

ATOMIC ENERGY OF CANADA LIMITED Third Quarter Financial Report

Financial Statements (Unaudited)

As at and for the three and nine months ended December 31, 2021

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MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER



As we approach the two-year anniversary of the COVID-19 pandemic, this is a good opportunity for reflection on both what we have accomplished through the pandemic, but also how it may continue to affect us in the coming months and years. On the former, the progress we have been able to achieve despite the challenges we faced along the way are nothing short of impressive. The AECL team and the team at Canadian Nuclear Laboratories (CNL) have shown flexibility, resilience and dedication in times of great uncertainty, enabling us to deliver on important projects for the benefit of Canadians.

We have made progress in advancing environmental remediation, the

revitalization of the Chalk River site and moving science and innovation forward. The Chalk River Laboratories continue to be transformed into a world-class, nuclear science and technology campus and we are advancing on multiple research fronts with benefits in health, safety, security, and energy.

Working under AECL's Federal Nuclear Science and Technology Work Plan, CNL is making advances in hydrogen research and technologies. Hydrogen can serve as viable clean energy solution and with decades of experience and expertise in this area, CNL is conducting research in a number of areas, including the development of new hydrogen storage technologies, exploring how the heat and energy produced from nuclear reactors could be leveraged to produce hydrogen through advanced electrolysis or high temperature processes, and supporting federal decision-making and policy development related to hydrogen safety.

On the Chalk River revitalization front, construction efforts are moving forward on the non-nuclear new builds. CNL has announced that an integrated project delivery agreement has been put in place for the design and construction of the Advanced Nuclear Materials Research Centre, which will provide modern shielded facilities needed to advance several of AECL's strategic priorities, including small modular reactors, environmental remediation, support for Canada's CANDU fleet and radioisotope work.

Throughout this quarter, we also remained steadfast in our commitment to meaningful engagement with First Nations and Métis communities local to our sites to identify mutually beneficial partnerships and opportunities for collaboration. Discussions continued in earnest on relationship agreements, opportunities for collaboration and developing a shared approach to environmental monitoring. As we now face yet another wave of the COVID-19 pandemic, we continue to be faced with the need to be nimble and adaptive in how we deliver our work. The pandemic continues to challenge us in many ways, but we remain steadfast in our commitment to protect workers and the communities in which we operate, and to deliver results to Canadians. While we deliberately slowdown in some instances to respond to public health guidance, we are also forging ahead, in a safe manner, to deliver on our mandate and move important projects forward.

J. Dumarkan.

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 third quarter of 2021-22 and accompanying notes. Management's Narrative Discussion should therefore be read in conjunction with this document.

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 February 23, 2022.

Our Business

AECL is a federal Crown corporation that has a mandate to enable nuclear science and technology and to protect the environment by fulfilling the Government of Canada's radioactive waste management and decommissioning responsibilities. AECL receives funding from the Government of Canada and earns commercial revenues through the activities of CNL at the Chalk River Laboratories to deliver on its mandate. As a federal Crown corporation, AECL reports to Parliament through the Minister of Natural Resources.

AECL delivers its mandate through a long-term, contractual arrangement with CNL for the management and operation of its sites under a Government-owned, Contractor-operated model. Under this model, AECL retains ownership of the sites, facilities, intellectual property, and liabilities. CNL, a private-sector organization, manages AECL's sites and facilities under a contract with AECL.

The Government-owned, Contractor-operated model allows AECL to leverage the expertise and experience of the private sector to accelerate the decommissioning and environmental stewardship program and deliver world-class nuclear science and technology at the Chalk River Laboratories. As an agent of the Government of Canada, AECL's small expert-based organization brings value to Canada by setting priorities for CNL and providing expert-based oversight of the Government-owned, Contractor-operated arrangements with a view to achieving its mandate and priorities. AECL plays a challenge function and 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 two main areas of focus for activities are:

1. Nuclear Laboratories

The Chalk River Laboratories are Canada's largest science and technology complex and host to more than 2,800 CNL employees, including a large number of engineers, scientists and technical staff. 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 is transforming 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.

2. Environmental Stewardship

The objective is to safely and responsibly address the environmental responsibilities and liabilities which have resulted from legacy activities at AECL sites. This requires 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 remediate AECL's sites to modern standards, protect the environment, and make way for new buildings that will support the ongoing nuclear science and technology mission at the Chalk River site.

Sites under the responsibility of AECL across Canada



Third Quarter Highlights for 2021-22

Nuclear Laboratories

AECL has been leading innovation in nuclear science and technology for over six decades. 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 design of the CANDU reactor, 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.

