A close-up, high-angle photograph of an electric vehicle's battery pack. The battery is a large, rectangular, grey metal enclosure with various electrical connectors and cables attached. The background is dark and slightly blurred, showing other components of the vehicle's chassis. The overall lighting is dim, with some highlights on the battery's surface and the yellow plastic components of the powertrain.

# Electric Vehicle Manufacturing Value Chain Program (EVMP)

Project Application Guide

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## Overview

The next few years will be critical for Canada to meaningfully participate in the North American and global electric vehicle (EV) market. Canada, like many other global jurisdictions, have announced EV mandates, which includes a ban on the sale of internal combustion engine (ICE) vehicles by 2035. The EV market share is projected to increase from 3% in 2020 to 20% in 2030.

In light of recent anchor investments being made in Canada, many domestic EV parts suppliers and innovators continue to face challenges in navigating the new supply chain opportunities. For Canada to meet the growing demand and to benefit from the growing market share of EVs, the Canadian automotive supply chain must make significant changes to their product lines and shift production capabilities to EV and EV parts.

Canada has many of the key ingredients in place and potential to create a vertically integrated EV value chain. Canada is home to a world leading innovation ecosystem that uniquely converges with a vibrant manufacturing footprint, equipped with top talent, knowledge and capabilities, and critical mineral resources. There is a critical and time-sensitive opportunity to scale-up and commercialize high-potential Canadian innovation and manufacturing capabilities – along the entire EV value chain, from the processing of minerals to the assembly of battery packs and vehicles – so that they are market ready for integration into the growing EV market.

In 2021, NGen launched a first round of EV manufacturing value chain funding and invested over \$76 million in business-led collaborative projects. To build on that momentum, NGen has launched the EV Manufacturing Value Chain Program (EVMP) to ensure that the Canadian automotive manufacturing sector continues to be strengthened.

## Program Goals

NGen is looking to invest in innovative, business-led, collaborative projects that strengthen Canadian capability and content, for integration into Canada's value chains for electric vehicles (EV).

EVMP targets the development, commercialization, and scale-up of transformative manufacturing technologies and capabilities across EV value chains. Specifically, projects must target the manufacturing scale-up of road-based EVs, specifically for Battery Electric Vehicles (BEV) and Fuel-Cell Electric Vehicles (FCEV).

Advanced manufacturing is the key to unlocking Canada's potential in this globally competitive market. Production capabilities must be at the cutting edge, the most efficient, the highest quality, and the greenest to enter this market, gain market share and stay competitive.

NGen focuses on the development and deployment of advanced manufacturing processes to improve and scale up production capabilities. Projects must focus on these advanced manufacturing capabilities and are expected to:

- Create Jobs.
- Create value for the Canadian economy.
- Develop new processes from crushing ore, mineral refinement, materials development, manufacturing scale-up of components, systems and final assembly and recycling.
- Increase the value and integration of made-in-Canada parts and technology into EV supply chains and to scale manufacturing.
- Reduce the overall cost of manufacturing EV products in Canada.
- Increase the quality of the products being manufactured.
- Reduce overall operational emissions.
- Build flexibility into the production process.

**The deadline to submit the project for screening is October 11, 2023 at 5:00 pm Eastern time.**

## Who is eligible to receive NGen funding?

- Any business member of NGen may submit an application for project funding or apply to be considered as a partner or co-investor in Global Innovation Cluster projects. Register as an NGen member at [www.ngen.ca/join](http://www.ngen.ca/join).
- Recipients of Global Innovation Cluster funding must be a business registered in Canada, and have value-added presence in Canada (i.e., manufacturing presence, R&D) beyond a sales office.
- Funding recipients must be:
  - for-profit organizations,
  - not-for-profit organizations that facilitate and fund research and development on behalf of the ecosystem and whose funding and/or revenue is received primarily from private-sector or industry organizations,
  - non-federal Crown corporations whose funding is derived from commercial activities, or
  - indigenous organizations.
- Other publicly funded not-for-profit organizations, post-secondary institutions, federal Crown Corporations, and government departments or agencies are not eligible to receive Global Innovation Cluster funding directly, although they may bring their own contributions to projects or be sub-contracted by funded recipients to carry out project activities.
- International organizations (offshore companies and research organizations without a registered business presence in Canada) may also participate in Global Innovation Cluster projects, but any project activity undertaken by these organizations will not be eligible for Global Innovation Cluster funding.
- International organizations (offshore companies and research organizations without an incorporated presence in Canada) may also participate in NGen projects, but any project activity undertaken by these organizations will not be eligible for NGen funding.

