

## **Net Zero Emerging Concepts and Technologies (ECT) Research Program Nova Scotia**

Please note:

Abbreviations:

- Net Zero Atlantic (NZA)
- Nova Scotia Department of Environment and Climate Change (DECC)
- Nova Scotia Department of Natural Resources and Renewables (NRR)

The terms proponent, Lead Applicant, Lead Researcher, and Principal Investigator are used interchangeably.

The following is a list of Frequently Asked Questions (FAQs) that NZA has received over the Call 1 and Call 2 process. Please review the existing FAQs. Should you have any additional question about your application please send it to [info@netzeroatlantic.ca](mailto:info@netzeroatlantic.ca). Please note that NZA will be meeting with applicants prior to the call closing. Any requests for information are required to follow this FAQ process.

**This FAQ document was updated as of 2023-11-17.**

**The NZA deadline to accept questions from interested Applicants closed as of 5 pm AST, Thursday November 16, 2023.**

## ECT FAQs:

### 1. What is the Net Zero Emerging Concepts and Technologies (ECT) Research Program?

The ECT Research Program is:

1. a three-year grant program
2. for early-stage research and development projects
3. that will support local solutions and help the province adopt new technologies and approaches
4. to reduce Nova Scotia GHGs emissions post 2030
5. and generate economic benefits for the province.

The ECT Research Program is intended to support early-stage projects that may find it difficult to access funding from other sources. The Program will fund two types of research and development:

- **Stream 1 (Technology and Methods *Development* in Nova Scotia):** Targets early-stage conceptual projects that create made-in-Nova Scotia GHG reduction technology/IP and approaches. Stream 1 funding is intended to support research and development in Nova Scotia.
- **Stream 2 (Technology and Methods *Adoption* from Elsewhere:** Targets emerging GHG reduction technologies and approaches under development outside of Nova Scotia. Stream 2 will fund technoeconomic 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 additional funding to support field work or pilot plants that demonstrate strong potential to cost-effectively reduce GHGs within Nova Scotia.

### 2. What is the purpose of this Program?

- It is critical to identify knowledge and technology gaps so that hard to abate emissions in the 2030-2050 period can be addressed. The ECT Research Program targets 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.
- 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. This in turn is expected to result in economic development opportunities for Nova Scotian companies and technology developers.

- The provincial government funding provided for the Net Zero ECT Program advances Actions 13 and 63 of [Nova Scotia's Climate Change Plan for Clean Growth](#): 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.

**3. Is the development of technology and/or intellectual property (IP) a required outcome of proposed projects?**

No, technology and IP development are not required outcomes but all proposals must explain how their projects are expected to reduce Nova Scotia's hard-to-abate GHGs and what economic benefits to the province may be derived from their proposed R&D project. Technology and IP development are two obvious outcomes that will achieve both objectives.

**4. Are companies that do not have an office in Nova Scotia eligible to receive funding?**

Yes, however the Lead Applicant must be registered, incorporated or based in Nova Scotia. This means that non-Nova Scotian companies, academic institutions, not-for-profits, etc. must serve as project partners and cannot be the Lead Applicant. Please see the Applicant Guide for more information.

**5. How will successful proposals be selected? Will NZA Program administrators provide debriefs to unsuccessful applicants?**

Evaluation criteria are listed in the Applicant Guide. Proposals will be assessed by the Net Zero ECT Program's Proposal Review Committee. Following the close of each call, a webinar will be held to debrief unsuccessful Applicants and help ensure more successful outcomes in subsequent submissions. Due to the number of applications, individual debriefs cannot be held.

- 6. We are the Lead Applicant and have two other companies and one university as team members on our project. How will the ECT Program funds be distributed? Directly to each team member or directly to the Lead Applicant, who then re-distributes?**

Using Net Zero Atlantic's standard contract template, ECT Program funds will be disbursed to the Lead Applicant alone. The Lead Applicant is responsible for managing team member inputs to the project and disbursing funds to them.