Through the Government-owned, Contractor-operated 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 the 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, and to enable new and novel scientific initiatives, CNL also uses AECL facilities to provide technical services and research and development products on a commercial basis.

CNL has developed a long-term plan (approved by AECL) outlining its strategic approach to delivering an integrated, effective, project-based and customer-focused science and technology mission that serves the needs of the federal government as well as those of external customers. Based on an assessment of existing capabilities, the external environment and market opportunities, CNL has identified eight strategic initiatives that it will focus on over the next few years, which support the needs of the federal government and third-party customers to tap into new and expanded markets:

- Long-term reliability of existing reactors: Support for Canada's fleet of existing reactors through work on life extension and long-term reliability of the existing fleet of CANDU reactors domestically and internationally, and expansion to include support for other reactor designs, advanced nuclear materials, fuels research and nuclear chemistry applications.
- Advanced fuel fabrication: Development of advanced nuclear fuel concepts in order to support the long-term reliability of existing reactors and the development of advanced reactors. These 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, with a view to positioning Canada to take a leadership role in this emerging nuclear technology. The objective is for Canada and CNL to best leverage their expertise and facilities to position small modular reactors to provide low-carbon, reliable, load-following, scalable and cost-effective energy options to remote communities, mining and oil sand applications, and to fill other energy gaps and needs that often have unique Canadian interest.
- Decarbonizing the transportation sector: CNL aims to build on existing capabilities, and leverage recent capital investments by AECL 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. The benefit of this therapy is that the

radiation is targeted at the cancer cell, unlike existing treatments that often involve irradiation of all cells in the vicinity of a tumor, healthy and cancerous.

- Nuclear cyber security: Cyber security of industrial control systems is a growing concern in all industries, and particularly in the nuclear industry where it represents a multibillion-dollar worldwide market. While a large commercial industry caters to the cyber security of information technology systems, most solution providers are focused on conventional hacking and data theft. CNL has already commissioned a nuclear cyber security test facility located in New Brunswick, and is now 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, both domestically and abroad. There is a growing demand from government departments and agencies for nuclear science and technology 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 is working 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 also 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.

As part of its long-term vision for the Chalk River Laboratories, CNL's plans, approved by AECL, entail the revitalization of the site through the demolition of old and outdated buildings and the construction of new facilities that will transform the site into a world-class, state-of-the-art nuclear science and technology campus and enable a vibrant science and technology mission going forward.

During the third quarter, AECL and CNL pursued activities in this respect, including:

- Leveraging the Memorandum of Understanding between AECL and the US National Nuclear Security Administration, personnel from CNL and some US national laboratories (Pacific Northwest National Laboratory, Savannah River National Laboratory, Los Alamos National Laboratory, Sandia National Laboratories), as well as representatives from the National Nuclear Security Administration conducted a joint exercise to improve the future of nuclear verification work. This in-person exercise was designed to collect samples from the National Research Experimental research reactor located at the Chalk River Laboratories to enhance rapid nuclear verification deployment capabilities.
- CNL announced that it had issued a call for proposals for a new health stream within its Canadian Nuclear Research Initiative. The new health stream is designed to accelerate the development of targeted radiopharmaceuticals in Canada through collaborative research projects related to health sciences, radiobiology and medical isotope development.
- CNL signed a Memorandum of Understanding with ITM Isotope Technologies Munich SE to explore the development and industrial-scale production of Actinium-225, a rare alpha-emitting

radioisotope with important potential applications in targeted alpha-therapy, the next generation of cancer treatment.

- CNL and Korea Hydro & Nuclear Power announced that they signed a Memorandum of Understanding to cooperate on research related to spent nuclear fuel. They will engage in knowledge-sharing and other joint activities to advance storage, transportation and disposal practices for spent CANDU nuclear fuel, and to explore opportunities to collaborate on nuclear decommissioning and waste management initiatives.
- In support of the Chalk River site revitalization, construction activities on new buildings continued during the third quarter. Of particular note, several buildings are being constructed out of mass timber, demonstrating AECL's and CNL's commitment to sustainability.
 - Activities on a new office building, the Science Collaboration Centre, are progressing steadily. Scheduled for completion in the spring of 2023, the new Science Collaboration Centre will serve as the central planning and collaboration space for CNL's science and technology programs.
 - In November 2021, CNL announced that an integrated project delivery agreement was put in place for the design and construction of the Advanced Nuclear Materials Research Centre, which will provide modern shielded facilities needed to advance several of AECL's strategic priorities, including small modular reactors, environmental remediation, support for Canada's CANDU fleet and radioisotope work.
 - The site entrance building at the Chalk River Laboratories was officially inaugurated this quarter. The building was named by the Algonquins of Ontario and is now known as the Minwamon Building, which means 'clear path' in the Algonquin language.
- In November 2021, AECL, the Department of Energy of the United States of America, and the United Kingdom's Nuclear Decommissioning Authority reaffirmed their shared commitment to sustainability in the management of legacy nuclear sites. This cooperative effort, under an existing collaboration agreement, will enable the organizations to collaborate to advance their commitment to protecting the environment, as well as addressing both climate change and socio-economic outcomes in the delivery of their mandate.

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 (for more information on the various types of radioactive waste, visit nuclearsafety.gc.ca/eng/waste). Several sites and/or buildings have also been contaminated as a result of nuclear science and technology activities and past waste management practices that do not meet modern standards; these now need to be decontaminated and demolished, sites cleaned up and remediated, and the radioactive waste managed based on modern standards.

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 Government-owned, Contractor-operated 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 projects to dispose of radioactive wastes and to advance other decommissioning activities to reduce its environmental liabilities and protect the environment.

Work has steadily progressed at the Chalk River Laboratories, with 110 buildings having been fully decommissioned since 2015. This not only reduces AECL's environmental liabilities and overall site maintenance costs, but it also provides the required space for new facilities to be built as part of the site's revitalization.

The resulting contaminated materials, demolition debris, and waste from contaminated lands need to be disposed of in a manner that further protects the environment. As such, CNL has proposed to build a near surface disposal facility 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 and tools, as well as contaminated building material, debris and soil. A near surface disposal facility is an appropriate, internationally accepted and proven method of disposing of low-level radioactive waste. The radioactive waste intended for the disposal facility includes waste currently stored on site and waste which will be created as a result of remediation and decommissioning activities at AECL sites (i.e. contaminated soil and building debris). It also includes waste which will continue to be produced as a result of ongoing nuclear science and technology activities at the Chalk River site.

Progress in the area of environmental stewardship for the third quarter of 2021-22 is presented below.

In Manitoba, work continued to decommission the **Whiteshell site**, which was previously an active nuclear research laboratory, despite a reduction of staff on site due to COVID-19. The scope of work includes the decontamination and demolition of structures and planning for the in situ decommissioning (i.e. immobilizing and leaving in place) of the WR-1 research reactor. Work on the Environmental Impact Statement for the WR-1 research reactor continued with CNL engaging with Indigenous communities to discuss the project and preparing documentation for eventual submission to the regulator.

CNL also advanced work to decommission most of the buildings on the main campus, which is anticipated to be completed by late fall 2022. The decommissioning and demolition of the former liquid treatment centre was completed, as well as the above grade decommissioning and demolition of the former health and safety facility. The main campus demolition plan continues with another series of buildings being safely de-energized (the former technology information centre, the powerhouse, and the machine shop and maintenance facilities), with demolition expected this fall. Furthermore, activities continued on the design and fabrication of a specialized remote handling system to retrieve waste that is stored in standpipes and bunkers (concrete boxes and structures which are just below ground level). The testing of the complete system is expected to occur in 2022.

At the **Chalk River site** in Ontario, despite onsite staff restrictions due to the pandemic, CNL continued the decommissioning of Building 250 and the Building 200 series, which represent four of the highest risk buildings and most complex to be decommissioned. Projects are remaining on schedule, despite

the 5th wave of the COVID-19 caused by the Omicron variant, while proper COVID-19 safety protocols are being maintained.

CNL also continued to advance planning work on the proposed Near Surface Disposal Facility, including engaging with local stakeholders and Indigenous communities, and responding to questions. In July, the Canadian Nuclear Safety Commission announced acceptance of CNL's Final Environmental Impact Statement, a key step in the environmental assessment process for the project. This paves the way for the project to proceed to public regulatory hearings, which are scheduled to take place in February and May/June 2022.

Work also continued to progress on the planning for the in situ decommissioning of the **Nuclear Power Demonstration** reactor. The project is currently undergoing an Environmental Assessment, and work during the third quarter continued to focus on responding to questions from, and engaging with, Indigenous communities on the proposal. CNL submitted an updated draft of the Environmental Impact Statement to the Canadian Nuclear Safety Commission in December 2021.

AECL is also responsible for fulfilling Canada's responsibilities with respect to historic low-level radioactive 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 as part of the **Port Hope Area Initiative**, pursuant to an agreement between Canada and the municipalities. Two near surface facilities (engineered containment mounds) have been built for this purpose. In the case of the Port Granby project, AECL and CNL announced in November 2021 that all waste has now been remediated and the mound has been capped and closed. In total, 1.3 million tonnes of historic low-level radioactive waste have been relocated from the shorelines of Lake Ontario in Clarington, to a new, near surface 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 and nine months ended December 31, 2021, 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 plans for and manages risks as part of sound risk management practices. Due to its oversight role, AECL's risk management approach goes beyond the internal organizational risk, and includes oversight of CNL risks as they relate to the 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, which could ultimately impact financial results.

COVID-19 Pandemic: The ongoing pandemic presents risks to the safety and security of personnel and the sites, as well as risk of financial impacts. To mitigate the safety and security risks, AECL and CNL are following comprehensive plans for recovery that reflect government and health authority guidance, provide for COVID-19 countermeasures including changes to workspaces and work procedures to maintain physical distancing, provide personal protective equipment and training, and implement appropriate restrictions on travel, amongst other things. CNL and AECL continue to closely monitor the financial impacts of COVID-19, including near-term impacts to revenue and cash flow in 2021-22, as well as longer-term impacts to project costs and schedules.

Human Resources: AECL is a small organization that relies on a small complement of highly trained and experienced personnel, several of whom bring experience in the management of similar Government-owned, Contractor-operated arrangements, both from a government and contractor perspective. AECL's goal is to maintain the necessary expertise and capabilities to oversee the Government-owned, Contractor-operated contract and play an appropriate oversight and challenge function to achieve value for money for Canada. Given AECL's small size, an ongoing challenge is to adapt to fluctuating resourcing requirements across different areas of the organization and backfill those on short-term leave where appropriate. To manage this, AECL strives to be adaptable and flexible, deploying a handful of third-party service contracts to bolster resourcing when and where required and cross-training employees when the opportunities arise. A succession plan is in place and is reviewed regularly. Furthermore, AECL regularly reviews its total compensation package to remain competitive amongst similar employees nationally and internationally.

Contractor Performance: As AECL relies on a private-sector contractor to execute scope related to its mandate, an inherent risk is failure of the contractor to execute and perform. To mitigate this risk and drive the appropriate behaviour, the contract with CNL is carefully structured to include several mechanisms for AECL to incentivize and oversee CNL's performance. On an annual basis, AECL sets priorities supported by achievable stretch targets to drive value for Canada. Ongoing evaluation of the contractor throughout the year provides AECL the opportunity to highlight strengths and weaknesses and the contractor the opportunity to correct where needed.

Costs to Operate Chalk River Laboratories: The shutdown of the National Research Universal reactor in March 2018 has resulted in lost revenue from the activities of the reactor (including isotope sales) and diminishing funding for the National Research Universal reactor, which has created funding pressures in terms of corporate support and site operating costs that must be borne by the remaining programs. More recently, this has been further compounded by the cost pressures created by the COVID-19

pandemic. While CNL continues to make progress by lowering indirect costs to address the cost pressures, it continues to look at all options with a view to enabling a sustainable organization in the long-term, while remaining protective of the environment and health and safety.

Major Waste Disposal Projects: Part of AECL's core mandate is environmental stewardship and remediation of sites for the benefit of future generations. Currently, three important projects which are aimed at reducing environmental risks and protecting the environment are at various stages of environmental assessment:

- Construction of a Near Surface Disposal Facility at the Chalk River Laboratories;
- In situ decommissioning of the WR-1 research reactor at the Whiteshell 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 success of these projects. Timelines have been revised to ensure that all comments and concerns from the public and Indigenous communities have been considered for all three projects, as well as requests from the Canadian Nuclear Safety Commission to provide additional technical studies. As a result, additional time has been needed to build the safety case for each project. Overall, while these schedule changes have impacted CNL's ability to commence large-scale cleanup and remediation activities at AECL sites, they are allowing for more public and Indigenous engagement, and the development of additional studies in support of the projects' safety cases.

Indigenous Engagement and Consultation: Indigenous reconciliation continues to be a priority for AECL. There are increasing needs for support for capacity to engage, Traditional Knowledge studies, and participation in formal regulatory processes, as well as environmental monitoring operations. 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. AECL and CNL are working closely together and are looking for more ways to increase participation, collaboration and mutual benefit with Indigenous communities.

Public Relations: In order to be successful in delivering its mandate, AECL depends on the support of key stakeholders, including government and the public. AECL is continually looking for relationship building opportunities, as well as innovative and effective means to reach its audiences. Working with CNL, AECL endeavours, when communicating with the public, to use clear messaging and a variety of communications tools to more effectively reach key audiences.

Cybersecurity: Cybersecurity is top of mind at AECL. AECL's approach to cybersecurity is two-fold: cybersecurity within its own organization and CNL's cybersecurity efforts to protect AECL's information assets as part of the Government-owned, Contractor-operated contract. AECL and CNL work to continuously improve cybersecurity capabilities, with a focus on training and adaptation.

	Three Mon	ths Ended	Nine Months Ended				
	Dec	ember 31	Dec	ember 31			
(\$ millions)	2021	2020	2021	2020			
Revenues							
Parliamentary appropriations	\$ 214 \$	212 \$	608 \$	583			
Commercial revenue	32	25	98	69			
Interest income	1	1	2	3			
Other proceeds	-	-	7	-			
	247	238	715	655			
Expenses							
Cost of sales	21	16	64	49			
Operating expenses	38	17	72	50			
Contractual expenses	47	39	187	159			
Decommissioning, waste management and							
contaminated sites expenses	309	291	479	457			
	415	363	802	715			
Deficit for the period	\$ (168) \$	(125) \$	(87) \$	(60)			

Financial Review

Parliamentary Appropriations

The Government of Canada provides funding quarterly for AECL to advance its priorities and deliver on its mandate. AECL recognized \$214 million of Parliamentary appropriations in the third quarter of 2021-22, consistent with the same period in 2020-21. On a year-to-date basis, AECL recognized \$608 million of Parliamentary appropriations, compared to \$583 million for the same period in 2020-21. The year-to-date variance is primarily related to an increase in funding required to execute decommissioning, remediation, and waste management activities, as planned.

Commercial Revenue

In the third quarter of 2021-22, \$32 million in revenue was recognized, compared to \$25 million for the same period in 2020-21. On a year-to-date basis, revenues were \$98 million, compared to \$69 million in 2020-21. Revenue included research and development activities performed by CNL for commercial customers, as well as heavy water sales. The quarterly and year-to-date increase in commercial revenue is a result of the COVID-19 pandemic and the related reduced level of activity in the prior period, as well as increased heavy water sales.

Interest Income

Interest income is earned on cash, short-term investments from appropriations and investments held in trust. Interest income earned is comparable to the same periods in 2020-21.

Other Proceeds

Other proceeds relate largely to a commercial settlement recorded during the first quarter.

Cost of Sales

Cost of sales is higher than the same periods in the prior year as a result of increased revenues as discussed above. On a year-to-date basis, cost of sales decreased as a percentage of revenue compared to the same period of the prior year as a result of additional costs for COVID-19 related replanning and rescheduling in the prior period as well as an increase in higher margin heavy water sales in the current year.

Operating Expenses

Operating expenses are largely comprised of AECL's oversight expenses and amortization of tangible capital assets. Operating expenses in the third quarter of \$38 million and year-to-date of \$72 million are higher than the same periods in 2020-21 due to an accrual of \$20 million for a commercial settlement expected to be paid in the fourth quarter.

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 third quarter total \$47 million, compared to \$39 million in the third quarter of 2020-21. Year-to-date expenses in this category total \$187 million compared to \$159 million in the previous period in 2020-21. The variances are largely a result of increased spending on science and technology activities.

Decommissioning, Waste Management and Contaminated Sites Expenses

Decommissioning, waste management and contaminated sites expenses consist of financial expenses 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. Revaluation gains and losses represent changes to the estimates for the reported obligations. Decommissioning, waste management and contaminated sites expenses in the third quarter of 2021-22 of \$309 million and year-to-date of \$479 million are higher than the same periods in 2020-21 as a result of approved changes to project estimates recorded in third quarter of the current year.

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 2021-22 year-to-date expenditures are trending behind plan largely due to delays in decommissioning and waste management activities. Priorities and deliverables have not materially changed in the first nine months of 2021-22.

Cash Flow and Working Capital

Nine Mon	ths Ended
Dec	ember 31
2021	2020
\$ 377 \$	404
(70)	(87)
307	317
159	80
\$ 466 \$	397
\$ \$	Nine Mon Dec 2021 \$ 377 \$ (70) 307 159 \$ 466 \$

Operating Transactions

Operating transactions generated a year-to-date net cash inflow of \$377 million in 2021-22, compared to an inflow of \$404 million during the same period of the previous year. The variance is a result of a decrease in cash receipts from customers, owing to collection of a \$50 million commercial settlement in the prior year, partly offset by an increase in commercial revenue in the current year.

Capital Transactions

Capital transactions used cash in the third quarter of 2021-22 of \$70 million compared to \$87 million in the same period in the previous year. The variance is a result of increased spending in the prior year toward newly built Chalk River site infrastructure.

Highlights of the Statement of Financial Position

	De	cember 31	March 31	Variance	Variance
(\$ millions)		2021	2021	In \$	Ву %
Financial Assets	\$	726 \$	561 \$	165	29%
Liabilities		8,671	8,381	290	3%
Non-Financial Assets		824	787	37	5%
Accumulated Deficit		(7,121)	(7,033)	(88)	1%

AECL closed the third quarter of 2021-22 with Financial Assets of \$726 million, which represents a \$165 million increase from March 31, 2021. This variance is mainly the result of an increase in cash related to \$271 million of funding for the fourth quarter of the current year received before the end of the third quarter, partly offset by a \$123 million decrease in the Appropriations receivable that was accrued at the end of the previous fiscal year and largely consumed in the first quarter.

The increase in Liabilities of \$290 million can be attributed primarily to the \$271 million increase in deferred funding for the fourth quarter.

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 and Accumulated Deficit. AECL records Parliamentary appropriations received in the period as revenue in the Statement of Operations and Accumulated Deficit 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.

J. Dumarken.

Fred Dermarkar *President and Chief Executive Officer* February 23, 2022 Chalk River, Canada



Thomas Assimes *Chief Financial Officer* February 23, 2022 Chalk River, Canada

UNAUDITED FINANCIAL STATEMENTS

Statement of Financial Position

As at

		December 31	March 31
(thousands of Canadian dollars)	Notes	2021	2021
Financial Assets			
Cash		\$ 465,566	\$ 159,157
Long-term disposal of waste fund		47,146	48,030
Investments held in trust		59,231	58,315
Trade and other receivables	3	49,277	43,342
Appropriations receivable	9	-	122,601
Inventories held for resale		104,958	129,239
		726,178	560,684
Liabilities			
Accounts payable and accrued liabilities	4	62.698	37.029
Employee future benefits	5	15.509	16.211
Due to Canadian Nuclear Laboratories	-	161.356	175.620
Deferred funding	9	270.800	
Decommissioning and waste management	Ū	,	
provision	6	7.287.390	7.362.192
Contaminated sites liability	7	873.034	790.190
		8,670,787	8,381,242
Net Debt		(7,944,609)	(7,820,558)
Non-Financial Assets			
Tangible capital assets	8	823.839	786,819
Prepaid expenses	U U		444
		823,839	787,263
Accumulated Deficit		(7,120,770)	(7,033,295)
Accumulated deficit is comprised of:			
Accumulated operating deficit		(7,122,380)	(7,034,916)
Accumulated remeasurement gains		1,610	1,621
		\$ (7.120.770)	\$ (7.033.295)

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			Three Months Ended			Nine	Мо	nths Ended	
		2022			D	ecember 31		De	ecember 31
(thousands of Canadian dollars)	Notes	Budget		2021		2020	2021		2020
Revenues									
Parliamentary appropriations	9	\$ 1,188,800	\$	213,800	\$	211,640	\$ 607,749	\$	583,440
Commercial revenue		91,000		32,692		25,115	98,049		69,346
Interest income		4,000		922		1,076	2 <i>,</i> 553		2,929
Other proceeds		-		-		-	7,050		-
		1,283,800		247,414		237,831	715,401		655,715
Expenses									
Cost of sales		63,700		20,912		15,873	64,269		49,029
Operating expenses		63,643		38,436		16,851	72,186		50,167
Contractual expenses	10	248,785		46,573		38,594	187,177		159,123
Decommissioning, waste management and									
contaminated sites expenses		277,708		309,442		291,099	479,233		457,350
		653 <i>,</i> 836		415,363		362,417	802,865		715,669
Surplus (deficit) for the period		629,964		(167,949)		(124,586)	(87 <i>,</i> 464)		(59,954)
Accumulated operating deficit, beginning of period	d	(7,034,916)		(6,954,431)		(6,976,838)	(7,034,916)		(7,041,470)
Accumulated operating deficit, end of period		\$ (6,404,952)	\$	(7,122,380)	\$	(7,101,424)	\$ (7,122,380)	\$	(7,101,424)

Statement of Remeasurement Gains and Losses

	Nine Mon	Months Ended		
	Dec	ember 31		
(thousands of Canadian dollars)	2021	2020		
Accumulated remeasurement gains, beginning of period	\$ 1,621 \$	1,801		
Remeasurement (losses) gains arising during the period				
Unrealized (losses) gains on Investments held in trust	(129)	3,274		
Reclassifications to the Statement of Operations and Accumulated				
Deficit				
Realized losses (gains) on Investments held in trust	118	(419)		
Net remeasurement (losses) gains for the period	(11)	2,855		
Accumulated remeasurement gains, end of period	\$ 1,610 \$	4,656		

Statement of Change in Net Debt

				Nine	Months Ended
			2022		December 31
(thousands of Canadian dollars)	Notes		Budget	2021	2020
Surplus (deficit) for the period		\$	629,964	\$ (87,464)	\$ (59,954)
Tangible capital assets					
Acquisition of tangible capital assets	8		(151,846)	(73,915)	(76,957)
Amortization of tangible capital assets	8		45,233	36,483	35,243
Other changes	8		-	412	3
			(106,613)	(37,020)	(41,711)
Non-financial assets					
Changes in prepaid expenses			-	444	452
Net remeasurement (losses) gains for the pe	riod		-	(11)	2,855
Increase in net debt			523,351	(124,051)	(98,358)
Net debt, beginning of period		(7,820,558)	(7,820,558)	(7,756,153)
Net debt, end of period		\$ (7,297,207)	\$ (7,944,609)	\$ (7,854,511)

Statement of Cash Flows

Nine Months E		
		December 31
(thousands of Canadian dollars)	2021	2020
Operating transactions		
Cash receipts from Parliamentary appropriations	\$ 1,001,150	\$ 918,190
Cash receipts from customers and other sources	103,249	127,262
Cash paid to suppliers	(247,135)	(197,393)
Cash paid to employees	(9,116)	(8,956)
Cash paid for decommissioning, waste management		
and contaminated sites activities	(471,189)	(431,543)
Cash invested for future waste management		
and disposal activities	(1,463)	(4,788)
Interest received	1,124	1,472
Cash provided by operating transactions	376,620	404,244
Capital transactions		
Acquisition of tangible capital assets	(70,211)	(86,652)
Cash applied to capital transactions	(70,211)	(86,652)
Increase in cash	306,409	317,592
Cash, beginning of period	159,157	79,851
Cash, end of period	\$ 465,566	\$ 397,443

NOTES TO THE FINANCIAL STATEMENTS For the three and nine months ended December 31, 2021

(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 Her Majesty in Right of Canada. As a result, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada. AECL receives funding from the Government of Canada and is exempt from income taxes in Canada.

AECL's 2021-22 to 2025-26 Corporate Plan received Treasury Board approval in the first quarter of the 2021-22 fiscal year. The Corporate Plan is aligned with the direction provided by AECL's sole shareholder, the Government of Canada, and reflects AECL's priorities 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, 2021. The accounting policies used in these statements are consistent with those disclosed in the most recent annual audited financial statements dated March 31, 2021.

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.

AECL has considered the impact of the COVID-19 pandemic on the valuation of its assets and has determined that no impairments are required. AECL has also considered the impact of the pandemic on the valuation of its Decommissioning and waste management provision and Contaminated sites liability, and where impacts were known, changes to the provision have been made.

Budget Figures

The 2021-22 budget is reflected in the Statement of Operations and Accumulated Deficit and the Statement of Change in Net Debt. Budget data presented in these financial statements is based upon the 2021-22 projections and estimates contained within the 2021-22 to 2025-26 Corporate Plan. The expected impact of the COVID-19 pandemic on AECL's results has been reflected in the 2021-22 budget figures.

3. Trade and Other Receivables

	December 31		March 31		
(thousands of Canadian dollars)	2021		2021		
Trado rocojuablos	¢ 10.027	ć	11 / 20		
	\$ 13,337	Ş	11,480		
Unbilled revenue	14,007		18,026		
Consumption taxes receivable	15,333		13,836		
	\$ 49,277	\$	43,342		

4. Accounts Payable and Accrued Liabilities

	Decembe	March 31		
(thousands of Canadian dollars)	2	021	2021	
Trade payables	\$5,	100	\$ 4,642	
Other payables and accrued expenses	27,	216	21,830	
Accrued payroll liabilities	1,	121	2,002	
Amounts due to related parties		170	234	
Provisions	24,	704	5,704	
Customer advances and obligations	4,)87	2,617	
	\$ 62,	598	\$ 37,029	

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:

	Three M	Ionths Ended December 31	Nir	Nine Months Ended December 31			
(thousands of Canadian dollars)	2021	2020	2021	2020			
Payments by employees	\$ 212 \$	189	\$ 677	\$ 606			
Payments by employer	285	308	1,131	1,116			

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(g) of the annual audited financial statements dated March 31, 2021. 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 \$6.1 million (March 31, 2021: \$6.1 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 relate to obligations stemming from activities undertaken prior to the creation of AECL in 1952.

	Nine Months Ended			Year Ended
	0	December 31		March 31
(thousands of Canadian dollars)		2021		2021
Carrying amount - Beginning of period	\$	7,362,192	\$	7,184,910
Liabilities settled		(327,955)		(432,194)
Unwinding of discount		209,549		271,357
Revision in estimate and timing of expenditures		42,142		335,037
Estimates affecting Property, plant and equipment and future disposal				
costs for waste from ongoing operations		1,462		3,082
Carrying amount - End of period	\$	7,287,390	\$	7,362,192

The undiscounted future expenditures, adjusted for inflation, for the planned activities comprising the liability are \$15,792.0 million (March 31, 2021: \$16,073.0 million).

The provision was discounted using a rate of 3.80% as at December 31, 2021 and March 31, 2021.

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.

		Year Ended		
	December 31			
(thousands of Canadian dollars)		2021		2021
Carrying amount - Beginning of period	\$	790,190	\$	877,196
Liabilities settled		(144,697)		(158,557)
Unwinding of discount		11,293		17,528
Revision in estimate and timing of expenditures		216,248		54,023
Carrying amount - End of period	\$	873,034	\$	790,190

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 2023-24, 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 1.91%. The estimated total undiscounted expenditures are \$941.8 million (March 31, 2021: \$860.9 million).

8. Tangible Capital Assets

(thousands of Canadian dollars)

	Construction in progress		Land and land improvements		Buildings	Ma E	Reactors, chinery and quipment	Total	
Cost at March 31, 2021	\$	182,064	\$	145,586	\$ 545,437	\$	502,368	\$ 1,375,455	
Additions and transfers		73,915		1,476	42,887		9,406	127,684	
Disposals and transfers		(53,769)		(170)	(490)		(3,759)	(58,188)	
Cost at December 31, 2021		202,210		146,892	587,834		508,016	1,444,952	
Accumulated amortization at March 31, 2021		-		52,558	235,210		300,868	588,636	
Increase in amortization		-		4,208	11,361		20,915	36,483	
Disposals and transfers		-		(166)	(314)		(3,527)	(4,006)	
Accumulated amortization at December 31, 2021		-		56,600	246,257		318,256	621,113	
Net carrying amount at March 31, 2021		182,064		93,028	310,227		201,500	786,819	
Net carrying amount at December 31, 2021	\$	202,210	\$	90,292	\$ 341,577	\$	189,760	\$ 823,839	

9. Parliamentary Appropriations

	Three Months Ended				Nine	Months Ended		
	December 31					December 31		
(thousands of Canadian dollars)	2021		2020		2021		2020	
Parliamentary appropriations for operating,								
capital and statutory expenditures								
Amount received during the period for operating,								
capital and statutory expenditures	\$ 270,800	\$	446,340	\$	1,001,150	\$	918,190	
Amount receivable from a previous period	-		-		(122,601)		(100,050)	
Amount deferred from the previous period	213,800		-		-		-	
Amount received related to the next period								
(Deferred funding)	(270,800)		(234,700)		(270,800)		(234,700)	
Total Parliamentary appropriations recognized	\$ 213,800	\$	211,640	\$	607,749	\$	583,440	

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, 2022 total \$1,227.9 million.

10. Contractual Arrangement

Since 2015, AECL has been delivering its mandate through a Government-owned, Contractoroperated 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	Мо	onths Ended	Nine Months Ended				
		De	ecember 31		December 31			
(thousands of Canadian dollars)	2021		2020		2021		2020	
Contractual amounts paid or payable Less: Costs charged to Decommissioning and waste management provision and	\$ 243,601	\$	239,044	\$	771,180	\$	703,636	
Contaminated sites liability	(156,663)		(159,982)		(470,635)		(433,807)	
Less: Costs charged to Construction in progress	(27,743)		(29,570)		(73,915)		(76 <i>,</i> 957)	
Less: Costs classified as Cost of sales	(12,622)		(10,898)		(39,453)		(33,749)	
Contractual expenses	\$ 46,573	\$	38,594	\$	187,177	\$	159,123	

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



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