



ATOMIC ENERGY OF CANADA LIMITED

First Quarter Financial Report

Financial Statements (Unaudited)

**As at and for the three months ended
June 30, 2023**

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MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER



Since this past March, AECL has realized some important achievements, particularly with respect to a new suite of partnerships. We are particularly proud of the tripartite Long-Term Relationship Agreement between AECL, the Algonquins of Pikwakanagan First Nation (AOPFN), and CNL; the agreement was formally concluded in early June. This agreement represents many months of collaborative work and partnership; it will address environmental protection, radioactive waste management, cultural protection and promotion, and the pursuit of collaborative economic and business opportunities.

The agreement will establish a working group to serve as the basis for ongoing collaborations and create a Neya Wabun Guardian Program that will establish a regular AOPFN monitoring presence at designated AECL sites, among other environmental, cultural and economic protection and promotion activities and programs. We look forward to working with our partners to live up to our commitments under the Long-Term Relationship Agreement, and to building on this success by concluding agreements with other Indigenous communities.

This quarter we also unveiled the future site of the Micro-Modular™ Reactor project, led by Global First Power, to be located at our Chalk River Laboratories. Global First Power is proposing to construct and operate a 15-megawatt thermal (MWth) (approximately 5 MW electrical) Micro-Modular™ Reactor plant at the Chalk River campus that would serve as a model for future small modular reactor deployments to support remote and industrial applications.

AECL, CNL and McMaster University launched an Undergraduate Nuclear Research Experience Program, which is part of an eight-week program, where students will be paired with a CNL employee for mentorship opportunities and for guidance on their research projects. Research projects will focus on health, safety and security, energy and the environment, including but not limited to research in small modular reactors, hydrogen, materials characterization, medical isotopes and radiochemistry. We are looking forward to seeing what these students will accomplish in the future!

We formed another collaborative relationship with the University of New Brunswick (UNB). AECL, CNL and the university signed a Memorandum of Understanding to pursue collaborative research projects. That relationship includes the delivery of research conducted in partnership with UNB's Centre for Nuclear Energy Research.

Overall, this has been a busy quarter with some monumental partnerships. I look forward to AECL continuing on its trajectory to drive nuclear innovation forward for Canada.

A handwritten signature in blue ink that reads "F. Dermarkar .". The signature is fluid and cursive.

Fred Dermarkar

President and Chief Executive Officer

MANAGEMENT'S NARRATIVE DISCUSSION

Introduction

Management's Narrative Discussion is intended to provide the reader with a greater understanding of AECL's business, its business strategy and performance, its expectations for the future, and its management of risk and capital resources. It is also intended to enhance the understanding of the unaudited financial statements for the first quarter of 2023-24 and accompanying notes. Management's Narrative Discussion should therefore be read in conjunction with the unaudited financial statements.

Unless otherwise indicated, all financial information presented in Management's Narrative Discussion, including tabular amounts, is in Canadian dollars and is prepared in accordance with Canadian Public Sector Accounting Standards (PSAS).

Management's Narrative Discussion was authorized for issuance by the Board of Directors on August 23, 2023.

Our Business

As a federal Crown corporation, Atomic Energy of Canada Limited (AECL) is working to advance Canada's interests through leading edge nuclear science and technology initiatives and protection of the environment. This includes combating climate change through clean energy growth and decarbonization strategies, advancing the battle against cancer and other diseases by pioneering new treatment methods, and accelerating Canada's environmental remediation responsibilities related to past nuclear science activities. AECL receives funding from the Government of Canada to enable nuclear science and technology and manage the Government of Canada's radioactive waste liabilities. Since 2015, AECL has been delivering its mandate through a Government-owned, Contractor-operated (GoCo) model, whereby a private-sector organization, Canadian Nuclear Laboratories (CNL), is responsible for managing and operating AECL's sites on its behalf.

Under the GoCo model, AECL retains ownership of the sites, facilities, intellectual property, and liabilities. CNL manages AECL's sites and facilities under contract with AECL. The GoCo model allows AECL to leverage private-sector expertise and experience to accelerate the decommissioning and environmental stewardship program and deliver world-class nuclear science and technology. As an agent of government, AECL brings value to Canada by setting CNL's priorities and providing expert-based oversight of its plans and operations. AECL assesses CNL's performance to advance its objectives in the most effective and efficient manner, while maintaining the highest priority on safety, security, and protection of the environment. Furthermore, AECL supports the government's development of nuclear policy.

The three main areas of focus for activities are:

1. Nuclear Innovation (Nuclear Laboratories)

AECL is focused on leveraging the successes of its past as well as future nuclear innovation to benefit Canada and Canadians. Working with industry, AECL is enabling the development of new technologies to advance small modular reactors (SMRs), clean hydrogen and fusion all with a view to building on the success of the CANDU reactor technology and its already realized and potentially enhanced contributions to climate objectives, energy security and jobs. Advancements in nuclear medicine are being pursued in an effort to further revolutionize the diagnosis and treatment of disease. This includes supporting the research and development of new and promising nuclear health technologies, including new and emerging radiotherapies, diagnostics, and radiotheranostics such as targeted alpha therapy.

Work in these areas is enabled by the vast and unique capabilities that reside at CNL and at the Chalk River Laboratories, Canada's largest science and technology complex and host to nearly 3,000 employees. The work undertaken at the laboratories supports Canada's federal roles, responsibilities, and priorities in the areas of health, energy and climate change, the environment, safety and security. Services are also provided to industry and other third parties on a commercial basis.

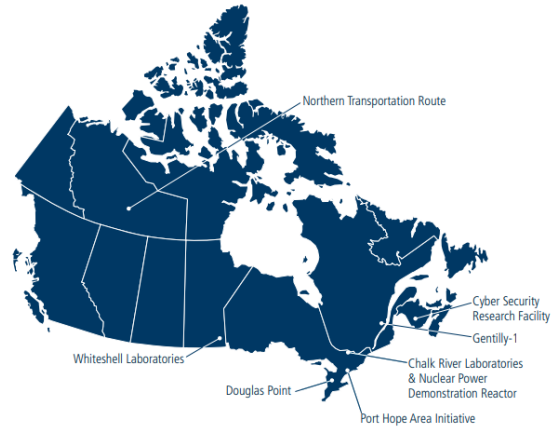
The Chalk River site is currently undergoing an important renewal that will transform the site into a modern, world-class nuclear science and technology campus, thanks to an investment of \$1.2 billion over ten years by the federal government, beginning in 2016.