- 7. What are the reporting requirements with a successful proposal? Will there be milestones established to correlate with the projected funding?**

Yes, payments will be disbursed on a milestone basis over the course of the project (typically 3-4 payments depending on project size and duration).

If needed, an initial payment can be made upon project initiation; subsequent payments would be made at key milestones and tied to presentations, interim reports or upon task completion. For this reason, the Lead Applicant is requested to describe key milestones in the proposal, since these milestones will be used in the contract with NZA.

## **8. What outcomes are you anticipating the ECT Research Program will achieve?**

Anticipated 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. NZA recommendations to government 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.

## **9. 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.

## **10. Who can I contact with questions?**

Please send any inquiries about the ECT Research Program to [info@netzeroatlantic.ca](mailto:info@netzeroatlantic.ca). If warranted, questions and responses will be posted on an updated FAQ – so please refer back to this link before completing your proposal.

## **11. Do the objectives have to include a direct reduction of emissions? Or can it be an indirect reduction? For example, diverting food waste from landfills, sustainable agriculture practices.**

NZA is not prescriptive in outlining the project objectives required for ultimate recipients. Indirect reduction of emissions could be appropriate should the proponent clearly align their project to one of the seven Priority Research Themes identified in the Applicant Guide.

## **12. Do the project objectives have to be measured by how many emissions were reduced? Or can the objectives be measured using other metrics?**

NZA will not outline nor prescribe the metrics to which ultimate recipients should be using.

**13. Would landfills be considered as a project research theme?**

The priority research themes are set and are listed in the Applicant Guide. However, there is potential for landfills to be connect to one of the existing seven (7) priority research themes. It is up to the proponent to make the connection / alignment with the theme depending on their project objectives.

**14. If we are working in collaboration with companies that will be installing electrolyzers in NS but IP belongs to them, will that work against the project proposal?**

If IP is generated as part of the project, it is expected the IP and economic benefits will remain in Nova Scotia. However, if existing IP is being used to meet the project objective and there is economic benefit to Nova Scotia, then it will meet the program requirements.

**15. Our technology has multiple components, one component has been demonstrated and more far along. We intent to apply for a project for the component that needs validation. Would we be eligible?**

Yes, validation of specific components are eligible. The proposal will need to clearly define how the work aligns with the program objectives.

**16. If for example the technology relates to green resources energy generation, is that of interest? Or only energy storage?**

The proposal needs to align with one of the Priority Research Themes. Energy generation is not one of the themes so will not be applicable unless there is a clear connection with one of the themes.

**17. For Mitacs funding, are NSCC students or high school students eligible or just students enrolled into an undergraduate program?**

NSCC students are eligible

**18. Can ECT support the "company portion" of Mitacs project costs?**

Yes, NZA is considered a private partner by Mitacs, thus ECT funding would be matched by Mitacs.

**19. In the budget, would a Mitacs supported student researcher (i.e. employed by the University partner) be listed as a contractor, or under salaries and benefits?**

If you are the Lead Applicant, it would be listed under contractor since the university would be your contractor/partner. If the University is the Lead Applicant it would be listed under salaries and benefits since the intern is part of the Lead Applicant's team.

**20. If an applicant requests Mitacs funding and identifies Net Zero Atlantic as the anticipated partner providing funds, should the partner funds requested by NZA be included in the project budget at this stage? My understanding of the guidelines is that these funds should not be included, and Mitacs funds could be included under the cash from other sources (not yet secured).**

Correct. Mitacs funding would be listed under cash from other sources (not yet secured).

**21. With the Net-Zero ECT funding, can a company include an extra-provincial university as a collaboration partner?**

Yes.