### Involvement of the National Research Council of Canada (NRC)

NGen welcomes the participation of the NRC in its projects. The mechanism for the NRC to participate in a project would be through a subcontract to an industry partner. There are options on how NRC will be treated in an NGen project:

- NRC will be part of the consortium [Collaboration Agreement](#) recognizing that they will bring value to the consortium, that may be bringing IP or are critical part of the project delivery. NGen will recognize the NRC as a partner in the publications and promotion of the project activity.
- NRC's portion of the project would be subcontracted directed by an industry partner – the agreement is solely between the industry partner and the NRC. NGen may recognize the NRC as a partner in publications and promotional activity as agreed to by the consortium.

## Project Eligibility Criteria (Scope)

NGen will invest up to \$35 million in projects with an industry match of at least 37%, resulting in at least \$95 million of new advanced manufacturing innovation spending for the automotive industry.

### Project Requirements

The projects must be transformative, applied, enduring, and collaborative and meet the scope criteria areas below:

- **Transformative**, involving the development of advanced manufacturing capabilities with the potential to confer a significant global competitive advantage to Canadian industry.
- **Collaborative**, projects need to demonstrate meaningful collaboration with a minimum of two Canadian partners – a lead and partner(s) – developing industry relationships, building trust, and sharing knowledge, risk, investment, and the resulting benefits.
- **Applied**, focused on solutions, with the potential to generate significant commercial and economic benefits, including jobs maintained and created.
- **Enduring**, leaving a legacy in skills development, tools, testbeds, intellectual property, and/or business knowledge for Canada's advanced manufacturing ecosystem beyond the partners and timeline of the project.

Projects must be incremental and in-addition to the regular business undertakings of the applicants. Applicants must demonstrate that the proposed project is new or that the funding will be used to expand the scope or scale of the proposed project. Use Question 10 in the application to describe how the project is incremental.

Projects must have the potential to deliver significant commercial benefits and jobs both within the consortium and beyond.

The total amount of the project should be between \$1.5 million and \$8 million. Eligible expenses will be reimbursed at a funding rate of 37%.

Claims for eligible expenses must be made by the January 31, 2028, with funding fully paid to partners by the March 31, 2028.

Project participants must have robust commercialization plans in place to demonstrate paths to market.

## Project Consortium Requirements

A project consortium,

- Must demonstrate meaningful collaboration, with at least two (2) Canadian industry partners (a lead and partner(s)) that are not associated with each other.
- Must include at least one (1) small to medium-sized (SME) company (an SME is defined as an organization that has fewer than 500 employees globally as a partner). Applicants are strongly encouraged to include more SME partners.
- Must demonstrate a clear path to commercialization into Canadian EV value chains. Consortia must demonstrate the involvement of and/or support from,
  - an industry-based market-pull company (i.e., potential customer);
  - a vehicle manufacturer(s) (VM); or
  - a Tier-1 business (one supplying components or services directly to a VM).

Support would ideally be as a formal collaborative partner or providing in-kind support.

**At a minimum**, a strong and credible letter of support, demonstrating a relationship and an in-principle agreement to commercialize the outcomes should the project be successful, will need to be provided.

## Eligible Project Types and Areas

Projects should focus on the development of,

- An advanced manufacturing technology;
- Novel manufacturing processes; or
- Circular economy processes and capabilities,

to improve and scale-up production capabilities. A limited percentage of product research and development will be permitted.

The program is aimed at supporting the development of manufacturing capabilities in the following areas across road-based EV (battery and fuel cell electric vehicle) value chains:

1. Processing, refinement, and production of critical minerals and materials for EVs and EV systems and components
2. Traction battery including associated components and systems
3. Significant vehicle light weighting
4. Power electronics and associated components and systems
5. Electric machines and associated components and systems
6. Fuel cell (full system)

The manufacturing scale-up of hybrid powertrains are in scope, but only for the electric and/or zero emission aspects of the architecture.

If your project type and area is not included in the project areas listed above, please email us at [ev-challenge@ngen.ca](mailto:ev-challenge@ngen.ca) for consideration.

## Projects Out-of-Scope

Projects out of scope are:

- Projects that focus primarily on product development or the design of products themselves. The project must focus on the development and/or scale-up of advanced manufacturing capabilities. **\*Please note:** An amount of product development, testing, and validation is allowed within a project as long as it can be demonstrated as being required to support the achievement of the advanced manufacturing goals. — No more than 20% of the funding allocation can be related to product development.
- Projects related to off-road vehicles, including mobile off-road vehicles. This program will focus on road-based vehicles.
- Projects related to internal-combustion engine (ICE)-based powertrains, and ICE aspects of hybrid powertrains
- Projects related to EV charging infrastructure.
- Projects related to the extraction of raw ore
- Projects related to experimental or theoretical work without any direct commercial application or use. Projects must demonstrate a strong commercialization strategy.
- Production activities themselves or activities that subsidize full-scale production.
- Capital investment for purposes not related to the project. Capital investment must demonstrate new advanced manufacturing capabilities for the organization.
- Activities that could be viewed as anti-competitive.
- Projects where benefits accrue to a single firm or organization
- Projects that would be undertaken at the same scale or scope and within the same timeframe without NGen funding.
- Any routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.