Through the work and capabilities of the Chalk River Laboratories, AECL and CNL can act as a conduit between the Government of Canada and private industry by identifying and facilitating opportunities for coordination between the public and private sectors to build support for initiatives that serve federal priorities, commitments, and goals.

2. Environmental Stewardship

The objective is to address safely and responsibly the environmental responsibilities and liabilities which have resulted from legacy activities at AECL sites. These legacy liabilities are the result of decades of significant contributions and advancements in nuclear science which have benefitted Canadians and the world, including the development of the CANDU technology and the production of medical isotopes which are used in the diagnostic and treatment of cancer and other diseases. AECL is now focused on the decontamination and decommissioning of redundant structures and buildings, the remediation of contaminated lands, and the management and disposal of radioactive waste at AECL sites, primarily at the Chalk River Laboratories and the Whiteshell Laboratories in Manitoba.

AECL is also responsible for the remediation and long-term management of sites contaminated with historic, low-level radioactive waste where the Government of Canada has accepted responsibility, most notably as part of the Port Hope Area Initiative. Responsible decommissioning and radioactive waste management is necessary to clean up AECL's sites, protect the environment, and make way for new buildings that will support the ongoing nuclear science and technology mission at the Chalk River site.



3. Leveraging CANDU Nuclear Technology

AECL is committed to working with the federal government, provincial governments and the Canadian nuclear sector to identify and assess opportunities for “large nuclear” technologies in Canada and internationally. This will include efforts to facilitate enhanced CANDU designs to optimize Canada’s CANDU technology for today’s and tomorrow’s energy needs, provide energy security for Canadians and secure potential revenue opportunities for Canada as well as Canada’s CANDU supply chain. The protection and promotion of CANDU technology is in addition to AECL’s GoCo mandate and is not executed through the GoCo model.

During the reporting period, a shift continued in the national dialogue on new nuclear in Canada. An evolution from a focus on small modular reactors to a discussion which includes large nuclear reactors continues. In this period, this evolution was further advanced by the Province of Ontario announcements that further recognize that large nuclear reactors will be required to meet net zero targets and its intentions for large nuclear projects in Ontario. This presents significant opportunities for AECL as well as Canada’s CANDU technology.

First Quarter Highlights for 2023-24

Nuclear Laboratories

AECL has been leading nuclear science and technology for over seven decades. The organization was the birthplace of Canada's nuclear industry, having hosted the first sustained criticality (controlled nuclear chain reaction) outside of the United States. More importantly, the Chalk River Laboratories were the birthplace of the CANDU reactor technology, a technology that today is used at 19 reactors in Canada, providing 15% of Canada's electricity, and 30 (CANDU or CANDU-derivatives) internationally. It also provided the research and facilities for breakthroughs in the life saving application of medical isotopes, including cobalt-60. Work undertaken at the Chalk River Laboratories has led to numerous and important scientific achievements – including two Nobel Prize winners.

Over the years, AECL has played an important role in supporting public policy and in delivering programs for the Government of Canada. This includes the production of medical isotopes and the provision of nuclear science and technology in the areas of energy, non-proliferation, emergency preparedness, counterterrorism, health, and security. AECL's unique facilities have made it an attractive research destination for scientists across Canada and the world, leading to home-grown innovation and the development and retention of highly qualified nuclear workers and scientists.

The restructuring of AECL and the implementation of the GoCo model have brought new opportunities for building on this important scientific legacy. AECL's mandate has been clearly defined by Government to leverage the capabilities at the Chalk River Laboratories to support the federal government's needs and responsibilities in the area of nuclear science and technology (through the Federal Nuclear Science and Technology Work Plan and work for federal departments and agencies as a federal lab), as well as to provide services to third-parties on a commercial basis. This has been further enabled by an investment of \$1.2 billion over 10 years starting in 2016 for new and renewed science and site support infrastructure at the Chalk River Laboratories, with the objective of building a world-class, state-of-the-art nuclear science and technology campus.

Through the GoCo model, AECL's objective is to leverage the vast experience and expertise at the Chalk River Laboratories to contribute to the Government's science, innovation and clean energy objectives. Nuclear science and technology activities at the Chalk River Laboratories support AECL's Federal Nuclear Science and Technology Work Plan, which helps the Government of Canada deliver on its responsibilities in the areas of health, nuclear safety and security, energy and the environment.

To further grow the science expertise and capabilities at Chalk River, AECL has asked CNL to provide technical services and research and development products for third parties on a commercial basis.

CNL will focus on nine strategic initiatives to support the government and help commercial clients to tap into new and expanded markets:

- **Long-term reliability of existing reactors:** CNL will support the CANDU fleet of reactors domestically and internationally through work on life-extension and long-term reliability,

and support other reactor designs, advanced nuclear materials, fuels research and nuclear chemistry applications.

- **Advanced fuel fabrication:** CNL will develop advanced nuclear fuel concepts to support long-term reactor reliability and the development of advanced reactors. Advanced fuels offer higher performance, improved failure tolerance, increased safety, proliferation resistance and accident tolerance, and are recycled or recyclable.
- **Small modular reactors:** CNL's goal is to demonstrate the commercial viability of small modular reactors by 2030, thereby positioning Canada to take a leadership role in this emerging nuclear technology. The objective is for Canada and CNL to leverage their expertise and facilities to position small modular reactors to provide low-carbon, reliable, load-following, scalable and cost-effective energy options to smaller and remote communities, mining and oil sands applications, and to fill other energy gaps and needs that often have a unique Canadian interest.
- **Hydrogen and the transportation sector:** CNL aims to leverage AECL's recent capital investments in modern hydrogen laboratories to support hydrogen safety, and heavy water and tritium management in CANDU reactors. As hydrogen technologies have matured, costs have dropped to the point that hydrogen solutions are financially competitive with similar energy conversion technologies. Hydrogen technology offers low-carbon options for the energy and transportation sectors, which supports Canada's international commitments for carbon reduction.
- **Targeted alpha therapy research for cancer treatment:** Targeted alpha therapy is a new area of research in the battle against cancer and other diseases. This therapy focuses tightly on cancer cells with a precision that spares their healthy neighbours.
- **Nuclear cybersecurity:** Cybersecurity of industrial control systems is a growing concern in all industries. In the nuclear industry, it represents a multibillion-dollar worldwide market. A large commercial industry caters to the cybersecurity of information technology systems. However, most solution providers are focused on conventional hacking and data theft. CNL has established a nuclear cybersecurity test facility in Fredericton, New Brunswick, and is working to develop, commercialize and deploy a nuclear industrial-control cyber-intrusion detection and mitigation system.
- **Nuclear forensics, detection, and response:** The need for science and technology activities in nuclear security continues to grow in Canada, as evidenced by the government's renewed commitments to nuclear threat reduction domestically and abroad. There is a growing demand from government departments and agencies for expertise to inform their response to emergent national and international issues concerning nuclear safeguards, safety, and security. CNL is working to establish a facility for government agencies and commercial partners to develop, test, calibrate and validate nuclear forensics technologies and materials. Furthermore, CNL is supporting work to safeguard and secure nuclear material and improve Canada's border security.
- **Science and technology for advanced environmental sustainability:** CNL works to expand the understanding of the behaviour of contaminant radionuclides, and further develop safe and economical nuclear waste management technologies. The environmental technology capability will continue to support the government in monitoring for the presence and spread of low levels of contamination. CNL is also growing its commercial work in this area.

