

# REQUEST FOR EXPRESSION OF INTEREST

## SEPTEMBER 2022



**AECL**  
Atomic Energy  
of Canada Limited

**EACL**  
Énergie atomique  
du Canada limitée





## Summary

The purpose of this Request for Expression of Interest (“**RFEOI**”) is to solicit input and feedback from interested parties on various elements of a potential competitive procurement process to manage and operate AECL’s Nuclear Laboratories under a Government-Owned, Contractor-Operated (GoCo) Model.

### Purpose of this Request for Information

Atomic Energy of Canada Limited (“**AECL**”), a Canadian Crown corporation, is conducting planning activities to assess whether and how to procure the services of a contractor to manage the operations of Canadian Nuclear Laboratories Ltd. (“**CNL**”) under a Government-owned, Contractor-operated (“**GoCo**”) model. The purpose of this RFEOI is to solicit input and feedback from interested parties on various elements of the proposed competitive procurement process, which is described in more detail below. Specifically, the objectives of this RFEOI are to:

- solicit input via capability statements from interested parties with the specialized experience and capabilities necessary to meet all the major elements of scope required to manage and operate Canadian Nuclear Laboratories. Within these capability statements, AECL is seeking feedback from contractors and other interested parties regarding options for innovative approaches for the performance of the major elements of scope as well as insight into potential contracting alternatives to maximize value without impacting safety.

This market research will assist AECL with identifying interested and capable sources and developing its procurement plan. Key market research goals include identifying and minimizing barriers to competition and identifying risks associated with successful completion of the project scope. The final contract type, period of performance and amount of funding, will be determined through the procurement planning process and this market research.

### Overview of AECL

Under the Financial Administration Act, AECL is a distinct legal entity, wholly owned by the Crown, which operates at arm’s length from the Federal Government in its day-to-day operations and its activities and programming. AECL contributes to the achievement of the Federal Government’s broad policy objectives. AECL is required to comply with a range of provisions in statutes that include, among others, the Canada Labour Code, the Official Languages Act, the Canadian Free Trade Agreement, and the Access to Information Act.

AECL delivers its mandate through a GoCo model, whereby a private sector organization, CNL, is responsible for managing and operating AECL’s sites. Under the GoCo model, AECL owns the sites, facilities, assets, liabilities (including environmental remediation liabilities) and intellectual property. CNL is responsible for the day-to-day management and operations of AECL’s sites and holds the nuclear site licenses.

AECL accepts CNL’s annual plans, and CNL’s performance is then systematically monitored and assessed based on targets and measures set out by AECL at the beginning of each year. AECL also oversees two



target-cost contracts, also with CNL, for the decommissioning and closure of two nuclear sites: The Nuclear Power Demonstration reactor, in Ontario, and the Whiteshell Laboratories, in Manitoba.

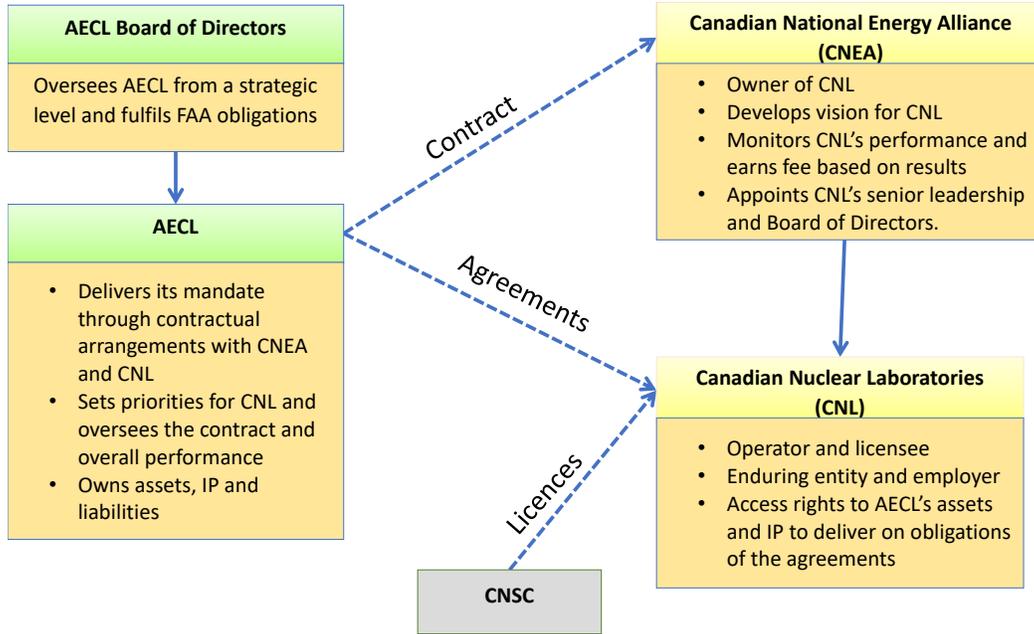
AECL relies on a small complement of staff with national and international experience in the management of similar arrangements, both from a government and contractor perspective. The objective is for AECL to have the necessary expertise and capabilities to oversee the GoCo contract and play an appropriate oversight and challenge function to achieve value for money for Canada.