It is recommended that the project be submitted for screening early on the NGen Salesforce portal so that the NGen project team can review the project for eligibility before completing a full application.

If in doubt about the project scope and eligibility of a project idea, the NGen project team is available to provide support throughout the application process [ev-challenge@ngen.ca](mailto:ev-challenge@ngen.ca) .

## Funding

Projects must involve at least two (2) unassociated Canadian industry partners (a lead and partner(s)) contributing to project costs.

Projects may range in size. NGen will reimburse 37% of eligible project costs up to a maximum of \$8 million of total costs per project. Projects with total costs over this amount will be accepted; however, funding will be capped at \$2.96 million.

NGen will reimburse up to 37% of total eligible project costs incurred by industry partners.

Eligible project costs are defined in the [Project Finance Guide](#).

This program will support organizations to create new advanced manufacturing capabilities. Therefore, capital expenditures of up to 25% of the total project costs will be allowed. Capital equipment expenses need to be for new advanced manufacturing equipment that creates new capabilities within the organization. The expenditure needs to support the project goals and create world-class manufacturing capabilities.

Any capital expenditure exceeding \$1 million will require pre-approval by NGen.

The total amount of sub-contracted or consulting costs cannot exceed 30% of total project costs, and the work must be performed in Canada.

Project partners cannot also be sub-contractors for labour services or consultants within the project.

No individual partner may receive more than 70% of NGen funding.

All eligible project expenses must be incurred in Canada.

## NGen Administration Fee

NGen is a not-for-profit organization. Project administration fees are applied to projects as a condition of funding. The fee is a one-time, non-refundable project administration fee payable to NGen equal to 3.5% of the total cost of the project. Payment of the fee is a non-negotiable condition of project funding. The 3.5% fee enables NGen to support projects through its project monitoring and claims management process.

## Program Timeline

Please refer to the Program website, <https://www.ngen.ca/funding/challenge/ev-manufacturing> for the most updated project guides, templates, and webinar recordings.

Project Funding Lab webinars that will outline program requirements, the application process, and finance rules will take place on June 20, 2023 (Bilingual Event)

Register as an NGen member [www.ngen.ca/join](http://www.ngen.ca/join), only organizational members can apply for funding.

Two application deadlines must be met to submit a compliant proposal:

- Screening Deadline** - The first is a mandatory submission for screening so that NGen can ensure the project is in scope and complete financial due diligence. Deadline: October 11, 2023 at 5:00pm Eastern Time
  - The screening includes a summary of the project intent, the partners, and the high-level financials.
  - Failing to meet this deadline will mean the proposal will not be considered for funding.
  - Members can apply for funding through the member portal (<https://portal.ngenconnects.ca/opportunities>) under funding programs the portal will be open to receive project registrations by the June 30, 2023
- Final Application Deadline** - The second is the final application deadline for projects that have been successfully screened: November 15, 2023 at 5:00 pm Eastern Time. Once submitted, applications will be sent to an independent third party panel for assessment

Applicants will be notified of assessment results by December 5, 2023. Projects that are recommended for funding will proceed to the contracting phase.

Projects are expected to complete contracting and officially launch by early February 2024. It is recommended that project teams review the Collaboration Agreement and the Master Project Agreement drafts on the NGen website before applying.

All projects complete and claims filed by January 31, 2028.

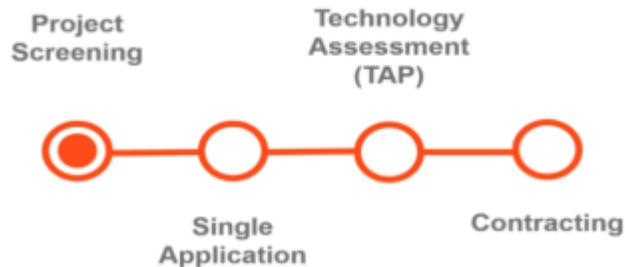
## Summary of Key Dates

Project Funding Lab (Bilingual Event)	June 20, 2023
Application Portal Opens	June 30, 2023
<b>Project Screening Deadline</b>	October 11, 2023 (5 pm Eastern)
<b>Final Application Deadline</b>	November 15, 2023 (5 pm Eastern)
Notification of Assessment Result	December 5, 2023
Completion of contracting phase & official start to project	Early March 2024

## Applying for Project Funding

A dedicated portal for applications can be accessed by NGen Member organizations on June 30, 2023 following the Challenge webinar on June 27, 2023 (French) and June 28, 2023 (English). A tutorial will also be made available at this time. The portal is required to enter the project information.