- **Fusion:** As the demand for clean electricity processes has reached critical status, fusion can help transform the world's energy supply and help meet the energy demands in the path to net-zero emissions. Canada has a unique opportunity to leverage existing technologies from the vast experience with CANDU in deuterium and tritium management to accelerate the development of this technology domestically and abroad. The first phase will be the CNL-led Fusion Innovation Hub which will provide an area to test and solve challenges with fusion and the deuterium-tritium cycle and position Canada as a leader in the fusion sector. The second phase will be for CNL and its partner(s) to construct a deuterium-tritium fusion cycle system at the Laboratories at Chalk River, generating commercial revenues, intellectual property, new jobs, and a highly qualified talent pool.

As part of its long-term vision for the Chalk River Laboratories, CNL will build and leverage strong connections and advance relationships with academia, science-based departments and laboratories in Canadian government, other national laboratories, and others in the science and technology ecosystem, leading to demonstrable project examples and pursuing opportunities to collaborate and build on the unique science and technology facilities and/or long-term financial stability that is consistent with the Science & Technology Partnering Strategy.

During the first quarter, AECL and CNL pursued activities in this respect, presented below.

AECL and CNL signed a Memorandum of Understanding (MOU) with another Canadian university, with a view to strengthening research collaboration and enable the development of a talent pipeline in the nuclear sector. During the quarter, a Memorandum of Understanding was signed with the University of New Brunswick (UNB). This new MOU is designed to nurture even closer relations with UNB's research community, enable knowledge mobilization, spur innovation and the development of intellectual property, and to provide solutions that address national and industry challenges.

Under the auspices of the MOU between AECL and the National Nuclear Security Administration (NNSA) and work funded in part by AECL's Federal Nuclear Science and Technology Work Plan, CNL and Sandia National Labs organized an exercise that enabled the participating organizations to test their cyber and physical security defense systems and response capabilities in a simulated cyber and physical attack. NNSA and AECL have also agreed to co-host a side-event at the upcoming IAEA General Conference in September 2023 which will showcase our strengthened cooperation arrangements and look forward to enhanced work together on ensuring that international safeguards are taken into consideration in new small modular reactor designs. Canada, and Chalk River Laboratories, in particular, has exceptional history in ensuring 'safeguardability' of CANDU power reactors.

The site of Global First Power's Micro-Modular™ Reactor (MMR®) project was unveiled at the Chalk River Laboratories this quarter as well. The site of the proposed MMR demonstration reactor is currently a staff parking lot that will be repurposed to accommodate the new facility. By selecting this location, Global First Power will have good access to campus utilities and to CNL's many technical and operational support services.

As part of a competitive procurement process to renew the contract to manage Canadian Nuclear Laboratories beyond the current contract which expires in 2025, a Request for Pre-Qualification was

launched in the spring. In the coming months, AECL will also be engaging with local communities and Indigenous communities and Nations to gather input that could help inform contractual requirements.

Environmental Stewardship

AECL has been conducting nuclear science and technology activities for decades. While these activities have had important benefits for Canada and Canadians – for example the production of medical isotopes used in the detection and treatment of cancer – they also produced radioactive waste. AECL has various types of radioactive waste at its sites, including high-level waste (used fuel), intermediate-level waste and low-level waste. Several sites and/or buildings have also been contaminated as a result of nuclear science and technology activities and past waste management practices; these now need to be decontaminated and demolished, sites cleaned up and remediated, and the radioactive waste managed safely.

AECL is also responsible for fulfilling Canada’s responsibilities with respect to historic low-level waste at sites where the original owner no longer exists, or another party cannot be held liable and for which the Government has accepted responsibility. This includes the cleanup and safe long-term management of historic, low-level radioactive waste in the municipalities of Port Hope and Clarington, in Ontario pursuant to an agreement between Canada and the municipalities. This project is one of the largest and most complex environmental projects in Canada.

AECL’s objective is to protect the environment by advancing key decommissioning, remediation and waste management projects in order to address risks and hazards. With the implementation of the GoCo model, AECL was given a mandate to accelerate these activities to reduce risks and costs for Canada in a safe manner, consistent with international leading practices. Specifically, AECL has asked CNL to propose long-term radioactive waste disposal solutions and to advance other decommissioning activities to reduce its environmental liabilities.

Work has steadily progressed at the Chalk River Laboratories, with 116 buildings decommissioned since 2015. The contaminated materials, demolition debris, and contaminated soil require disposal in a way that protects the environment. CNL has proposed to build a Near Surface Disposal Facility (NSDF) at the Chalk River site. This purpose-built, engineered facility will enable the responsible and safe disposal of AECL’s low-level radioactive waste. This includes contaminated items like gloves, protective shoe covers, clothing, rags, mops, equipment, tools, contaminated building material, debris, and soil. Using an internationally accepted and proven method of disposing of low-level radioactive waste, the NSDF would receive waste stored on site and waste created through ongoing remediation and decommissioning activities at all AECL sites. Progress in environmental stewardship for the first quarter of 2023-24 is presented below.