AECL adopts several of the Government of Canada's Greening Initiatives in greening its operations and is generally aligned with the United Nations' 2030 Agenda for Sustainable Development and the Federal Sustainable Development Strategy. Environment and Social Governance ("ESG") at AECL is defined by creating value across environmental and social focus areas that have been identified by AECL's management as significant to AECL's operations. This includes areas that we believe are of significance to our key stakeholders, communities, and the Government of Canada. AECL considers ESG impacts across our operations and seeks to embed social and environmental considerations within our decision making.

### **Overview of the Management and Operation of the Canadian Nuclear Laboratories**

In February 2013, the Minister of Natural Resources announced that Canada would undertake a competitive procurement process seeking a contractor to manage the operation of AECL's Nuclear Laboratories using a GoCo model. Subsequently, a contract was awarded to Canadian National Energy Alliance ("CNEA") for the management and operation of the Nuclear Laboratories under a GoCo model ("GoCo Contract"). The GoCo Contract was executed on September 13, 2015. The GoCo Contract term ends on September 12<sup>th</sup>, 2025. AECL is considering the potential of entering into another competitive process to continue the management and operation of Nuclear Laboratories.

CNL is focused on three key areas: (i) managing radioactive waste, environment remediation and nuclear decommissioning responsibilities; (ii) performing science and technology activities to meet core federal responsibilities; and (iii) Supporting Canadian industry, both nuclear and other, through access to science and technology facilities and expertise on a commercial basis.



### Objectives of the Procurement

The objective of any resulting procurement is to enter into a contract that will reduce and or contain costs and risks for Canadian taxpayers, while seeking to leverage CNL's capabilities and resources for the benefit of Canadians.

These objectives are expected to be met through (i) use of best practices and innovative approaches that will enable cost savings or cost stabilization; (ii) accelerated environmental remediation and decommissioning and waste management; (iii) new revenue generation; (iv) solving complex technical, financial and regulatory issues; and (v) ensuring that the Nuclear Laboratories are safely and securely managed and that the capabilities, resources and infrastructure required to satisfy AECL's mandate are maintained and/or constructed (vi) in the spirit of reconciliation, building and maintaining long-term relationships with Indigenous communities with the goal of achieving mutual learning and understanding, respect and healing as well as to support opportunities for economic benefit.

### The Procurement Process

The potential procurement process may be conducted in one continuous process consisting of two separate and sequential stages, AECL reserves the right to change any or all of this process if a procurement is conducted:

1. The Request for Response Evaluation ("RFRE") stage, in which interested parties submit a Response that will be evaluated to confirm that mandatory technical criteria, financial capability requirements, national security requirements, and certifications are met. The RFRE stage also includes detailed consultations with respondents that have met the pre-qualification requirements of the RFRE ("Qualified Respondents"). The detailed requirements and terms of the draft Request for Proposal ("RFP") and resulting contract will be made available during the detailed consultations during the RFRE stage for feedback from Qualified Respondents. At the end of the RFRE stage, Qualified Respondents will have been provided with the draft of the RFP.



2. The RFP stage, or bid solicitation process, is when bids will be solicited from Qualified Respondents. Only Qualified Respondents from the RFRE stage will be eligible to submit bids in the RFP stage. In the RFP stage, bids will be typically be evaluated against mandatory, and point rated criteria. Contract award is anticipated at the end of the RFP stage.

