches. Stream 1 funding is intended to support technology and IP development in Nova Scotia.
- **Stream 2:** Targets emerging GHG reduction technologies and approaches under development outside of Nova Scotia. Stream 2 will fund techno-economic and/or feasibility studies that evaluate how emerging technologies, methods, and/or practices demonstrated elsewhere can be imported and deployed, with or without modification, in the Nova Scotia context. Project outcomes will include recommendations for funding to support field work or pilot plants that demonstrate strong potential to cost-effectively reduce GHGs within Nova Scotia.

What is the purpose of this program?

- Investing in research is a key strategy needed to close the significant knowledge and technology gaps that must be addressed in order to achieve net-zero emissions by 2050. The ECT Research Program will help bring more solutions from the lab to the marketplace and support the goal of making Nova Scotia a global leader in clean, renewable energy.
- To address the most hard-to-abate emissions in the 2030-2050 period, the ECT program will identify gaps in carbon-reduction pathways and invest now in research and development to create and implement affordable solutions.

- The provincial government funding being provided for the Net Zero ECT Program advances actions 13 and 63 of [Nova Scotia's Climate Change Plan for Clean Growth](#), specifically research on new processes that can improve natural carbon sinks – such as soil and forests, which absorb carbon dioxide – and new technologies and practices to meet our net zero by 2050 target.

What are the objectives of the program?

- The primary objective of the Net Zero ECT Research Program is encourage and fund the Nova Scotia research and innovation community (both private and academic sectors) to develop a suite of promising clean technologies, approaches and practices that warrant continued funding from Nova Scotia's incubation ecosystem – government sources, the private sector, or a combination of both.
- Overall, the Net Zero ECT Research Program has the following strategic objectives:
 1. Identify knowledge gaps to eliminate or offset the final 20% of GHG emissions.
 2. Advance promising technologies and approaches that can address the gaps to net zero.
 3. Encourage collaborative research among Nova Scotia's universities, NSCC, First Nations-led institutions, the private sector and others.
 4. Create intellectual property that has the potential to address global demands for low-carbon solutions, thus creating economic opportunities for Nova Scotians.
 5. Build collaborative thematic research networks that can attract national and foreign investment.

What areas of research will this program support?

- Priority research areas are expected to include subjects listed below but will also be defined in consultation Nova Scotia Department of Environment and Climate Change (the primary funder) and through the application of Net Zero Atlantic's Energy System (ACES) Model. The model will be used to identify knowledge gaps and provide insights into the relative costs, benefits and challenges of different deep decarbonization options.
 - Fishing and Ferry Fleets
 - Nature-Based Solutions for Carbon Sequestration
 - Agricultural emissions
 - Long-Term Energy Storage
 - Direct Air Capture
 - Electricity System Challenges Post 2030

How will successful proposals be selected?

- The criteria for the Net Zero ECT Research Program will be set by the program's Research Management Committee in coordination with the Nova Scotia Department of Environment and Climate Change. Proposals submitted following the opening of the call for proposals in June will be assessed by the Net Zero ECT Program's Proposal Review Committee.

How much funding is available via the Net Zero ECT Research Program?

- In April 2023, the Net Zero ECT Program received \$3 million in funding from the Nova Scotia Department of Environment and Climate Change. This funding will be awarded over three years as grants to the proponents of successful proposals.

What are the sizes of the grants successful proposals are expected to receive via the ECT Program?

- Stream 1: Technology Development Projects: Grant amounts of up to \$50,000 will be available for a limited number of projects with up to \$250,000 in follow on funding.
- Stream 2: Technology Adoption Projects: Grant amounts of up to \$130,000 will be available for a limited number of projects.

When is the first call for proposals for the Net Zero ECT Research Program?

- The first call for applications for the Net Zero ECT Research Program is June 21, 2023.

When do you expect future calls for proposals to take place?

- The second call for proposals is expected to be held in September 2023 and a third in June 2024.

How long will the Net Zero ECT Research Program run?

- The program has received funding for three years from the Nova Scotia Department of Environment and Climate Change.

Who is eligible to apply for funding through the Net Zero ECT Research Program?

- Proponents of research initiatives related to emerging concepts and technologies that have the potential to contribute to emissions reductions in Nova Scotia are encouraged to apply to the program.

What outcomes are you anticipating the Net Zero ECT Research Program will achieve?

- Anticipated Net Zero ECT Research Program outcomes include:
 1. A suite of promising emerging clean technologies, approaches and practices that warrant continued funding from Nova Scotia's incubation ecosystem – government sources, the private sector, or a combination of both.
 2. Recommendations for funding to support advanced studies, field work or pilot plants for promising technologies or methods that should be introduced to Nova Scotia from other jurisdictions.
 3. An assessment of the program's success with respect to its strategic objectives, with recommendations on how Nova Scotia should continue investment in technologies and methods needed to reach net zero in the Post 2030 period.

What is Net Zero Atlantic?

- Net Zero Atlantic (NZA) is a not-for-profit energy research organization that works to advance Atlantic Canada's transition to a carbon neutral society by coordinating independent energy sector research for a variety of end users. NZA's purpose is to advance a sustainable and inclusive transition to a carbon-neutral Atlantic Canada by providing credible and objective research and support services. NZA identifies critical knowledge and data gaps, assembles research and delivery teams, and leads applied research projects to close these gaps.

Whom can I contact with questions?

- Please send any inquiries about the ECT Research Program to info@netzeroatlantic.ca. NZA will host an explanatory webinar on the program on Thursday June 1, 2023 (1:00 pm ADT). Registration for the webinar is available [here](#).