In Manitoba, CNL continued its work to decommission the Whiteshell Laboratories (WL) site, a former nuclear research laboratory. Specialty waste retrieval equipment is assembled at a manufacturing facility in Ontario in preparation for system testing before it is transferred to Manitoba. At the WL site focus has been on preparing the site grounds and roadways for the arrival of the waste retrieval equipment, preparing decommissioning documentation, and commissioning temporary office trailers for use as buildings are decommissioned. A revised draft Environmental Impact Statement for the

proposed in situ decommissioning of Whiteshell Reactor-1 (WR-1) was submitted to the regulator, addressing information requests from federal and provincial reviewers.

Critically this quarter, the Whiteshell Laboratories experienced a safety shutdown. The shutdown was ordered after CNL identified gaps in the training qualifications of some Whiteshell fire response staff. To ensure ongoing, safe occupancy of the site with the required fire protection, CNL immediately paused all work at the WL site, except activities required to maintain the site in a safe state. AECL continues to play a key oversight role in ensuring that the causes for the lapses that led to the safety shutdown are understood, that measures are taken to address all issues, and that the public and regulators are informed.

On May 30th, AECL and CNL jointly held a regional community meeting on the future land use at the WL site. Members from 14 different communities came together to discuss what they would like to see at the site when it is fully decommissioned and learn about the regulatory standards that are proposed as part of the restoration project. CNL and AECL will continue to gather input from communities to inform the decision making in the future.

At the Chalk River site, CNL continues to maintain its schedule and make excellent progress in decommissioning four of the highest-risk buildings -- Building 250 and the Building 200 series. This work continues to be the most complex decommissioning activities performed at the site. Through its decommissioning work, CNL is making way for the rejuvenation of the Chalk River Laboratories and enabling AECL to achieve its vision of leading Canadian nuclear innovation.

The proposed NSDF entered a phase of deepened engagement with two First Nations under a procedural direction issued by the CNSC in 2022 July. The review period saw the formal conclusion of the long-term relationship agreement, previously approved by the Board, with the Algonquins of Pikwakanagan, marking the first time a right-bearing First Nation has granted 'free, prior and informed consent' for a permanent nuclear waste disposal project in Canada. It afforded AECL and CNL time to advance dialogue with the Kebaowek First Nation and the Kitigan Zibi Anishinabeg First Nation. At the conclusion of the review, which was extended to May 1, 2023, AECL and CNL submitted additional information to the CNSC to support its consideration of issues such as the duty to consult, the environmental assessment, and the Chalk River licence amendment application. Similar submissions are expected from the First Nations and CNSC staff. The AECL summary submission was submitted on June 6, 2023 and the Indigenous final oral hearing was held on August 10, 2023.

The Port Hope Area Initiative continued to advance the cleanup of historic low-level radioactive waste in Port Hope, advancing toward AECL's objective of assuring safe long-term waste management contained in an engineered mound. Following a public hearing, the Canadian Nuclear Safety Commission, Canada's independent nuclear regulator, issued a decision to renew the licence for the Port Hope Project, as part of Port Hope Area Initiative activities, for ten years. The new, single licence consolidates four previous licences for activities related to the Port Hope Area Initiative, authorizing CNL to continue the safe cleanup and management of historic low-level radioactive waste in Port Hope, and the ongoing monitoring and maintenance of the Port Granby Long-Term Waste Management Facility.

Forward-Looking Statements

This Management's Narrative Discussion has been reviewed by AECL's Audit Committee and approved by AECL's Board of Directors. It provides comments on the performance of AECL for the three months ended June 30, 2023, and should be read in conjunction with the unaudited financial statements and accompanying notes.

The Management's Narrative Discussion contains forward-looking statements with respect to AECL based on assumptions that Management considers reasonable at the time of preparation. These forward-looking statements, by their nature, necessarily involve risks and uncertainties that could cause future results to differ materially from current expectations. We caution the reader that the assumptions regarding future events, many of which are difficult to predict, may ultimately require revision.

Management of Risks and Uncertainties

AECL carefully anticipates and manages risks using sound practices. AECL's risk-management approach encompasses risks both to itself and to CNL's management and operation of AECL sites and facilities. Through ongoing communication between AECL and CNL, plans and activities are monitored to mitigate risks as necessary.

This section highlights some of the risks to AECL and their potential to affect its financial results.

Human Resources: AECL is a small organization that relies on a small complement of highly trained and experienced personnel, several of whom bring both contractor and government experience in managing similar GoCo arrangements. AECL's goal is to maintain the necessary expertise and capabilities to oversee the GoCo contract and achieve value for money for Canada. AECL's small size presents an ongoing challenge to adapt to fluctuating resourcing requirements across the organization and backfill those on short-term leave where appropriate. AECL uses third-party service contracts to ensure that it is staffed effectively and that its people receive cross-training when opportunities arise. A succession plan is in place and is reviewed regularly. AECL regularly reviews its total compensation package to remain competitive amongst similar employers nationally and internationally.

Contractor Performance: As AECL relies on a private-sector contractor to execute scope related to its mandate, it faces an inherent risk that the contractor may fail to perform. To mitigate this risk, AECL carefully structured its contract with CNL to include incentives to deliver on its priorities and enable performance. AECL sets annual priorities and achievable stretch targets and, throughout the year, evaluates CNL's and its parent companies' performance to highlight strengths and weaknesses, and to afford the opportunity to correct where needed.

Costs to Operate Chalk River Laboratories: The 2018 shutdown of the National Research Universal reactor resulted in lost revenue, including isotope sales, and diminishing funding for the National Research Universal reactor. This created pressures in funding corporate support and site-operating

costs. These must be borne by the remaining programs. CNL continues to look to reduce indirect costs to address the pressures, and to examine all long-term options to enable a sustainable organization that protects the environment, health, and safety.

Major Waste Disposal Projects: AECL's mandate includes environmental stewardship and remediation of sites for the benefit of future generations. Three important projects designed to reduce environmental risks and improve environmental protection are proceeding through environmental assessments:

- Construction of the Near Surface Disposal Facility at the Chalk River Laboratories.
- In situ decommissioning of the WR-1 research reactor at the Whiteshell Laboratories site; and,
- In situ decommissioning of the Nuclear Power Demonstration facility in Rolphton, Ontario.