**22. How will the grant funds for Stream 1 be distributed? It is listed as a grant, however in a few sections (under budget) the costs are listed as eligible or ineligible for "reimbursement".**

NZA will typically e-transfer a portion of the total funding award upon contract signature, then dole out the remainder over the course of project. There is no "claims process" as such, just simple lump sum invoices that are typically tied to project milestones. For Stream 1 for example, we might provide 20K up front, 20K at mid project, then 10K at the end. NZA will not typically write a cheque for the entire amount up front but are happy to provide some sort of commitment letter or whatever else might be needed to ensure the matching funder is satisfied. NZA is happy to make project-specific payment arrangements on a case-by-case basis, especially if it helps secure matching funds.

**23. For the Mitacs funding, do we need to have a student by the application deadline, or can we find a student later?**

A student needs to be identified at the time of contracting with Mitacs. This is expected to be in early January.

In the proposal it is not required that a student be named, but it needs to provide a commitment to having the student in place at the time of contracting. The lack of a student identified will be considered a project risk that will need to be defined and mitigation addressed in the proposal.

**24. Is the acquisition of secondary research data compilations from a couple of optimal sources an eligible expense? (This would not be the primary research but would enhance the bulk of the significant or critical secondary research data gathered directly from technology providers and validated).**

Yes, data acquisition is an eligible expense.

**25. Regarding project eligibility, if a technology has deployed a prototype version of its product in NS, is it eligible to submit a project piloting the commercially-ready version of its technology?**

Yes, such a project would be eligible.

**26. We were uncertain if the budget submission is intended to show how the original grant of \$50 000 would be used. Is the budget to show the planned cost of the specific work submitted in the application (*redacted*) up to the maximum amount of funding from the Net Zero ECT program in stage 1 (\$50 000)? Or is the budget to show the project planned cost for the year for all operations and product development to stage completion, even if it is in excess of the amount of funding from the Net Zero ECT program.**

The budget should show how the \$50K would be used, naturally, but the budget should also provide enough detail so that the broader funding structure of the full project can be understood by reviewers. Thus, the final suggestion is the most applicable.

**27. Is this program only targeting nascent technology?**

The target is early-stage concepts and technologies. We intend to be inclusive rather than exclusive in the definition, but we will favour earlier-stage projects if we receive multiple strong submissions and must differentiate on that basis alone. Please see the next response.

**28. Must the project maturity at the time of application be only in the research stage, or can it be little more mature, such as beyond the proof of concept and now attempting to address needs identified post POC and closer to a pre-pilot stage with further research required to address these needs?**

Yes, it can be a little more mature as you have outlined.

**29. If we outsource to another country for some hardware design and manufacturing -- is this considered a partner as per the application?**

It could be, depending on how you describe your relationship with the company. Otherwise, it's simply a subcontractor, which is also eligible to receive funding through you as the lead applicant.

**30. If we outsource is there any (political) weighting applied depending on the country we outsource to?**

No.

**31. Is greater weight given to a research partner in academia vs. a working professional; i.e., NSCC/Dalhousie vs. a person in the related field?**

No.

**32. Does the applicant have to be based in Nova Scotia?**

Yes, the Lead Applicant must be based in Nova Scotia, but partners do not have to be based in Nova Scotia.

**33. Could you please expand on the Nova Scotia content requirements?**

There are no Nova Scotia content requirements as such. The Lead Applicant must be based in Nova Scotia and there is an expectation that a certain amount of the project work will be undertaken in the province, but there are no set criteria for local content.

**34. Does the project have to be strictly inside in one of the 7 Priority Research Themes?**

Yes, the project must fall within one or more of the themes. If your project does not fall within a Theme, please suggest a new theme by contacting us at 'info@netzeroatlantic.ca' and we will consider adding it to future intakes.

**35. Is taking advantage of the MITACS program explicitly factored into the evaluation criteria? i.e., will this be considered as leverage?**

Yes, using the Mitacs opportunity is considered leverage and is explicitly factored into the evaluation criteria, but in a comparatively minor way. Please see the Evaluation Criteria section in the Applicant Guide to review the weighting criteria.

**36. Can an independent member (outside an organisation) submit a proposal?**

Yes, the Program is open to sole proprietors on the understanding that NZA Program Managers may require specific assurances and documentation to prove that funds are appropriately managed and HST/GST taxes remitted if applicable.