**Nature of Request for Expression of Interest**

This RFEOI is not a bid solicitation and will not result in the award of any contract. As a result, interested parties of any services described in this RFEOI should not reserve stock or facilities, nor allocate resources, as a result of any information contained in this RFEOI. Nor will this RFEOI result in the creation of any source list. Therefore, whether or not any interested party responds to this RFEOI will not preclude that interested party from participating in any future procurement. This RFEOI is simply intended to solicit feedback from interested parties with respect to the matters described in this RFEOI. Some of the content of this RFEOI may or may not be used in procurement at a future date.

**Responses to the Request for Expression of Interest**

Each Interested Party should ensure that its name and return address are provided and that the RFEOI number appears in the subject line of the email. Each Interested Party shall use Appendix A to respond to the RFEOI. Each Interested Party is solely responsible for ensuring its feedback is delivered on time via email to the Procurement Authority. Responses may be submitted in either official language of Canada.

Canada may reach out to Interested Parties in relation to their responses to the RFEOI, should further clarification be required.

Treatment of Responses

Use of Responses: Responses will not be formally evaluated. AECL may, in its discretion, review responses received after the RFEOI closing date.

Confidentiality

Interested parties should mark any portions of their response that they consider proprietary or confidential. AECL will handle the responses in accordance with applicable legislation including the Access to Information Act.

Key Dates

Event	Time and Date
Closing date for submitting a response	October 18 <sup>th</sup> , 2022

**Major Elements of Scope**

This section describes the major elements of work (from here on referred to as “the **Work**”) to be performed to manage and operate AECL’s Nuclear Laboratories under the GoCo model. CNL shall leverage the AECL resources to continue the transformation that has been taking place since 2015. This includes:

- Strengthening CNL’s role as Canada’s National Nuclear Laboratory by delivering on Federal Priorities in Science & Technology and pursuing nuclear innovation for the public good



- Leveraging capabilities and assets to grow third party commercial services,
- Significantly advancing decommissioning, environmental remediation and waste management activities to reduce Government of Canada liabilities
- Deliver an integrated, optimally sized capital expenditure and asset management program

In undertaking the above, CNL shall:

- Maintain safe operations and reduce risks over time
- Improve and contain cost of operations
- Build and maintain collaborative relationships with Indigenous communities based on healing and reconciliation
- Enhance collaboration across academic and research networks
- Foster national and international industry collaboration

**Strengthening CNL’s role as Canada’s National Nuclear Laboratory by delivering on Federal Priorities in Science & Technology and pursuing nuclear innovation for the public good**

- **Federal Nuclear Science & Technology (“FNST”) Work Plan**

S&T delivers an integrated, effective, project- based and customer-focused science and technology mission that serves the needs of the Government of Canada as well as those of external customers. Federal Priorities focus on four research themes:

- (i) Supporting the development of biological applications and understanding the implications of radiation on living things’
- (ii) Enhancing national and global security, nuclear preparedness and emergency response’
- (iii) Supporting safe, secure and responsible use and development of nuclear technologies
- (iv) Supporting environmental stewardship and radioactive waste management

The FNST Work Plan addresses federal nuclear priorities and needs while maintaining those S&T capabilities at CNL critical to government. The FNST Work Plan is organized around four theme areas: health, energy, environment and safety and security. The core needs of the Government of Canada tend to drive the infrastructure, skills and capabilities to be maintained at the laboratories, while changing policy interests and priorities of Government tend to inform what specific projects are undertaken in each theme. The project lists and specific priorities are determined on a consensus basis across the 13 departments and agencies that have representation on two committees and four sub-committees. Participation in the FNST ranges in level from scientists to Assistant Deputy Ministers. These federal interdepartmental committees set the priorities and determine strategic direction and funding allocations to support the FNST Work Plan.

- **Pursuit of Nuclear Innovation for the Public Good**

Outside of the FNST Work Plan certain funds are available to invest in science and technology initiatives that will advance strategic objectives or capabilities. These investments leverage CNL



facilities, capabilities and resources for the benefit of Canada and more broadly Canadians and the public. Examples of these activities over the past number of years have included:

- Advancement of Actinium-225 isotope production in contribution to the development of advanced cancer treating therapies
- Working with industry to demonstrate Small Modular Reactor technology at an AECL site
- Advancement of hydrogen production technologies and energy storage techniques

The Work in this area will be to continue advancements made to date that demonstrate promise and value and to maintain an ongoing program that holistically reviews and pursues new and ongoing opportunities and investments for the public good.