The regulatory environment, as well as engagement of the public and Indigenous communities, are key to the projects' success. With project schedules being extended, this has allowed CNL adequate time to consider stakeholders' comments and concerns, and to accommodate requests from the regulator for additional technical studies. These schedule changes have held back plans for large-scale cleanup and remediation activities at the Chalk River Laboratories, but they have also allowed for more public and Indigenous engagement, and for the development of additional safety studies.

Indigenous Engagement and Consultation: AECL faces increasing needs to support capacity development, to conduct traditional knowledge studies, and to participate in regulatory processes and environmental monitoring. CNL also continues its outreach activities across all sites. AECL is engaged with Indigenous communities in building meaningful and mutually beneficial relationships, recognizing that these take time, and that its success depends on the strength of these relationships. AECL and CNL work closely together to increase participation, collaboration and mutual benefit with Indigenous communities. AECL is reinforcing its Indigenous engagement program and oversight activities.

Public Relations: AECL depends on the support of key stakeholders, including government and the public. It looks for relationship-building opportunities, and innovative and effective means to reach its audiences. Working with CNL, AECL uses clear messaging and a variety of communications tools to reach key audiences more effectively.

Cybersecurity: AECL takes a two-fold approach to cybersecurity risk: cybersecurity within its own organization and CNL's cybersecurity efforts to protect AECL's information assets. AECL and CNL work continuously to improve cybersecurity capabilities, with a focus on training and adaptation.

Financial Review

(\$ millions)	Three Months Ended	
	June 30	
	2023	2022
Revenues		
Parliamentary appropriations	\$ 251	\$ 186
Commercial revenue	25	36
Interest income	7	2
Other proceeds	-	7
	283	231
Expenses		
Cost of sales	18	22
Operating expenses	19	17
Contractual expenses	56	62
Decommissioning, waste management and contaminated sites expenses	15	(1,082)
	108	(981)
Surplus for the period	\$ 175	\$ 1,212

Parliamentary Appropriations

The Government of Canada provides funding quarterly for AECL to advance its priorities and deliver on its mandate. AECL recognized \$251 million of Parliamentary appropriations in the first quarter of 2023-24, compared to \$186 million in the same period in 2022-23. The quarterly variance is due largely to an increase in funding required to execute decommissioning, remediation, and waste management activities, as well as increased spending toward Chalk River infrastructure, as planned.

Commercial Revenue

In the first quarter of 2023-24, \$25 million in revenue was recognized, compared to \$36 million for the same period in 2022-23. Revenue included research and development activities performed by CNL for commercial customers, as well as heavy water sales. The quarterly decrease in commercial revenue is a result of decreased heavy water sales.

Interest Income

Interest income is earned on cash, short-term investments from appropriations and investments held in trust. Interest income earned has increased compared to the prior periods due to higher market interest rates.

Other Proceeds

Other proceeds relate to a commercial settlement recorded during the prior year.

Cost of Sales

Cost of sales is lower due to decreased sales of heavy water but is higher as a percentage of commercial revenue due to decreased higher margin heavy water sales.

Operating Expenses

Operating expenses are largely comprised of AECL's oversight expenses and amortization of tangible capital assets. Operating expenses in the first quarter of \$19 million are comparable to that of the same period in 2022-23.

Contractual Expenses

AECL delivers its mandate through a long-term contract with CNL for the management and operation of its sites. CNL expenditures (excluding costs charged to the Decommissioning and waste management provision and Contaminated sites liability, Construction in progress and Cost of sales) are reported by AECL as Contractual expenses. Expenses in this category for the first quarter of \$56 million are comparable to that of the first quarter of 2022-23.

Decommissioning, Waste Management and Contaminated Sites Expenses

Decommissioning, waste management and contaminated sites expenses consist of financial expenses, the impact on the liability of a change in discount rate, and the revaluation (gain) loss, if any, on these reported liabilities. Financial expenses reflect the increase in the net present value (accretion of discount) of these reported liabilities. Changes in discount rate will impact the net present value of the reported liabilities. If the discount rate increases during the year, the result would be a decrease in the Decommissioning, waste management and contaminated sites expenses. If the discount rate decreases, the result would be an increase to the reported expenses. For a sensitivity of a 1% change in the discount rate, refer to the annual audited financial statements dated March 31, 2023. Revaluation gains and losses represent changes to the estimates for the reported obligations.

Decommissioning, waste management and contaminated sites expenses in the first quarter of 2023-24 of \$15 million are significantly higher than the same period in 2022-23 due to the significant increase in discount rate recorded in the prior year, as a result of the adoption of the new PSAS ARO standard and the requirement to revalue the liability at every reporting date using a current rate. The prior period rate increased by 0.76%, versus a 0.02% increase in the current period.

Surplus (Deficit) for the Period

Consistent with AECL's financial reporting framework, appropriations are recognized as revenue when received in a given period, or as deferred funding to the extent they relate to the months following the period end, and may be greater or less than the reported expenditures for the same period. For instance, amounts received to fund decommissioning, waste management and contaminated sites expenditures are recorded as Parliamentary appropriations revenue in the current period while the related expenditures are drawn down from the associated liabilities previously recorded on the Statement of Financial Position. With respect to tangible capital assets, Parliamentary appropriations revenue includes amounts received in the period to fund the purchase and construction of these assets while the related expenditures are capitalized; therefore, the reported operating expenses include only the amortization of existing tangible capital assets.

Outlook

AECL's planned activities are set out in its Corporate Plan. The 2023-24 year-to-date expenditures are generally comparable to the planned results. As such, AECL is on track to meet its commitments within budget. Priorities and deliverables have not materially changed in the first three months of 2023-24.

Cash Flow and Working Capital

(\$ millions)	Three Months Ended	
	2023	June 30 2022
Cash provided by (applied to) operating transactions	\$ 111	\$ (36)
Cash applied to capital transactions	(54)	(35)
Cash applied to investing transactions	(51)	-
Increase (decrease) in cash	6	(71)
Balance at beginning of the period	145	262
Balance at end of the period	\$ 151	\$ 191

Operating Transactions

Operating transactions generated a net cash inflow of \$111 million in the first quarter of 2023-24, compared to an outflow of \$36 million during the same period of the previous year. The variance is a result of higher appropriations received in the first quarter of 2023-24 as well as amounts receivable from a previous period. Refer to Note 9 of the unaudited financial statements for a reporting on how appropriations received were used during the period.

Capital Transactions

Capital transactions used cash in the first quarter of 2023-24 of \$54 million compared to \$35 million in the same period in the previous year. The variance is a result of increased spending in the current year toward new Chalk River site infrastructure.

Investing Transactions

The \$51 million cash used in investing transactions in the first quarter of 2023-24 was an increase over the same period in the prior year primarily due to increased investment in short-term investments during the period.

Highlights of the Statement of Financial Position

<i>(\$ millions)</i>	June 30 2023	March 31 2023	Variance In \$	Variance By %
Financial Assets	\$ 505	\$ 607	\$ (102)	-17%
Liabilities	10,097	10,346	(249)	-2%
Non-Financial Assets	1,003	975	28	3%
Accumulated Deficit	(8,589)	(8,764)	175	-2%

AECL closed the first quarter of 2023-24 with Financial Assets of \$505 million, which represents a \$102 million decrease from March 31, 2023. This variance is mainly the result of a decrease in cash and appropriations receivable that funded first quarter activities.

The decrease in Liabilities of \$249 million can be attributed primarily to a \$204 million decrease in Decommissioning, waste management and contaminated sites liabilities due to increases in the discount rate used to calculate the net present value of the reported liabilities.

Use of Parliamentary Appropriations

AECL receives its funding primarily through Parliamentary appropriations. The appropriations are drawn down based on quarterly cash flow projections and may not necessarily match the timing of expenses reported in the Statement of Operations. AECL records Parliamentary appropriations received in the period as revenue in the Statement of Operations or as Deferred funding in the Statement of Financial Position to the extent they relate to the months following the period end. Refer to Note 9 of the unaudited financial statements for a reporting on how appropriations received were used during the period.

MANAGEMENT'S RESPONSIBILITY

Management is responsible for the preparation and fair presentation of these quarterly financial statements in accordance with the Treasury Board of Canada's Directive on Accounting Standards: GC 5200 Crown Corporations Quarterly Financial Reports, and for such internal controls as Management determines are necessary to enable the preparation of quarterly financial statements that are free from material misstatement. Management is also responsible for ensuring all other information in this quarterly financial report is consistent, where appropriate, with the quarterly financial statements.

Based on our knowledge, these unaudited quarterly financial statements present fairly, in all material respects, the financial position, results of operations and cash flows of the Corporation, as at the date of and for the periods presented in the quarterly financial statements.



Fred Dermarkar

President and Chief Executive Officer

August 23, 2023

Chalk River, Canada



Thomas Assimes

Chief Financial Officer

August 23, 2023

Chalk River, Canada

UNAUDITED FINANCIAL STATEMENTS

Statement of Financial Position

As at

<i>(thousands of Canadian dollars)</i>	Notes	June 30 2023	March 31 2023
Financial Assets			
Cash		\$ 151,323	\$ 145,522
Short-term investments		143,080	92,428
Long-term disposal of waste fund		33,294	32,734
Investments held in trust		74,125	74,259
Trade and other receivables	3	46,749	40,892
Appropriations receivable		-	160,500
Inventories held for resale		56,418	60,746
		504,989	607,081
Liabilities			
Accounts payable and accrued liabilities	4	12,132	27,394
Employee future benefits	5	12,593	12,880
Due to Canadian Nuclear Laboratories		218,690	247,978
Decommissioning and waste management provision	6	8,627,142	8,723,480
Contaminated sites liability	7	1,226,330	1,333,856
		10,096,887	10,345,588
Net Debt		(9,591,898)	(9,738,507)
Non-Financial Assets			
Tangible capital assets	8	1,001,187	973,537
Prepaid expenses		1,457	1,045
		1,002,644	974,582
Accumulated Deficit		(8,589,254)	(8,763,925)
Accumulated deficit is comprised of:			
Accumulated operating deficit		(8,586,127)	(8,761,229)
Accumulated remeasurement losses		(3,127)	(2,696)
		\$ (8,589,254)	\$ (8,763,925)

The accompanying notes are an integral part of these financial statements.

Statement of Operations

<i>(thousands of Canadian dollars)</i>	Notes	Three Months Ended		
		2024 Budget	2023	June 30 2022
Revenues				
Parliamentary appropriations	9	\$ 1,541,550	\$ 250,700	\$ 186,000
Commercial revenue		115,000	25,073	35,912
Interest income		4,000	6,771	1,846
Other proceeds		-	-	7,000
		1,660,550	282,544	230,758
Expenses				
Cost of sales		80,500	17,689	22,526
Operating expenses		65,177	18,893	16,570
Contractual expenses	10	216,024	55,469	62,110
Decommissioning, waste management and contaminated sites expenses		290,651	15,391	(1,082,475)
		652,352	107,442	(981,269)
Surplus for the period		1,008,198	175,102	1,212,027
Accumulated operating deficit, beginning of period		(8,761,229)	(8,761,229)	(9,622,850)
Accumulated operating deficit, end of period		\$ (7,753,031)	\$ (8,586,127)	\$ (8,410,823)

The accompanying notes are an integral part of these financial statements.

Statement of Remeasurement Gains and Losses

	Three Months Ended	
	June 30	
<i>(thousands of Canadian dollars)</i>	2023	2022
Accumulated remeasurement losses, beginning of period	\$ (2,696)	\$ (2,515)
Remeasurement losses arising during the period		
Unrealized losses on Investments held in trust	(882)	(2,865)
Reclassifications to the Statement of Operations		
Realized losses on Investments held in trust	451	5
Net remeasurement losses for the period	(431)	(2,860)
Accumulated remeasurement losses, end of period	\$ (3,127)	\$ (5,375)

The accompanying notes are an integral part of these financial statements.

Statement of Change in Net Debt

<i>(thousands of Canadian dollars)</i>	Notes	Three Months Ended		
		2024 Budget	2023	June 30 2022
Surplus for the period		\$ 1,008,198	\$ 175,102	\$ 1,212,027
Tangible capital assets				
Acquisition of tangible capital assets	8	(171,000)	(39,653)	(25,730)
Amortization of tangible capital assets	8	43,947	12,003	11,330
Other changes	8	-	-	38
		(127,053)	(27,650)	(14,362)
Non-financial assets				
Changes in prepaid expenses		-	(412)	(312)
Net remeasurement losses for the period		-	(431)	(2,860)
Decrease in net debt		881,145	146,609	1,194,493
Net debt, beginning of period		(9,738,507)	(9,738,507)	(10,482,291)
Net debt, end of period		\$ (8,857,362)	\$ (9,591,898)	\$ (9,287,798)

The accompanying notes are an integral part of these financial statements.