**37. Does this fund support projects that are already happening either in NS or elsewhere?**

Theoretically, the fund can support such projects provided Program objectives are met.

**38. Will there be an opportunity to receive feedback -- written or verbal -- on rejected proposals from round I?**

Yes, a webinar will be held after the call closes to provide anonymous, generic feedback to improve future submissions. Unfortunately, individual meetings will not be held, due to the volume of submissions expected.



**39. Is it acceptable to re-submit an adjusted application in future rounds?**

Yes, definitely.

**40. If I propose a project for stream 2, it is possible to get a comment that you can support it in stream 1?**

No, it is the proponent's responsibility to determine the appropriate stream, then describe why and how the project falls within that stream.

**41. Can you expand what you are looking for in the Theme: "Electricity System Challenges Post 2030"?**

The Theme is broadly written to be as inclusive as possible. Many project types may be eligible; we at Net Zero Atlantic are hoping the proponents will propose projects that we may not have considered, provided they can be shown to meet Program objectives.

**42. Does Green Energy Production fall into any of the existing Themes? Such as Hydrogen, Ammonia, Solar, Wind etc?**

Yes, Green Energy Production may fall into one or more of the Priority Research Themes, depending on how the project is conceived.

**43. Will the Priority Research Themes change in future intakes?**

Yes, the Themes are expected to change in the future, depending on submissions received and funder priorities. Suggestions for new themes can be submitted to 'info@netzeroatlantic.ca'.

**44. Do you have an estimate of number of projects you may be able to fund in each call?**

We did not have a concrete response to this question. The number of projects will be dependant on the quality of the applications. It is estimated that NZA may fund up to 10-12 projects per call. This number is expected to rise in the next fiscal year.

**45. Could you share who will be involved in the evaluation of the proposals?**

Proposals will be evaluated by staff at Net Zero Atlantic, the Province of Nova Scotia (DECC and NRR) and, to the extent possible, external subject matter experts (SMEs) recruited for the evaluation committee. We recognize it may be difficult to secure participation of SMEs in all domains thus some applications may not be reviewed by external SMEs.

- 46. Can you please confirm what application would need to be filled out with Mitacs? Would we submit that application at the same time that we submit this application, or should we wait till we received approval from Net Zero?**

In collaboration with Mitacs, we are currently preparing a submission template that will be partially 'pre-populated' with relevant information so the proponent would largely 'cut and paste' information from their proposal to NZA to complete the Mitacs template. The Mitacs template would be completed *once the proponent has been notified by NZA that their proposal has been selected for funding*.

- 47. We are wondering if we could apply this application towards an already approved Mitacs application? For more context, last year we received approval to hire a Mitacs student in conjunction with (*activity redacted*). This contract with Mitacs began August 16, 2023 and runs for two years. Our most recent student's term ends at the end of August when we hire him full time. As a result, we need a new student to take on the second term of our current Mitacs agreement. If we were successful with NetZero's application, could we apply funding towards that Mitacs contract?**

Yes, but please note the student must be named when the Mitacs application is submitted.

- 48. I would appreciate your thoughts on whether software solutions that indirectly address (*project concept redacted*). The software solution will help with (*activities redacted*), rather than a hardware solution that directly (*activities redacted*), for example.**

We can only provide a general answer. We prefer not to comment on the eligibility or suitability of specific project concepts since each project must 'compete' with other submissions on its own merit. Please refer to Priority Research Themes in Appendix 1 of the Applicant Guide – all projects must align with one or more of these Themes. When conceiving a project, we suggest the proponent formulates a knowledge gap within a Priority Research Theme, then considers how the proposed project will address that gap, reduce hard-to-abate GHGs post 2030 and result in economic opportunities for Nova Scotia.

That said, software solutions may be a useful approach to meeting the ECT Research Program objectives.