### The Process



### NGen Support for Project Applications

NGen's project team may assist in the development of NGen project applications prior to their assessment. NGen staff may assist by:

- Providing high-level advice and guidance with respect to scope criteria, funding rules, eligible activities, and project requirements, and draft responses to the 10 questions.
- Identifying potential project partners. An online matchmaking and networking portal for the Program can be found here <https://b2beematch.com/ngen/>
- Identifying other sources of funding for project activities.

Resources are limited, and the support will be provided on a first-come, first-serve basis.

Support can be requested by e-mail at [ev-challenge@ngen.ca](mailto:ev-challenge@ngen.ca).

Emailing confidential or sensitive documents is not recommended. NGen can support the review of project information through the secure portal.

### Partner Collaboration Portal

NGen will be setting up collaboration portal that will support projects in finding partners. Companies can post information related to the project and the types of partners they are looking for.

The portal will be accessible on the Program website at <https://b2beematch.com/ngen/>

### Project Screening

NGen will screen all proposals to ensure they meet basic eligibility requirements for Global Innovation Cluster projects.

Projects must submit for screening by October 11, 2023 at 5:00pm Eastern Time. Failing to meet this deadline will mean the proposal will not be considered for funding.

In project screening, applicants will be asked to,

- Provide the names and contact information for each partner in the project
- Provide the name of the lead project partner (this information may be disclosed publicly)
- Provide a short title and description of the project to a maximum of 300 words (this information may be disclosed publicly)
- Complete an Application Agreement
- Certify that they have read, understand, and are willing to comply with NGen's project requirements.
- Describe the purpose of their project and how it contributes to new advanced manufacturing capabilities in Canada.
- Indicate that their project is collaborative and identify lead private sector partners.
- Certify that private sector partners looking for funding are incorporated in Canada and that the project will be carried out in Canada.
- Certify that their project would not be undertaken in the same form without Global Innovation Cluster funding.
- Provide an estimate of project costs and indicate that they are willing to invest in the project within the timelines of NGen's Global Innovation Cluster funding horizon.
- Certify that they have adequate financial means and project management capabilities to carry out the project.
- Agree to provide information necessary for NGen to conduct Financial Due Diligence.

### Financial Due Diligence

NGen will undertake a financial assessment of each participating project partner to ensure they will be able to support their commitment to the project for its entire duration.

Factors that will be evaluated include but are not limited to Profitability, Liquidity, Leverage/ Indebtedness, and Cashflow.

In the event the supporting financial information provided by the applicants is insufficient to demonstrate the ability to complete the planned project as proposed, NGen Canada will:

- Request additional information from the participating member.
- Reject the proposed program because the project team does not appear to have the ability to fund the proposed project to completion, or
- Approve the project for a reduced amount of NGen funding until such time the participating members can provide further assurances on liquidity.

### Completing the Application

Applicants who meet eligibility requirements as part of Project screening will be invited to apply.

The application consists of:

- A) Answers to ten (10) questions, with a maximum 7000-characters per question. To ensure that the level of information provided is fair for all applicants:
- Any information provided above 7000-characters will not be sent out to the assessors.
  - No external links are allowed.
  - No additional information such as reports are allowed to be submitted to the appendices.
  - Please include any information in the application ten questions and if appropriate cite a suitable reference.
  - Consider utilizing graphs, charts, and images.
- B) Five (5) supporting documents
1. Project Plan (DOC, XLS, MSP, PDF) – attach as Appendix
  2. Risk Register (DOC, XLS) – attach as Appendix
  3. IP Plan – input directly into Salesforce application portal
  4. Additional attachments (e.g., letters of support) – attach as Appendix
  5. Financial Workbooks (one for each partner) – input directly into Salesforce application portal

Templates for the Project IP Plan Template table is available on Salesforce.

There are no templates for the Project Plan or Risk Register; it is expected that the company uses the project management tools available within their company.

### Application Scoring

Each project application will be assessed based on 10 questions by up to 5 independent assessors.

Responses are equally weighted in assessments.

Applications will be scored out of 100 marks (10 marks per question) by independent experts.

The assessors will answer two yes/no Gateway questions.

- Is the project in scope for funding for this program?
- Is the project recommended for funding based on the overall application and in particular the business case presented?

If the majority of assessors answer no to either gateway question the application, regardless of the overall score out of 100 will not be considered for funding. It is recommended throughout the application process that advice is sought from the NGen project team to ensure the project meets the scope criteria.

### Independent Expert Assessment Panels

All project proposals will be subject to an independent assessment process undertaken by up to five external experts selected by NGen. The expert assessment panels will ensure that approved projects are of high quality, meet NGen's strategic objectives, and are selected fairly. These panels may also include Government representatives.