Statement of Cash Flows

	Three Months Ended	
	June 30	
<i>(thousands of Canadian dollars)</i>	2023	2022
Operating transactions		
Cash receipts from Parliamentary appropriations	\$ 411,200	\$ 186,000
Cash receipts from customers and other sources	18,872	59,141
Cash paid to suppliers	(100,425)	(121,709)
Cash paid to employees	(4,996)	(4,574)
Cash paid for decommissioning, waste management and contaminated sites activities	(219,255)	(155,711)
Cash designated for future waste management and disposal activities	(180)	(548)
Interest received	5,530	1,091
Cash provided by (applied to) operating transactions	110,745	(36,310)
Capital transactions		
Acquisition of tangible capital assets	(54,292)	(34,784)
Cash applied to capital transactions	(54,292)	(34,784)
Investing transactions		
Cash invested in short-term investments	(50,652)	-
Cash applied to investing transactions	(50,652)	-
Increase (decrease) in cash	5,801	(71,094)
Cash, beginning of period	145,522	262,095
Cash, end of period	\$ 151,323	\$ 191,001

The accompanying notes are an integral part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

For the three months ended June 30, 2023

(Expressed in thousands of Canadian dollars)

(Unaudited)

1. General Information

Atomic Energy of Canada Limited (AECL) is a federal Crown corporation whose mandate is to enable nuclear science and technology and protect the environment by managing the Government of Canada's radioactive waste and decommissioning activities. Since 2015, AECL has been delivering its mandate through a Government-owned, Contractor-operated model, whereby Canadian Nuclear Laboratories (CNL), a private-sector organization, operates and manages AECL's sites on its behalf pursuant to a contractual arrangement.

AECL was incorporated in 1952 under the provisions of the *Canada Corporations Act* (and continued in 1977 under the provisions of the *Canada Business Corporations Act*), pursuant to the authority and powers of the Minister of Natural Resources under the *Nuclear Energy Act*.

AECL is a Schedule III Part I Crown corporation under the *Financial Administration Act* and an agent of His Majesty in Right of Canada. As a result, AECL's liabilities are ultimately liabilities of His Majesty in Right of Canada. AECL receives funding from the Government of Canada and is exempt from income taxes in Canada.

AECL has submitted its 2023-2024 to 2027-2028 Corporate Plan to the Treasury Board for approval. The Corporate Plan is aligned with the direction provided by AECL's sole shareholder, the Government of Canada, and reflects AECL's plans and priorities to be delivered under the Government-owned, Contractor-operated model.

2. Significant Accounting Policies

Basis of Accounting

These quarterly financial statements have been prepared in accordance with Canadian Public Sector Accounting Standards (PSAS) established by the Public Sector Accounting Board (PSAB) and should be read in conjunction with the annual audited financial statements dated March 31, 2023. The accounting policies used in these statements are consistent with those disclosed in the most recent annual audited financial statements dated March 31, 2023.

Both financial and non-financial assets are reported on the Statement of Financial Position. Non-financial assets are normally employed to provide future services and are charged to

expense through amortization or upon utilization. Non-financial assets are not taken into consideration when determining the net debt (or net financial assets), but rather are added to the net debt (or net financial assets) to determine the accumulated surplus (deficit).

Measurement Uncertainty

The preparation of the quarterly financial statements in accordance with PSAS requires management to make estimates and assumptions that affect the reported amounts of financial assets, liabilities and non-financial assets at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Items requiring the use of significant estimates and assumptions include those related to the fair value of financial instruments, useful life and write-down of tangible capital assets, employee future benefits, contingent liabilities and provisions including the decommissioning and waste management provision and contaminated sites liability. Estimates and assumptions are based on the best information available at the time of preparation of the quarterly financial statements and are reviewed regularly to reflect new information as it becomes available. Where actual results differ from these estimates and assumptions, the impact will be recorded in future periods when the difference becomes known.

Budget Figures

The 2023-24 budget is reflected in the Statement of Operations and the Statement of Change in Net Debt. Budget data presented in these financial statements is based upon the 2023-24 projections and estimates contained within the 2023-24 to 2027-28 Corporate Plan.

3. Trade and Other Receivables

<i>(thousands of Canadian dollars)</i>	June 30	March 31
	2023	2023
Trade receivables	\$ 14,880	\$ 14,336
Unbilled revenue	11,454	11,404
Consumption taxes receivable	20,415	15,152
	\$ 46,749	\$ 40,892

4. Accounts Payable and Accrued Liabilities

<i>(thousands of Canadian dollars)</i>	June 30	March 31
	2023	2023
Trade payables	\$ 3,928	\$ 1,488
Other payables and accrued expenses	4,056	19,820
Accrued payroll liabilities	685	2,410
Amounts due to related parties	574	443
Provisions	165	165
Customer advances and obligations	2,724	3,068
	\$ 12,132	\$ 27,394

Provisions are short-term in nature and are not discounted and include estimated costs related to lawsuits and legal claims and disputes with suppliers.

5. Employee Future Benefits

a) Pension Plan

Employees of AECL participate in the Public Service Pension Plan (PSPP). The PSPP is a contributory defined benefit plan established through legislation and sponsored by the Government of Canada. Contributions are required by both the employees and the employer to cover current service cost. The President of the Treasury Board of Canada sets the required employer contributions based on a multiple of the employees' required contribution.

Total contributions made on account of current service are as follows:

<i>(thousands of Canadian dollars)</i>	Three Months Ended	
	2023	June 30
	2023	2022
Payments by employees	\$ 297	\$ 287
Payments by employer	782	837

The Government of Canada holds a statutory obligation for the payment of benefits relating to the PSPP. Pension benefits generally accrue up to a maximum period of 35 years at an annual rate of two per cent of pensionable service, multiplied by the average of the best five consecutive years of earnings. The benefits are coordinated with Canada/Québec Pension Plan benefits and are indexed to inflation.

b) Other Employee Future Benefits

AECL provides certain voluntary termination compensation and other post-employment benefits as described in Note 2(h) of the annual audited financial statements dated March 31, 2023. The defined benefit obligation is not funded, as funding is provided when benefits are paid. Accordingly, there are no plan assets and the defined plan deficit is equal to the defined benefit obligation.