- 49. In the Priority Research Themes, number 1 is about ferries. (*Project concept redacted*). Would that go far enough as a research question?**

Again, we prefer not to comment on the eligibility or suitability of specific project concepts since each project must 'compete' with other submissions on its own merit. Please refer to Priority Research Themes in Appendix 1 of the Applicant Guide – all projects must align with one or more of these Themes. When conceiving a project, we suggest the proponent formulates a knowledge

gap within a Priority Research Theme, then consider how your project will address that gap, reduce hard-to-abate GHGs post 2030 and result in economic opportunities for Nova Scotia.

**50. About Priority Research Theme 5, how do you define long-term energy storage? Are we talking minutes, hours, days, months? (redacted) It is just a matter of getting a better sense of what you consider “long-term”.**

We don't have a definition of “long term”. We are primarily interested in energy storage systems of 12 hours and more. We believe shorter-term storage can be addressed by existing battery technology. That said, we would welcome any energy storage project idea that meets the overall Program Objectives: identify and address a knowledge gap in the Priority Research Theme, show how the addressing the gap will reduce hard-to-abate GHGs post 2030 and result in economic opportunities for Nova Scotia.

**51. It is likely that ECT projects will also be SR&ED (Scientific Research & Experimental Development tax credit program) eligible. Other funding (such as ECT) must be included to reduce a company's SR&ED claim to the extent that it is for SR&ED / covers SR&ED eligible costs. Some of the ECT eligible costs (such as salaries, contractors (if in Canada), overheads) are SR&ED eligible cost types and so ECT funding for those costs would reduce the SR&ED claim. However, other ECT costs may not be SR&ED eligible (capital, results dissemination, any contractors from outside Canada) and so funding for those costs may not have to be netted from the SR&ED claim.**

**My question is, can the ECT funding be directed at specific cost types (targeting costs ineligible for SR&ED) to allow for optimizing total funding? This would need to be supported by ECT claim documentation to avoid CRA applying 100% of the ECT funding against the SR&ED claim.**

Yes, we are open to creating tailored contracts with successful proponents that permit the maximization of total SR&ED funding.

**52. What does the ECT program do to help the development of electricity storage methods?**

Energy Storage and Electricity System Challenges are Priority Research Themes (please refer to Appendix A of the Applicant Guide for more information).

**53. Does the program cover developing and validation of tools to monitor GHG in the agricultural sector?**

Yes, the subject Agricultural Emissions is a Priority Research Theme.

**54. How many applications can an applicant submit?**

There is no limit to the number of applications a Lead Applicant can submit, at least for this first call for proposals. We may limit the number of applications per Applicant in future calls.

**55. Can a Co-Principal applicant from outside NS be included on the application?**

There can only be one Lead Applicant and one contract per project; partners (e.g., a co-principal) from outside of NS are welcome and can be described under "TEAM AND PARTNERS" in the Proposal Submission Template. We recommend you highlight this person's role.

**56. I have a project supported by the PEI Climate Challenge Fund on [details redacted]. We would like to secure more funds to investigate related considerations [details redacted]. Wonder if this kind of project is eligible for ECT funding?**

We prefer not to comment on the eligibility or suitability of specific project concepts. Please refer to Priority Research Themes in Appendix 1 of the Applicant Guide. When conceiving a project, we suggest the proponent formulates a knowledge gap within a Priority Research Theme, then consider how your project will address that gap, reduce hard-to-abate GHGs post 2030 and result in economic opportunities for Nova Scotia.

**57. I am a tidal developer [details redacted]. Can I get some funding help?**

Unfortunately, tidal energy is not a Priority Research Theme but please consider if you can formulate a project to fit within one or more of the existing Priority Research Themes.

**58. What kind of environmental benefits are being sought, beyond GHG reduction, for example, arresting biodiversity loss?**

The program objectives are limited to hard-to-abate GHG emissions reduction and economic development opportunities for Nova Scotia. Other benefits will be considered but are not explicitly being sought or evaluated.