NGen's external experts include former CEOs of manufacturing and technology companies, former senior manufacturing, engineering, and technology executives, senior personnel at universities and colleges, and executives from business consulting organizations.

The identity of experts participating in individual project assessments will be kept confidential. Assessors will sign non-disclosure agreements as well as conflict of interest disclosures to ensure independence and confidentiality.

### Application Acceptance or Rejection

Following an Assessment and Recommendation from the Independent assessors, NGen staff will advise all applicants directly if their project has been successful or not.

### Application Feedback

Applicants whose projects are not recommended for approval at the initial proposal or full application stage will be given a summary of how their project was evaluated, outlining the reasons why they were not approved, and given recommendations to strengthen their applications.

## Assessment Questions

To satisfy these requirements, project applicants must answer ten questions that will inform the assessment process.

To the best of your ability, please address the guidance provided for each question.

Please include any other pertinent information not covered in this guidance.

This guidance is intended to be answered by all applicants and not just the lead partner, so that the impact and anticipated benefits that will accrue are well defined.

Throughout the application, where possible, provide evidence for your statements

### Assessment Question 1

#### **1. What is the opportunity the project addresses?**

##### *RESPONSE GUIDANCE*

- Outline the big-picture motivation and the overall advanced manufacturing objectives that the project intends to achieve.
- Describe the EV Project Area (Project areas #1 to #6 listed on Page 8) that this application is targeting and explain what specific part of the value chain this project is addressing. For project area #6 (Significant Vehicle Light Weighting), quantify the expected impact that the project will have in terms of weight-saving.
- Provide an overview of the project considering both technology and business impacts, highlight other strategic benefits.
- Outline the gap and or opportunities that the project will be addressing in growing and strengthening Canada's EV value chain.
- Outline what the project team needs to do to successfully achieve the project objectives within the desired timeframe and budget. What are the specific challenges, research questions, or technical complexities that need to be addressed within the timeframe of the project?
- Describe the nature of the challenges facing you and your potential customers, along with the potential market challenges and barriers to entry in Canada's EV value chain that the project addresses.
- How will the outcomes of the project overcome these challenges?
- Clearly describe the project partners and how the partners will collaborate towards achieving the overall opportunity the project addresses.

## Assessment Question 2

### 2. What is transformative about the advanced manufacturing aspects of the project?

#### *RESPONSE GUIDANCE*

Projects must be globally transformative in nature. This is a core pillar of NGen projects. Projects that are not adequately transformative will be deemed out of scope for funding, regardless of the quality of the rest of the proposal.

- Clearly define the transformative Advanced Manufacturing aspects of the project and what new knowledge of advanced manufacturing is being created by each partner organization.
- Identify the extent to which the project is transformative and innovative both technically and commercially:
  - Are the technologies new or are you looking to apply existing technologies to develop unique transformative manufacturing solutions?
  - Outline the current state-of-art manufacturing processes and technologies for your industry (or sector) and describe how this project pushes the boundaries in the context of advanced manufacturing
  - Will the project lead to technological and business advantages that will allow Canadian companies to leapfrog global competitors and become world leaders in the application and/or production of advanced manufacturing technologies?
  - Describe how the project could be recognized globally as conferring or strengthening Canadian leadership in advanced manufacturing.
- Provide evidence for these statements. This could include the results of:
  - Patent searches,
  - Competitor analyses,
  - Literature surveys.
- If applicable, you should also outline your background intellectual property rights, as related to the project.
- If applicable, describe any novel research that will be undertaken as part of the project. Highlight and explain the timeliness and novelty of these research aspects of the project in an industrial context.
- What is the plan and rationale for the protection of IP and sharing of IP among your consortium partners and, beyond this, with other NGen members?

Elements of product development are eligible for funding under this program, and the novel transformative aspects of the product or technology can be described in response to this question. These other novel aspects are important to provide context. It is essential to note that the assessors will be awarding marks based on what is transformative for advanced manufacturing.

### Assessment Question 3

#### **3. What is the nature and size of the potential market(s) the project will address?**

##### *RESPONSE GUIDANCE*

For each project partner,

Describe which segments of the EV value chain that the project is seeking to enter with the development of a new advanced manufacturing technology and or capability.

AND/OR

Describe the existing market that you are operating within and how this advanced manufacturing opportunity will enhance your competitive position within the EV value chain.

- Include the details of:
  - the specific target product, platform and or service applications .
  - the target market, including the size and projected growth rates, margins, market leaders, key competitors, price competition, and barriers to entry.
  - the market differentiators for your project outcomes.
  - the expected share of market to be captured because of this project.
  - the opportunity timeline and when you expect benefits to be realized.
  - the impact of the project on existing or future customer relationships.
- Describe the additional adjacent markets where the new technologies or capabilities could be commercialized.
- Provide evidence for your statements about the market opportunities your project opens-up.

## Assessment Question 4

### 4. How will the results of the project be commercialized?

#### *RESPONSE GUIDANCE*

A key objective of this program is to develop and strengthen Canada's EV value chain by scaling-up and commercializing advanced manufacturing capabilities. Please ensure there is a compelling commercialization plan for each partner, describing how the benefits will be achieved.

- The commercialization plan should highlight,
  - how each partner will take their expected project outputs to market and commercially integrate them into the Canadian EV value chain
  - other potential business opportunities for each partner in collaboration and individually.
- Outline the expected project outputs that will be commercialized, such as new or improved products, services, processes, capabilities, intellectual property, and manufacturing technologies.
- Describe of how each of these outputs will be commercialized in the existing market, future, or adjacent markets as defined in Question 3. Consider:
  - A roadmap showing the routes to market, including details of specific channels being targeted, and estimated timelines.
  - Describing the number of manufacturers or facilities the project expects the technology to be implemented in.
  - Identifying the organizations necessary to access the road vehicle market
  - identifying the route(s) to market provided by the market-pull partner, Vehicle Manufacturers or tier-1 suppliers (as per the Project Consortia Requirements on page 8) that would be involved as a commercialization route. At a minimum, provide letters of support demonstrating a relationship and an in-principle agreement to commercialize the outcomes should the project be successful (upload to appendix in the Salesforce application portal).
  - Highlighting your competitive advantage and value proposition.
- Provide insights into the sales and marketing plan aligned with the direct and indirect economic benefits (benefits to be described further in the response to Question 5).
- Describe the plan for managing and commercializing Intellectual Property, including the license to manufacture, licensing of IP, manufacturing, or direct sales in your IP Plan (Appendix 3). (Please note: IP is not just patents and includes trade secrets, know-how, copyrights, industrial design, etc).
- Outline the plan for protecting and sharing IP among your consortium partners and, if appropriate, beyond this with other NGen members. Include a patent filing plan for domestic and foreign jurisdictions, if applicable.
- Outline any other commercial spill-over opportunities and highlight how your activities will contribute to the wider industry and other sectors.
- Describe the EV value chain upstream and downstream impacted by this project and how the commercialization activities will support Canadian Manufacturing.

## Assessment Question 5

### 5. What sort of economic benefits is the project expected to deliver to those inside and outside the consortium, and over what timescale?

#### *RESPONSE GUIDANCE*

Projects must deliver significant economic benefits to the partners. Identify the economic benefits the project will have for all participating project partners and other suppliers/partners inside and outside the project. How does the partnership help each partner achieve greater economic growth?

#### Additional Revenue

Include tables showing the expected additional revenue that will be generated for each partner over,

- the duration of the project,
- 0-2 years after the project, and
- 3-5 years after the project.

#### Direct and indirect jobs

Include a table showing the job impact for each project partner (and if appropriate for suppliers) over the duration of the project, 0-2 years after the project and 3-5 years after the project.

- Please identify:
  - the number of direct jobs created,
  - the number of direct jobs maintained/safeguarded,
  - the number of indirect jobs created within the supply chain (consider referencing multiplier effects based on direct jobs),
  - the number of indirect jobs maintained/safeguarded.
- Highlight the type of jobs that the partners will create.

#### Additional direct and indirect economic benefits

The economic case can be further strengthened by representing additional direct and indirect economic benefits. Examples include:

- The potential economic opportunity to implement the solutions in multiple manufacturers/facilities
- The economic value associated with:
  - Efficiency gains
  - Reduced downtime
  - Reduced manufacturing footprint
  - Positive environmental benefits
  - Reduced material usage
  - Higher quality output
  - Reduced scrap and warranty.

Indicate any commercial opportunities for other manufacturers/industry sectors arising from the application of the technology. Define the economic benefits that the project can have on the whole EV value chain upstream and downstream.

Will the project create spin-off business opportunities (new businesses, new or expanded supplier or partner relationships) in Canada?

## Assessment Question 6

### 6. What is the impact on the broader advanced manufacturing ecosystem and Canadians?

#### *RESPONSE GUIDANCE*

Projects must provide enduring benefits to Canada's advanced manufacturing ecosystem. This is a core NGen pillar. Benefits cannot accrue to one partner. Projects must create widespread positive impact and leave a legacy for advanced manufacturing in Canada, beyond the partners involved and throughout the supply network. If not described adequately, the project will be deemed out of scope for funding, regardless of the quality of the rest of the proposal.

It is important to highlight any workforce development and Equity, Diversity & Inclusion (EDI) opportunities practiced by the partners.

#### *Social Benefits*

Describe any expected positive social impacts, for example:

- Diversity and inclusion, including activities that will be undertaken to ensure that women and
- underrepresented groups are meaningfully represented in, and benefit from the project
- Enhanced quality of life
- Social inclusion
- Health and safety

#### *Environmental Benefits*

Outline the environmental improvements and impacts as an outcome of this project. Consider:

- GHG, particulate matter reduction
- Process and resource efficiency
- Better energy management
- Reduced volatile organic compounds
- Reduced land degradation
- Reduced water usage
- Footprint reduction
- Reduced emissions due more efficient and optimized transportation and distribution within the supply chain
- Use or creation of sustainable materials
- Reuse, recycle, and remanufacturing
- Other lifecycle benefits
- Other sustainability opportunities

#### *Other Benefits*

- Regulatory,
- certification,
- standards development,

- supply chain transparency,
- workforce development,
- industry knowledge,
- collaborative networks,
- infrastructure support, and
- regional and policy benefits, etc.

## Assessment Question 7

### **7. What is the overall project plan?**

#### *RESPONSE GUIDANCE*

- Describe the project management approach, identifying key project management tools and mechanisms (e.g., Quality Management Systems) that will be implemented to provide confidence that sufficient control will be in place to deliver the project on time, on budget, and according to specifications.
- Describe how you are going to measure the success of the project.
- Provide a brief written summary of the overall project plan, including a description of the work packages, key milestones and deliverables.
- As part of Appendix 1, provide a detailed project plan in the form of a Gantt chart (Appendix 1) that details the Work Packages, tasks, timelines, milestones, deliverables, dependencies, resource allocation for all partners, and work package costs.
- Describe the resource and management requirements for successful project completion, including how the work will be shared among project partners

The assessment and scoring for this question will consider both the written answer and Appendix 1. In evaluating the project plan, the assessors will consider the following:

- Is there sufficient detail provided when considering the complexity of the project?
- Is there sufficient detail to understand the tasks involved and the resources required?
- Is the timing of key milestones realistic?
- Is there a demonstration of sufficient resource commitment and capability to undertake the project?
- Is the Project Plan aligned with the costs described in the response to Question 10?

## Assessment Question 8

### 8. What is the overall risk management plan?

#### *RESPONSE GUIDANCE*

NGen recognizes that projects of this type are inherently risky and therefore seeks assurance that the projects it funds have adequate arrangements for managing this risk

- Describe the Risk Management approach, including the management tools and mechanisms to identify, evaluate and address the project risks.
- Key risks identified in the risk register can be elaborated upon as part of the answer to this question.

Provide a comprehensive risk analysis as part of the Risk Register

- Identifying the key risks within the project. Please provide enough information in the risk statement so that the cause, uncertainty, and effect are clear.
- Provide an analysis of the likelihood and impact of each risk, and provide a relative ranking for each risk
- Identify the mitigation strategies. Mitigation strategies can include Avoid, Transfer, Mitigate (reduce), Accept (and manage).
- For complex, high-risk projects, it would be advantageous to provide the effect of each risk management strategy in terms of the residual risk.
- All relevant risks should be identified. Include at least the following risks categories:
  - Technical,
  - Commercial,
  - Managerial,
  - Resource,
  - Financial risks
  - Intellectual Property (IP)
- Other risks to consider (and are not limited to) include:
  - Freedom to Operate,
  - Safety,
  - Regulatory,
  - Legal,
  - Environmental,
  - Supply chain risks.
- Assessors will be looking to see that all the main risks are identified and that there are sufficient risks within the project **to warrant NGen funding and that these risks are appropriately controlled.**

## Assessment Question 9

### 9. Describe the collaboration and the partner skills, experience, resources, and access to facilities to deliver the identified benefits?

#### *RESPONSE GUIDANCE*

Projects must demonstrate meaningful collaboration. This is a core pillar of NGen projects. Projects that do not adequately demonstrate collaboration will be deemed out of scope for funding, regardless of the quality of the rest of the proposal.

- Describe the collaborative nature of the project and how the consortium working together will achieve more than if they were working individually.
- Describe how the project partners will develop relationships and build trust and increase knowledge sharing
- Describe any additional collaborative activities related to suppliers, sub-contractors, academic or research organizations involved in the project.
- Use the **IP** Plan to demonstrate the nature of the collaboration in terms of the licensing and access to background and foreground IP during and after the project.
- Describe the track record of the project team members in undertaking and exploiting the results of research and development projects.
- Consider whether:
  - the project team has the right available mix of skills and experience to deliver the project successfully. Provide a high-level description of the partner's track record in achieving similar manufacturing R&D projects.
  - there are appropriate management reporting and governance structures between the consortium partners to manage and deliver the project. Consider including a governance structure diagram.
  - the make-up of the consortium, along with their knowledge and experience will help improve the capabilities of the Canadian supply chain during the project and beyond
  - there is appropriate access to facilities and resources, including identifying and allocating appropriate space and infrastructure for the project to be successful (consider floor space, specialized equipment needs, specialized resources, etc.)