### **Leveraging capabilities and assets to grow third party commercial services**

CNL provides services and access to its unique expertise and facilities on a commercial basis in support of building a strong, vibrant and sustainable nuclear science and technology mission. The objective is to leverage the assets and capabilities of CNL to attract third-party commercial revenues and associated margin. Commercial opportunities in science and technology for industry customers continues to be pursued in the areas of health, safety and security, energy, and environment – with energy being the single largest area of current Work and the largest growth area. Work for industry customers includes energy-related services to the CANDU Owners Group, major utility companies, and new Work in the light-water reactor market.

### **Significantly advancing decommissioning, environmental remediation and waste management activities to reduce Government of Canada liabilities.**

#### **Chalk River Laboratories**

- **Infrastructure Decommissioning:** Liability and risk reduction are the key drivers for Chalk River Laboratories (“CRL”) Infrastructure Decommissioning, involving the planning, characterization, regulatory requirements, and physical decommissioning of facilities and structures deemed non-keeper in nature.
- **Environmental Restoration:** CRL Environmental Restoration takes is responsible for risk reduction of contaminated lands and provides long-term monitoring and surveillance of contaminated groundwater. Activities include the remediation of Waste Management Areas, requiring feasibility studies necessary to determine the most appropriate remediation of ground contamination in areas where waste was directly buried in trenches, pits, standpipes or tile holes, or in areas surrounding above or below ground structures and plumes. This waste is to be retrieved, characterized, sorted and stored or disposed in the appropriate manner.
- **Waste Management, Processing, Storage and Disposal:** Comprises projects that cover a range of activities that ensure that waste management, processing and storage capabilities and disposal resources are available and operational to meet CNL needs. Scope activities include:
  - Collection, storage and processing of liquid wastes



- Management and operation of various waste storage, processing and disposal facilities
- Solid waste sorting, monitoring and processing for clearance, and ongoing execution of waste characterization services
- Low Level Waste (“**LLW**”) management, sorting and storage of LLW until such a time as a disposal facility becomes available as well as the continuation, as required, of constructing a near surface disposal facility at the Chalk River site
- Intermediate Level Waste (“**ILW**”) management and storage, such as continuing to improve and provide waste storage areas through inspection, treating, sorting and/or repackaging waste in containers, as required, and executing further retrievals as needed. Consideration of ILW disposal/end-state pathways also to be considered and advanced.
- High Level Waste (“**HLW**”) management, continued progress to develop and implement a comprehensive strategy to enable optimal disposition paths for all fuel and special nuclear material managed by CNL. This strategy involves a focus on developing lifecycle solutions to permanently eliminate nuclear liabilities, with a key focus on ensuring fuel can be either repatriated to the United States or disposed in the future Deep Geological Repository being planned by the Nuclear Waste Management Organization.

### **Prototype Reactors**

Gentilly-1 and Douglas Point are shutdown prototype nuclear reactors owned by AECL and located in Bécancour, Quebec and Kincardine, Ontario, respectively. The reactors operated in the late 1960’s through the mid 1980’s to advance the understanding of boiling light waterpower reactors (Gentilly-1) and steam condenser power reactors (Douglas Point). Both reactors are now shutdown and in a safe shutdown state prior to being fully decommissioned.

The overall scope of work associated with Douglas Point (DP) and Gentilly-1 (G-1) has two primary functions:

- To maintain the sites in a safe shutdown SWS state as per their respective Waste Facility Decommissioning Licence and the Licence Condition Handbooks
- Advance the decommissioning of the buildings

### **Port Hope Area Initiative**

The Port Hope Area Initiative represents Canada’s commitment to clean up and safely manage historic low-level radioactive waste situated in the municipalities of Port Hope and Clarington, in Ontario. The objective is to safely relocate and manage roughly 2.1 million cubic meters of historic low-level radioactive waste and contaminated soils. To achieve this, two projects are in progress: the Port Granby Project and the Port Hope Project. Both involve the remediation of contaminated material and the construction of a near surface long-term waste management facility (one in each municipality, both now complete). Whereas the Port Granby Project is virtually complete, the Port Hope Project is significantly more complex and will remain ongoing beyond 2025 as it involves remediation of hundreds of residential properties and Port Hope’s harbour and surrounding areas.