**59. What is the definition of "nature-based solutions" being used by NZA? Are these existing solutions (tree planting, etc.) or are novel solutions (alkalinity enhancement, rock weathering etc.) eligible as well?**

We don't have a specific definition of nature-based solutions, but in general we don't wish limit project ideas within a given theme. Projects should identify knowledge gaps that, when addressed by the proposed project, will aid in the reduction of hard-to-abate GHGs in the 2030-2050 period in Nova Scotia and demonstrate economic benefits to the province.

**60. Are the ECT webinars posted to YouTube?**

NZA does not have a YouTube presence. The recorded webinars have been posted to our website [here](#) while the direct vimeo link is <https://vimeo.com/manage/videos/832343333/analytics>

**61. What stage of advancement of a made-in-Nova Scotia project would cause an application to be disqualified because it is not early-stage enough? Can you add more clarification on the definition of ‘early-stage’?**

We don’t have a specific definition and we would not likely disqualify any project that is arguably ‘early stage’. However, in a situation where many proposals are received and some are clearly earlier stage than others, priority may be given to the ‘earlier stage’ projects. As mentioned during the webinar, this Program is specifically trying to attract early-stage projects that can’t get funding elsewhere.

**62. Do projects applicants have to identify a single research theme? Or can projects cover multiple themes?**

Projects can align with multiple streams but please note that individual projects will only be granted funding up to the amounts listed in the Applicant Guide. That is, a Stream 1 project touching on two Themes would only be eligible for \$50K, not 2X \$50K. NZA asks that applicants focus on one theme to strengthen their application.

**63. Would you like us to submit an application that addresses interdisciplinary ECT concepts for long-term energy storage and electricity system challenges OR only a biocentric application for these challenges across the Atlantic?**

Our only concept preference is that projects must align with one or more Priority Research Theme, but that we advise to pick one main theme to focus on in your application.

**64. Is there any provision to jump straight to the follow-on project funding for stream 1 for projects that have already completed the early-stage proof of concept and feasibility work and are approaching field demonstration?**

No, not for this call, although now that this idea has been raised it will be considered in future calls and, if permitted, will be described in the Applicant Guide.

**65. Would similar project submissions be recommended to combine and collaborate together into a single project?**

We are not planning or seeking to combine projects; however, in a situation where collaboration makes obvious sense, we might propose (on a project-by-project basis) that proponents work together and resubmit a combined project in a future call.

**66. Are there any plans for networking meetings or an online forum to help make connections?**

There are no plans at this time for such activities, but we will consider these ideas – thanks for raising these points.

- 67. Does the funding for a student have to be in increments of \$15,000 (half from ECT funds and half from Mitacs) as is the case with stand alone Mitacs Accelerate applications OR can funds be requested in the ECT budget that are for any amount – say \$10,000, that would then be matched by Mitacs funds? Put another way are funds requested that are eligible for Mitacs matching on a sliding scale or do they have to be in specific increments.**

Yes – Mitacs funds can be sliding scale.

- 68. Are there target word counts or other length limits for sections other than section 1 (that has a 300-word limit)? Is there an overall proposal page count limit?**

There is no word count on the other sections. We ask proponents to use effective and efficient explanations but acknowledge that the words required to do so will be dependant on the project specifics. There is no proposal page count limit.

- 69. Would you like to see references cited as appropriate and if so, should their full citation be included at the end of each section where they were referenced or somewhere else?**

If the proponents are referencing knowledge or work that is not their own, citations would be required. It is up to the proponent to determine the best method to communicate the references (ex. If references are only used in one section, it may make sense to list the citations at the bottom of that section).

- 70. Can you tell me when the proposed start date for 2nd call proposals would be?**

NZA is looking to have Call #2 contracts signed and projects active no later then February 28<sup>th</sup>, 2024.

- 71. Please confirm if an applicant affiliated with a post-secondary institution can submit multiple applications in the role of lead applicant to the Net Zero Atlantic ECT program.**

Multiple applications may be submitted for evaluation.