## Assessment Question 10

### 10. Why is NGen funding being requested, and what is the financial commitment for the project?

#### *RESPONSE GUIDANCE*

##### Part 1: Why is NGen funding being requested

- Projects must clearly articulate why NGen funding is being requested, how it will benefit the project, and demonstrate that the project activities are in addition to the regular business undertakings of the applicants. Questions to consider:
  - How has the project's technical or commercial scope changed due to NGen support?
  - Why is NGen funding critical to undertake the project as proposed?
  - Does NGen funding allow the project to be undertaken differently (more quickly, at a larger scale, with more partners)?
  - Would the collaborative partnerships have been formed without the project?
  - Is the project too risky for commercial investors?

##### Part 2: Financial Commitment

- Indicate the anticipated project cost, making clear the level of contribution from any project participants and the level of funding required from NGen. This information should be provided in the financial workbooks.
- Provide a breakdown of the costs per work package, showing how it aligns with the project plan and milestones. Consider adding this to Appendix 1 or described in this section in table format.
- Provide supporting information and an explanation of extraordinary or specialized project costs.
  - For each partner, ensure that all key points relating to these costs are described per cost category.
  - Ensure that project funding is not subsidizing production.
  - For each partner, ensure that all key points relating to the finances are described per cost category. For example:

##### Labour:

- Justification for the use of specialized labour or labour with especially high rates.

##### Subcontractor:

- The reason for, and use of, subcontractors, their impact on the project, and why they are not formal project partners.

##### Equipment:

- It is essential that:
  - the equipment being purchased is directly linked to the project goals,
  - the equipment is linked to the R&D capabilities supporting the creation of a new advanced manufacturing capability. This can include pilot

production where the project team proves out the advanced manufacturing capability. It cannot subsidize full production.

- is creating a new capability that does not already exist within the organization
- it is not the purchase of multiple similar pieces of equipment that would be seen as subsidizing future production activities
- Considering the points above, please describe the capital required in detail with a justification of why it is necessary to achieve the advanced manufacturing goals of the project.
- A justification for any pieces of capital equipment exceeding \$1M (NB: these costs require NGen approval in advance)

Materials and Supplies:

- Please explain any excessive amounts of material or the use of expensive materials.
  - Projects are not intended to subsidize production; the amount of material listed should be for the purposes of the project's R&D aspects. It should be linked to the prove-out of the advanced manufacturing capability.
- In evaluating the project, the assessors will consider the following questions:
    - Has the project presented a clear case that these activities are in addition to regular business undertakings?
    - Has a realistic budget breakdown been provided and is the budget realistic for the scale and complexity of the project?
    - Is a financial commitment from other sources demonstrated for the balance of the project costs?
    - Have the costed work package breakdowns been described and justified adequately?
    - Is the project providing value for money for NGen funding? Considering the project's total potential impact and return against the amount of funding being requested.
  - It is recognized that other funding sources may be required to complete the project. Specify other government or private sector funding sources necessary to achieve the project goals.
    - Describe other private sector co-investment/financial contributions that this project will attract in the short, medium, and long-term, identifying any potential follow-on funding.
    - Outline other government funding, including stacking limits, that this project has secured or plans to secure against the project.
    - Describe how the project can help attract or retain and promote industry investment and product mandates in Canada.

## Upon Agreement

Upon the final recommendation of the independent assessment panel, NGen will conclude a Master Project Agreement (MPA) with selected funding recipients detailing project requirements, reporting, and NGen's compliance obligations.

There must be a Collaboration Agreement in place among the members of the project consortia defining the roles of project partners and joint risk management provisions.

The Collaboration Agreement must also set out how foreground IP arising in projects will be shared among project partners. In addition, project participants must indicate the types of foreground IP they would be prepared to share with other members of the Global Innovation Cluster, to whom, and on what conditions.

Project Teams will also be requested to submit updated project documents that have been improved through the feedback provided during the Project Assessment. The revised project documents include:

- Project Plan
- Milestone Register
- Risk Register
- Financial Forecast
- Commercialization Plan
- Finance Workbooks

Once the improved project documents have been approved by NGen and the other Contracting documents (i.e., MPA, Collaboration Agreement, IP Plan) have been submitted, a Funding Confirmation Letter (FCL) will be issued to the Project Team. The release of the FCL represents the official start of the NGen project.

## Resources

### Templates

- [Application Agreement](#)
- [Project IP Plan Template Tables](#)

### References

- [NGen Intellectual Property Strategy](#)
- [Project IP Plan Guide for Applicants](#)
- [Program Finance Guide](#)