The voluntary termination compensation included in the reported Employee future benefits liability is \$4.7 million (March 31, 2023: \$4.7 million) and is payable in instances of future voluntary resignations and retirements.

6. Decommissioning and Waste Management Provision

AECL has an obligation to decommission its nuclear facilities and other assets to address its liabilities, reduce risk, and protect the environment. A portion of the liabilities relates to obligations stemming from activities undertaken prior to the creation of AECL in 1952.

	Three Months Ended June 30 2023	Year Ended March 31 2023
<i>(thousands of Canadian dollars)</i>		
Carrying amount - Beginning of period	\$ 8,723,480	\$ 9,304,857
Liabilities settled	(136,947)	(522,266)
Unwinding of discount	65,741	218,348
Effect of change in discount rate	(25,312)	(994,968)
Revision in estimate and timing of expenditures	-	715,390
Estimates affecting Property, plant and equipment and future disposal costs for waste from ongoing operations	180	2,119
Carrying amount - End of period	\$ 8,627,142	\$ 8,723,480

The undiscounted future expenditures, adjusted for inflation, for the planned activities comprising the liability are \$16,887.5 million (March 31, 2023: \$17,024.4 million).

The provision was discounted using a rate of 3.03% as at June 30, 2023. The opening balance as at March 31, 2023 was discounted using a rate of 3.01%.

7. Contaminated Sites Liability

AECL has the responsibility for the implementation of the Government of Canada's commitments with respect to the Port Hope Area Initiative and Low-level Radioactive Waste Management Office.

	Three Months Ended	Year Ended
	June 30	March 31
<i>(thousands of Canadian dollars)</i>	2023	2023
Carrying amount - Beginning of period	\$ 1,333,856	\$ 1,531,318
Liabilities settled	(82,489)	(231,217)
Unwinding of discount	9,753	33,714
Effect of change in discount rate	(34,790)	(35,348)
Revision in estimate and timing of expenditures	-	35,389
Carrying amount - End of period	\$ 1,226,330	\$ 1,333,856

The nature of the Port Hope Area Initiative is the clean-up and local, long-term, safe management of historic low-level radioactive waste in the municipalities of Port Hope and Clarington, in Ontario. This waste consists mainly of past process residues containing uranium and radium, and associated contaminated soils, the result of activities of a former federal Crown corporation and its private-sector predecessors. The implementation phase is forecasted to be complete in 2030-31, with long-term monitoring and maintenance expected to continue for 100 years after implementation.

AECL also has responsibility for the Low-level Radioactive Waste Management Office which includes all activities to address and manage historic low-level waste at sites in Canada for which the Government has assumed responsibility (excluding the Port Hope Area Initiative). Historic low-level radioactive waste is material contaminated with low levels of radioactivity resulting from the processing and shipment of uranium and radium.

The liability is discounted using net present value techniques at a rate of 3.64% at June 30, 2023. The opening balance as at March 31, 2023 was discounted using a rate of 2.92%. The estimated total undiscounted expenditures are \$1,420.4 million (March 31, 2023: \$1,502.9 million).

8. Tangible Capital Assets

(thousands of Canadian dollars)

	Construction in progress	Land and land improvements	Buildings	Reactors, Machinery and Equipment	Total
Cost at March 31, 2023	\$ 343,180	\$ 154,471	\$ 607,248	\$ 521,110	\$ 1,626,009
Additions and transfers	39,653	1	(3,248)	5,458	41,864
Disposals and transfers	(2,211)	-	-	(1,599)	(3,810)
Cost at June 30, 2023	380,622	154,472	604,000	524,969	1,664,063
Accumulated amortization at March 31, 2023	-	63,439	263,058	325,975	652,472
Increase in amortization	-	1,341	3,849	6,813	12,003
Disposals and transfers	-	-	-	(1,599)	(1,599)
Accumulated amortization at June 30, 2023	-	64,780	266,907	331,189	662,876
Net carrying amount at March 31, 2023	343,180	91,032	344,190	195,135	973,537
Net carrying amount at June 30, 2023	\$ 380,622	\$ 89,692	\$ 337,093	\$ 193,780	\$ 1,001,187

9. Parliamentary Appropriations

	Three Months Ended	
	2023	2022
<i>(thousands of Canadian dollars)</i>		
Parliamentary appropriations for operating, capital and statutory expenditures		
Amount received during the period for operating, capital and statutory expenditures	\$ 411,200	\$ 186,000
Amount receivable from a previous period	(160,500)	-
Total Parliamentary appropriations recognized	\$ 250,700	\$ 186,000

The difference between Parliamentary appropriations received and recognized relates to amounts received but related to either a previous or subsequent quarter. The appropriations approved for operating and capital expenditures for the year ending March 31, 2024 total \$1,541.6 million.

10. Contractual Arrangement

Since 2015, AECL has been delivering its mandate through a Government-owned, Contractor-operated model whereby the assets, sites and facilities continue to be owned by AECL, but are being contractually managed and operated by a private-sector company. As such, AECL makes payments to CNL and its parent company, Canadian National Energy Alliance (CNEA), as per the terms of the contractual arrangement.

The following contractual expenses were incurred:

	Three Months Ended	
	June 30	
<i>(thousands of Canadian dollars)</i>	2023	2022
Contractual amounts paid or payable	\$ 326,588	\$ 252,294
Less: Costs charged to Decommissioning and waste management provision and Contaminated sites liability	(218,680)	(154,564)
Less: Costs charged to Construction in progress	(39,653)	(25,730)
Less: Costs classified as Cost of sales	(12,786)	(9,890)
Contractual expenses	\$ 55,469	\$ 62,110

Contractual amounts paid or payable include fees paid to CNEA, in accordance with the contractual arrangement between AECL and CNEA and CNL.

11. Comparative Figures

Certain of the June 30, 2022 comparative figures have been adjusted to conform to the requirements of PS 3280 Asset retirement obligations, which was adopted effective April 1, 2022. For additional information on this adjustment, refer to Note 3 of the most recent annual audited financial statements dated March 31, 2023.



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