### **Deliver an integrated, optimally sized capital expenditure and asset management program**

AECL's plan to revitalize the Chalk River Laboratories is based on CNL's ongoing assessments of infrastructure needs, including consideration for health, safety, security and environmental risks, current facility conditions, regulatory requirements and ongoing business needs. All investments are in support of the renewal and revitalization of the Chalk River site, as assessed by CNL and approved by AECL, to address deficiencies created by lower levels of capital investment historically.

Capital investments are intended to address two main areas of focus:

- New Science Infrastructure – these investments are part of a longer-term plan to revitalize the Chalk River site and construct new science facilities in order to build a modern, world-class nuclear science and technology campus that serves the needs of government and industry
- Site Infrastructure – Investments have been required to support existing and aging infrastructure systems and facilities at the Chalk River site such as potable water, storm sewer, sewage treatment, electrical system and other utilities. These investments are necessary to respond to regulatory and health, safety, security and environmental requirements, as well as to maintain a cost efficient and reliable site.

While undertaking these investments CNL is also responsible for maintaining a robust, agile and prioritized asset management program to maintain in good condition existing assets and infrastructure.

The Capital Plan does not include infrastructure which directly supports decommissioning and waste management activities.

### **General Services**

The scope of General Services is to provide those services that enable the safe, efficient, effective delivery of CNL's Work in S&T, decommissioning, environmental remediation, and waste management and Capital and Infrastructure. This includes all the supporting services required of most organizations and, additionally, those unique to licenced nuclear sites. Activities include:

- Maintaining a leading Health, Safety, Security & Environment (HSSE) program that includes management of security forces, fire protection, the health centre, radiation protection and dosimetry, emergency preparedness, environmental protection, and occupational health and safety
- Managing the enabling corporate services functions, including human resources, finance, the Project Management Office (PMO), information technology, supply chain, legal etc.
- Managing site operations, otherwise known as the Infrastructure Development Group, whose portfolio includes the oversight and maintenance of CRL's Energy and Utility networks, Buildings and Structures, Road and Grounds, as well as the Fleet and Equipment distribution network
- Managing maintenance of site facilities
- Enabling the Central Technical Authority whose ensures technical excellence across the organization through engineering support, compliance, quality assurance programs, performance assurance programs, management of nuclear materials and training and development



## Appendix A - Form of Submission

### Company Data

- Corporate structure description including any affiliations and subsidiaries
- Contact information

### Form of Capability Statements

For each major element of scope please include the following;

- Core Competencies – short introductory statement relating to the interested party’s specific competency or area of expertise for each major element of scope. Include if required a bulleted list of key information.
- Prior Experience – list with general detail past work that is similar in nature in the format described in Appendix B.
- Differentiators – identify what makes you different from your competitors and how this benefits your clients. Include relevant certifications and or qualifications.

### Additional Information

Interested parties should respond to the following questions:

- (i) Please describe why your organization is interested in participating in this potential procurement.
- (ii) What kind of timeframe would you expect to prepare and team up for the procurement process described in this document?
- (iii) AECL expects a high degree of collaboration during the RFRE stage on various technical, operational, and financial elements of the contract. Do you have suggestions for interactions that would allow active engagement between the Proponent and AECL e.g, a draft RFP?
- (iv) AECL is committed to collaborating with Indigenous groups in the spirit of reconciliation, please describe your experience with Canadian Indigenous communities.
- (v) Describe how your organization supports sustainability, equity, diversity, and inclusion initiatives



**Appendix B – Prior Experience Format**

**A. Name of the Company responding to this “Request for an Expression of Interest”:**

**B. Reference Contract Information**

1. Contract Title and Identifying Number:
2. a. Contractor name:  
b. If the contractor was a consortium or partnership, provide the name of each member or partner company:
3. Contract client (name of government agency or prime contractor):
4. Contract client point of contact (Contracting Officer and/or Program Lead):
5. Contract Period of Performance:
6. Contract Type (Management and Operating or Target Cost or other):
7. Total Contract Value (including any options):
8. Contract Scope:
9. Self-Assessment of performance: