



ATOMIC ENERGY OF CANADA LIMITED

Second Quarter Financial Report

Consolidated Financial Statements (Unaudited)

**As at and for the three and six months ended
September 30, 2017 and September 30, 2016**

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MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER

We continue to see significant progress in the transformation of Canadian Nuclear Laboratories (CNL) under the Government-owned, Contractor-operated (GoCo) model. AECL provided CNL with clear priorities, and they are responding with an ambitious vision that is already starting to take shape. CNL is leading the revitalization of the Chalk River Laboratories, advancing environmental remediation at the Port Hope Area Initiative and pursuing strategic initiatives to enable a significant clean-up of legacy radioactive waste at the Chalk River site.

As part of its vision for the transformation of the Chalk River site, CNL articulated a long-term vision to transform the laboratories into a world-class, nuclear science and technology campus. It has since taken several steps towards its implementation. This past quarter, CNL announced that it was joining a growing cyber security cluster in New Brunswick by expanding its cyber security research capabilities at the National Innovation Centre for Cyber Security in Fredericton. It also received more than 80 responses to a request for expression of interest on Small Modular Reactors that was launched earlier in the year. Input received will be used to inform CNL and AECL's position with respect to the development of small modular reactors. This is in line with CNL's vision to become a hub for small modular reactor technology.

This exciting vision for CNL was shared with members of the community in August when CNL and AECL hosted an open house at the Chalk River Laboratories. With more than 2,000 participants, the event provided an opportunity to showcase the scientific work being accomplished at the Chalk River Laboratories and to share plans for the future. Indeed the coming years will see old buildings come down and new and renewed science infrastructure being constructed as more than a billion dollars is invested to renew the site's science and supporting infrastructure.

To enable this transformation, and to responsibly tackle environmental liabilities, CNL is proposing the construction of a near surface disposal facility at the Chalk River site for the disposal of AECL's low-level radioactive waste. This facility is essential to enabling the remediation of contaminated lands and the decommissioning and demolition of outdated buildings at the Chalk River site. CNL continued to engage with the public, stakeholders and Indigenous groups as part of the Environmental Assessment process that is underway.

Through these activities, AECL continued to oversee CNL's performance as part of its effort to bring value for money for Canada. This report highlights some of the significant progress accomplished during the second quarter of 2017-18 by CNL on behalf of AECL.



Richard J. Sexton

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 how it manages risk and capital resources. It is also intended to enhance the understanding of the unaudited consolidated financial statements for the second quarter of 2017-18 and accompanying notes. Management's Narrative Discussion should therefore be read in conjunction with these documents.

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 Public Sector Accounting Standards (PSAS).

Management's Narrative Discussion was authorized for issuance by the Board of Directors on November 16, 2017.

Our Business

AECL is a federal Crown corporation with the mandate to enable nuclear science and technology and fulfill Canada's radioactive waste and decommissioning responsibilities. AECL receives federal funding to deliver on its mandate and reports to Parliament through the Minister of Natural Resources. It also leverages the unique capabilities at its sites to support industry and other third parties on commercial terms.

AECL delivers its mandate through a long-term, contractual arrangement with Canadian National Energy Alliance (CNEA) for the management and operation of Canadian Nuclear Laboratories (CNL) 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 on a day-to-day basis under a contract with AECL. This model has been successfully used both in the United Kingdom and in the United States to bring private-sector rigour and efficiency in order to contain and reduce risks and costs. AECL's role is twofold: 1) to be an advisor to and agent of the Government of Canada; and 2) to set priorities for CNL, oversee the contract and assess CNL's performance in an effort to achieve value for money for Canada. AECL acts as a 'smart buyer' and plays a challenge function with a view to advancing its priorities in the most effective and efficient manner, while maintaining safety, security and the protection of the environment.

There are two main areas of focus:

1. Decommissioning and Waste Management

The objective is to safely and responsibly address environmental responsibilities and liabilities. This includes infrastructure decontamination and decommissioning, the remediation of contaminated sites and radioactive waste management at AECL sites and other sites for which the Government of Canada has accepted responsibility.

2. Nuclear Laboratories

The Chalk River Laboratories are Canada's largest science and technology complex and host to more than 2,800 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, the environment, safety and security. The laboratories also provide services to third parties on a commercial basis. The Chalk River site is currently undergoing an important renewal and modernization that will transform the site into a modern, world-class nuclear science and technology campus.

AECL Sites Across Canada



Second Quarter Highlights for 2017-18

Decommissioning and Waste Management

AECL is responsible for safely addressing environmental responsibilities and liabilities which are the result of more than 60 years of nuclear science and technology activities at its sites. For example, the production of medical isotopes, which are used in the detection and treatment of cancer, has over the years produced radioactive waste which needs to be addressed. Similarly, nuclear science activities have led to the contamination of buildings which, having reached the end of their useful life, must be decontaminated and demolished.

AECL is also responsible for the remediation and safe, long-term management of historic, low-level radioactive waste at sites in Canada for which the Government of Canada has accepted responsibility. This includes activities related to the Low-Level Radioactive Waste Management Office and the delivery of the Port Hope Area Initiative. In both cases, remediation is required in order to address liabilities associated with past radioactive waste management practices which are no longer considered acceptable, and for which the current owner does not exist and/or cannot reasonably be held responsible.

Activities necessary to address these liabilities include cleaning-up existing radioactive waste areas, safely decontaminating, demolishing and disposing of buildings and facilities, and remediating contaminated lands. AECL has asked CNL to carry out these activities on its behalf using international best practices. This is done at several sites across Canada. Notable accomplishments for the second quarter of 2017-18 are presented below.

The Chalk River Laboratories has multiple buildings and facilities which require decontamination, decommissioning and demolition, and some areas where contaminated soils need to be remediated. These facilities and buildings are no longer needed to meet operational needs and contribute to high site costs through ongoing monitoring, maintenance, energy consumption, etc. Likewise, the contaminated lands need to be remediated in order to protect the environment.

AECL has asked CNL to plan for, and carry out the necessary activities in order to reduce the risks to workers and the environment. CNL's work in this respect includes the decommissioning of a number of buildings at the Chalk River site, and a proposal to build a near surface disposal facility at the site in order to responsibly and safely dispose of AECL's low-level radioactive waste. The radioactive waste intended for the disposal facility is either currently stored on site, will be created as a result of land remediation and decommissioning activities at the Chalk River site and other smaller AECL sites across Canada, or will be produced as nuclear science and technology activities continue to be performed at the Chalk River site in the coming decades. It is also expected that a small percentage of radioactive waste to be disposed in the facility will come from hospitals and universities (as a result, for example, of nuclear medicine activities).

During the second quarter of 2017-18, CNL continued its engagement activities with local stakeholders, with presentations to local municipal and county councils, meetings with Indigenous groups and an open house at the Chalk River site.

Also at the Chalk River Laboratories, transfers of stored fuel to the new Fuel Packaging & Storage Facility continued on schedule. This facility is used to safely store used fuel – transferring it from its existing below-ground storage which has degraded over the years, to a new, state-of-the-art above ground storage facility. CNL took advantage of the summer months to exceed targets and successfully and safely retrieve, transfer, and repackage the used fuel in the new storage facility in order to reduce environmental hazards.

Another key project currently underway to reduce AECL's radioactive waste liabilities concerns the repatriation of highly-enriched uranium to the United States. The material has been used at the Chalk River Laboratories primarily in the production of the medical isotope molybdenum-99. This material requires high levels of security as well as costly and complicated storage. As part of the Global Threat Reduction Initiative (an initiative which aims at reducing proliferation risks by consolidating highly-enriched uranium inventories in fewer locations around the world), AECL is working with the United States Department of Energy and CNL to return (repatriate) this material to the United States for conversion and reuse.

This initiative provides for a safe, secure, timely and permanent solution to Canada's long-term management of this material. Shipments of fuel rods containing highly-enriched uranium, as well as shipments of target-residue material, to the Savannah River site in the United States continued to be safely completed during the second quarter of 2017-18, as planned.

In Manitoba, work continued to decommission the **Whiteshell site**, which was previously an active nuclear research laboratory. This 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. The proposal to decommission the research reactor in situ is in line with international best

practice and provides a safe, environmentally sound, and more cost effective approach to address AECL's liability when compared with the removal and disposal of contaminated reactor components. The proposal, led by CNL, is currently undergoing an Environmental Assessment. During the second quarter of 2017-18, CNL continued to engage with stakeholders, the public and Indigenous groups on its proposal through public information sessions in surrounding communities, site tours and meetings.

Finally, as part of the **Port Hope Area Initiative**, where historic low-level radioactive waste contamination in the municipalities of Port Hope and Clarington is being remediated, CNL continued with property investigations, construction and waste emplacement. The Port Hope Area Initiative is delivering on Canada's long-term commitment to clean up low-level radioactive waste in the community, remediate historically contaminated lands and safely manage radioactive waste.

Activities in the second quarter of 2017-18 included the upgrade of municipal roads to prepare for waste transportation on designated routes, the installation of the clay liner at the Port Hope Long-Term Waste Management Facility and the inactive commissioning of the waste water treatment plant. To date, 4,300 properties in the Municipality of Port Hope have been involved in some aspect of the Property Radiological Survey, which is testing approximately 4,800 properties for the presence or absence of historic low-level radioactive waste.

Nuclear Laboratories

CNL has been implementing its long-term vision for the Chalk River Laboratories which involves transforming the site into a world-class, state-of-the-art nuclear science and technology campus. Activities in this respect include the development of plans for the construction of an advanced nuclear material research centre, which will consolidate research activities into a modern facility and enable CNL to grow its stature nationally and internationally.

CNL also announced investments to expand its cyber security research capabilities at the National Innovation Centre for Cyber Security in Fredericton. CNL joins a growing cyber security cluster in New Brunswick and will grow its existing expertise to explore issues related to cyber security of industrial control systems.

As a result of a request for expression of interest on Small Modular Reactors (SMRs) which was launched earlier in the year, CNL received 80 responses from SMR technology developers, potential end users, and other interested parties and stakeholders, including host communities, the nuclear supply chain and research and academic institutions. CNL has voiced a strong interest in working as a key partner on the development and deployment of SMRs, and this initiative allows them to build a better understanding of existing capabilities, technology gaps, needs and requirements, and overall market interest.

In August, CNL and AECL welcomed over 2,000 visitors to the Chalk River Laboratories. The open house featured scientific demonstrations and exhibits, tours of the laboratories, presentations, hands-on activities, and heavy equipment displays, amongst other things. This event provided the public and community members an opportunity to celebrate the scientific accomplishments being made at the Chalk River Laboratories – past and present – and to learn about the cutting-edge work being carried out on behalf of Canadians in nuclear science and technology and environmental stewardship.

AECL continues to oversee the Federal Nuclear Science and Technology Work Plan, which is delivered by CNL. As part of this work plan, thirteen federal departments and agencies are working with AECL and CNL to identify priorities and areas of work in nuclear science and technology in order to support federal priorities and mandates in the areas of health, energy, safety and security, and the environment. Projects from the Federal Nuclear Science and Technology Work Plan continue to attract national and international interest, leveraging research with other programs such as the Canadian Safety and Security Program, the Generation IV International Forum, the International Atomic Energy Agency and the Cooperative Action Plan between the Department of Energy of the United States of America, Natural Resources of Canada and AECL on nuclear energy research and development. Project milestones continue to be achieved by CNL on time.

As part of its responsibilities for managing and operating AECL's sites, CNL operates the National Research Universal (NRU) reactor, Canada's largest nuclear research reactor located at the Chalk River Laboratories. The NRU has been operating for 60 years and is slated to be shutdown permanently at the end of March 2018. While the production of the key medical isotope molybdenum-99 from the NRU reactor ended in October 2016, AECL has asked CNL to retain the capability to produce the isotope in the event of a worldwide shortage, which couldn't be mitigated through other means. In the meantime, the NRU continues to be fully operational for other purposes and the global supply of medical isotopes continues to meet demand without the need for the NRU to resume production. The future outlook also continues to be positive, as projected by the Organization for Economic Co-operation and Development (OECD) and the Association of Imaging Producers and Equipment Suppliers. During the second quarter of 2017-18, planning for the safe shutdown of the research reactor continued. CNL also continued to engage employees in its retain, retrain and redeploy program, which aims at retaining and retraining talented staff once NRU activities wind down.

Improvements to the Chalk River site infrastructure continued to progress. This includes the conversion of the site power house from oil to natural gas and other buildings from electricity to natural gas, which is already reducing the operating cost of the Chalk River site and its carbon footprint. Furthermore, the installation of a supply of domestic water will address current deficiencies with the supply of potable water for food preparation, sanitary and personal facilities and safe drinking water. The new tritium laboratory, which is being built in an existing building, is also progressing well. The new laboratory will provide several upgrades and will enable CNL to leverage its expertise in tritium management to continue to grow its science and technology stature. Finally, the occupation of laboratory space of the newly-built Harriet Brooks building, which provides state-of-the-art facilities for materials research, commenced. The administrative side of the building has been in use for several months as the installation of laboratory equipment was being finalized.

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 quarter ended September 30, 2017, and should be read in conjunction with the unaudited consolidated 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.

Financial Review

(\$ millions)	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
Revenues				
Parliamentary appropriations	\$ 133	\$ 148	\$ 303	\$ 330
Commercial revenue	20	29	37	64
Interest income	1	1	2	3
	154	178	342	397
Expenses				
Cost of sales	19	21	31	47
Operating expenses	18	11	32	21
Contractual expenses	83	100	163	162
Decommissioning, waste management and contaminated sites expenses	69	72	138	143
Wrap-Up Office activities	1	-	2	4
	\$ 190	\$ 204	\$ 366	\$ 377

Parliamentary Appropriations

The Government of Canada provides funding quarterly for AECL to advance its priorities and deliver on its mandate. AECL recognized \$133 million of Parliamentary appropriations in the second quarter of 2017-18, compared to \$148 million for the same period in 2016-17. On a year-to-date basis, AECL recognized \$303 million of Parliamentary appropriations, compared to \$330 million for the same period in 2016-17. The second quarter and year-to-date variances are primarily related to AECL requiring less cash for capital and supplier payments.

Commercial Revenue

In the second quarter of 2017-18, \$20 million in revenue was recognized, compared to \$29 million for the same period in 2016-17. On a year-to-date basis, revenues were \$37 million, compared to \$64 million in the first six months of 2016-17. Revenue included isotope sales, commercial technology sales, nuclear waste management and research and development activities performed by CNL for commercial customers. The reported decrease in the second quarter and year-to-date can be attributed primarily to decreased isotope sales in the current period, consistent with the Government's decision to cease production of molybdenum-99 from the NRU reactor in October 2016.

Interest Income

Interest income is earned on cash, short-term investments from appropriations and investments held in trust. Income earned in the quarter and year-to-date is comparable to the prior periods.

Cost of Sales

Cost of sales are consistent with the reported revenues for the periods, except for a decrease in margin as a result of the discontinuation of molybdenum-99 production in October 2016.

Operating Expenses

Operating expenses include AECL's oversight expenses and amortization of tangible capital assets. The \$18 million in the current period is higher than the previous year's quarter of \$11 million. On a year-to-date basis, operating expenses were \$32 million compared to \$21 million in the prior period. The current period and year-to-date variances are due primarily to increased amortization of tangible capital assets.

Contractual Expenses

AECL delivers its mandate through a long-term contract with CNEA for the management and operation of its sites. CNL expenditures are reported by AECL as Contractual expenses. Expenses in this category for the second quarter total \$83 million, compared to \$100 million in the second quarter of 2016-17. Year-to-date expenses in this category total \$163 million compared to \$162 million in the previous period in 2016-17. The reported decrease in the quarter is largely due to a reduction in spending on the NRU.

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. Decommissioning, waste management and contaminated sites expenses in the second quarter of 2017-18 of \$69 million and year-to-date of \$138 million are comparable to that of the same periods in 2016-17.

Wrap-Up Office Activities

At the date of the divestiture of the assets of its commercial division to Candu Energy Inc. in 2011, AECL retained certain liabilities. These are being managed by AECL and are referred to as the Wrap-Up Office. Operating expenses for the Wrap-Up Office include the cost of staff and third-party service providers to address the retained liabilities. These activities continue to be wound down as planned.

Outlook

AECL's planned activities are set out in its Corporate Plan. The 2017-18 year-to-date results 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 six months of 2017-18.

Consolidated Cash Flow and Working Capital

(\$ millions)	Three Months Ended		Six Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Cash provided by operating transactions	\$ 126	\$ 55	\$ 237	\$ 222
Cash applied to capital transactions	(31)	(38)	(58)	(82)
Cash				
Increase	95	17	179	140
Balance at beginning of the period	121	208	37	85
Balance at end of the period	\$ 216	\$ 225	\$ 216	\$ 225

Operating Transactions

Operating transactions generated a net cash inflow of \$126 million in the second quarter of 2017-18, compared to \$55 million during the same period in 2016-17. On a year-to-date basis, operating activities resulted in a net cash inflow of \$237 million compared to \$222 million during the same period the previous year. The variance in the quarter is the result of receiving Parliamentary Appropriations for both the second and third quarter, offset by higher cash payments to suppliers and lower receipts from customers compared to the prior period.

Capital Transactions

Capital transactions used cash of \$31 million in the second quarter of 2017-18 compared to \$38 million in the same period in 2016-17. On a year-to-date basis, capital activities used cash of \$58 million compared to \$82 million used in the same period in the previous year. The decrease is primarily due to the fact that 2016-17 included substantial construction activities for a new science and technology facility at the Chalk River site, which was largely completed in 2016-17.

Highlights of the Consolidated Statement of Financial Position

<i>(\$ millions)</i>	September 30, 2017	March 31, 2017	Variance In \$	Variance By %
Financial Assets	\$ 561	\$ 475	\$ 86	18%
Liabilities	8,216	8,053	163	2%
Non-Financial Assets	632	596	36	6%
Accumulated Deficit	(7,023)	(6,982)	(41)	1%

AECL closed the second quarter of 2017-18 with Financial Assets of \$561 million, which represents an \$86 million increase from March 31, 2017. This variance is mainly the result of increased cash received from Parliamentary appropriations as the appropriations for the third quarter of 2017-18 were received just prior to the end of the current quarter and was treated as Deferred funding.

The increase in Liabilities of \$163 million can be attributed primarily to the increase in Deferred funding as described above.

The increase in Non-Financial Assets of \$36 million is mainly a result of increased spending toward tangible capital assets.

Management of Risks and Uncertainties

Risks and uncertainties are described in AECL's 2016-17 Annual Report under the section "Management's Discussion and Analysis." Risks and uncertainties and risk management practices as noted in the 2016-17 Annual Report have not materially changed in the first six months of 2017-18.

MANAGEMENT'S RESPONSIBILITY

Management is responsible for the preparation and fair presentation of these consolidated quarterly financial statements in accordance with the Treasury Board of Canada "Standard on Quarterly Financial Reports for Crown Corporations," and for such internal controls as Management determines is necessary to enable the preparation of consolidated 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 consolidated quarterly financial statements.

Based on our knowledge, these unaudited consolidated 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 consolidated quarterly financial statements.



Richard J. Sexton

President and Chief Executive Officer

November 29, 2017

Chalk River, Canada



David J. Smith

Chief Financial Officer

November 29, 2017

Chalk River, Canada

UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Statement of Financial Position (Unaudited)

As at

<i>(thousands of Canadian dollars)</i>	Notes	September 30, 2017	March 31, 2017
Financial Assets			
Cash		\$ 216,033	\$ 37,024
Long-term disposal of waste fund		23,368	16,556
Investments held in trust		49,768	50,329
Trade and other receivables	3	73,775	70,909
Appropriations receivable	9	-	94,430
Inventories held for resale		4,149	4,369
Heavy water inventory		194,108	201,153
		561,201	474,770
Liabilities			
Accounts payable and accrued liabilities	4	72,276	71,511
Employee future benefits	5	24,275	25,160
Due to Canadian Nuclear Laboratories		118,354	111,663
Deferred funding	9	187,100	-
Deferred decommissioning and waste management funding		281,763	269,512
Decommissioning and waste management provision	6	6,486,783	6,492,243
Contaminated sites liability	7	1,043,050	1,081,866
Customer advances and obligations		2,112	545
		8,215,713	8,052,500
Net Debt		(7,654,512)	(7,577,730)
Non-Financial Assets			
Tangible capital assets	8	630,670	594,674
Prepaid expenses		1,317	842
		631,987	595,516
Accumulated Deficit		(7,022,525)	(6,982,214)
Accumulated deficit is comprised of:			
Accumulated operating deficit		(7,022,319)	(6,983,092)
Accumulated remeasurement (losses) gains		(206)	878
		\$ (7,022,525)	\$ (6,982,214)

The accompanying notes are an integral part of these unaudited consolidated financial statements

Consolidated Statement of Operations and Accumulated Deficit (Unaudited)

<i>(thousands of Canadian dollars)</i>	Notes	2018	Three Months Ended		Six Months Ended	
		Budget	September 30, 2017	2016	September 30, 2017	2016
Revenues						
Parliamentary appropriations	9	\$ 966,368	\$ 133,300	\$ 147,596	\$ 302,870	\$ 330,316
Commercial revenue		77,800	20,064	29,470	36,907	64,328
Interest income		4,000	891	1,308	1,941	3,157
		1,048,168	154,255	178,374	341,718	397,801
Expenses						
Cost of sales		42,790	19,419	21,489	31,375	46,613
Operating expenses		52,293	17,753	10,577	31,744	21,120
Contractual expenses	10	339,181	82,584	100,128	163,473	162,162
Decommissioning, waste management and contaminated sites expenses		283,897	68,866	71,699	137,731	143,398
Wrap-Up Office activities		12,000	550	426	2,356	3,637
		730,161	189,172	204,319	366,679	376,930
(Deficit) Surplus for the period		318,007	(34,917)	(25,945)	(24,961)	20,871
Accumulated operating deficit, beginning of period		(6,983,092)	(6,980,810)	(7,298,219)	(6,983,092)	(7,337,278)
Transfer to deferred decommissioning and waste management funding		(18,000)	(6,320)	(6,320)	(12,251)	(12,251)
Transfer to repayable contributions		(5,000)	(272)	(724)	(2,015)	(2,550)
Accumulated operating deficit, end of period		\$ (6,688,085)	\$ (7,022,319)	\$ (7,331,208)	\$ (7,022,319)	\$ (7,331,208)

The accompanying notes are an integral part of these unaudited consolidated financial statements

Consolidated Statement of Remeasurement Gains and Losses (Unaudited)

<i>(thousands of Canadian dollars)</i>	Three Months Ended		Six Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Accumulated remeasurement gains, beginning of period	\$ 803	\$ 1,659	\$ 878	\$ 1,301
Remeasurement (losses) gains arising during the period				
Unrealized (losses) gains on Investments held in trust	(1,054)	185	(1,117)	572
Reclassifications to the Consolidated Statement of Operations and Accumulated Deficit				
Realized losses (gains) on Investments held in trust	45	-	33	(29)
Net remeasurement (losses) gains for the period	(1,009)	185	(1,084)	543
Accumulated remeasurement (losses) gains, end of period	\$ (206)	\$ 1,844	\$ (206)	\$ 1,844

The accompanying notes are an integral part of these unaudited consolidated financial statements

Consolidated Statement of Change in Net Debt (Unaudited)

<i>(thousands of Canadian dollars)</i>	Notes	2018	Three Months Ended		Six Months Ended	
		Budget	September 30, 2017	2016	September 30, 2017	2016
(Deficit) Surplus for the period		\$ 318,007	\$ (34,917)	\$ (25,945)	\$ (24,961)	\$ 20,871
Tangible capital assets						
Acquisition of tangible capital assets	8	(165,000)	(32,403)	(36,356)	(55,321)	(69,521)
Amortization of tangible capital assets	8	35,350	9,865	6,476	19,103	12,313
Disposal of tangible capital assets	8	-	229	138	222	138
		(129,650)	(22,309)	(29,742)	(35,996)	(57,070)
Non-financial assets						
Changes in prepaid expenses		-	(68)	248	(475)	(177)
Net remeasurement (losses) gains for the period		-	(1,009)	185	(1,084)	543
(Increase) decrease in net debt		188,357	(58,303)	(55,254)	(62,516)	(35,833)
Net debt at beginning of period		(7,577,730)	(7,589,617)	(7,831,531)	(7,577,730)	(7,843,195)
Transfer to deferred decommissioning and waste management funding		(18,000)	(6,320)	(6,320)	(12,251)	(12,251)
Transfer to repayable contributions		(5,000)	(272)	(724)	(2,015)	(2,550)
Net debt at end of period		\$ (7,412,373)	\$ (7,654,512)	\$ (7,893,829)	\$ (7,654,512)	\$ (7,893,829)

The accompanying notes are an integral part of these unaudited consolidated financial statements

Consolidated Statement of Cash Flows (Unaudited)

<i>(thousands of Canadian dollars)</i>	Three Months Ended		Six Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Operating transactions				
Cash receipts from Parliamentary appropriations	\$ 320,400	\$ 167,980	\$ 584,400	\$ 517,696
Cash receipts from customers	6,167	36,964	36,317	76,318
Cash paid to suppliers	(103,232)	(46,220)	(193,031)	(185,612)
Cash paid to employees	(3,841)	(3,965)	(9,405)	(9,023)
Cash paid for decommissioning, waste management and contaminated sites activities	(93,649)	(100,311)	(182,007)	(177,444)
Interest received	451	177	676	463
Cash provided by operating transactions	126,296	54,625	236,950	222,398
Capital transactions				
Acquisition of tangible capital assets	(31,617)	(38,395)	(57,941)	(82,435)
Cash applied to capital transactions	(31,617)	(38,395)	(57,941)	(82,435)
Increase in cash	94,679	16,230	179,009	139,963
Cash at beginning of period	121,354	208,286	37,024	84,553
Cash at end of period	\$ 216,033	\$ 224,516	\$ 216,033	\$ 224,516

The accompanying notes are an integral part of these unaudited consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the three and six months ended September 30, 2017

(Expressed in thousands of Canadian dollars)

(Unaudited)

1. The Corporation

Atomic Energy of Canada Limited (AECL) is a federal Crown corporation whose mandate is to enable nuclear science and technology and manage Canada's radioactive waste and decommissioning activities. Since 2015, AECL has been delivering its mandate through a long-term contract with Canadian National Energy Alliance (CNEA) for the management and operation of Canadian Nuclear Laboratories (CNL) under a Government-owned, Contractor-operated model.

AECL also manages the retained liabilities associated with its former CANDU Reactor Division (Commercial Operations), which was sold to Candu Energy Inc., a wholly-owned subsidiary of SNC-Lavalin, on October 2, 2011. These activities are referred to as the Wrap-Up Office.

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 2017-2018 to 2021-2022 Corporate Plan received Governor in Council approval in the fourth quarter of the 2016-17 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

a) Basis of Accounting

These consolidated quarterly financial statements have been prepared in accordance with Canadian Public Sector Accounting Standards (PSAS) established by the Public Sector Accounting Board (PSAB), and reflect the policies below.

These consolidated quarterly financial statements should be read in conjunction with the annual audited consolidated financial statements dated March 31, 2017.

Both financial and non-financial assets are reported on the Consolidated 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 financial assets (or debt), but rather are added to the net financial assets (or debt) to determine the accumulated surplus (deficit).

Measurement Uncertainty

The preparation of the consolidated 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 consolidated quarterly financial statements and are reviewed annually 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 2017-18 budget is reflected in the Consolidated Statement of Operations and Accumulated Deficit and the Consolidated Statement of Change in Net Debt. Budget data presented in these consolidated financial statements is based upon the 2017-18 projections and estimates contained within the 2017-18 to 2021-22 Corporate Plan.

b) Basis of Consolidation

Subsidiaries are entities controlled by AECL. The financial statements of subsidiaries are included in the consolidated quarterly financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries have been changed when necessary to align them with the policies of AECL. These consolidated quarterly financial statements include the accounts of AECL's wholly-owned but inactive subsidiary, AECL Technologies B.V., incorporated in the Netherlands in 1995.

3. Trade and Other Receivables

<i>(thousands of Canadian dollars)</i>	September 30, 2017	March 31, 2017
Trade receivables	\$ 19,061	\$ 18,058
Less: allowance for doubtful accounts	(3,419)	(3,419)
Net trade receivables	15,642	14,639
Other receivables:		
Unbilled revenue	6,918	7,632
Consumption taxes receivable	29,987	11,825
Contract receivables from customers in respect of the financing of products and services, maturing through 2019 at fixed repayment amounts	13,991	28,096
Finance lease receivable	6,139	7,619
Other receivables	1,098	1,098
	\$ 73,775	\$ 70,909

4. Accounts Payable and Accrued Liabilities

<i>(thousands of Canadian dollars)</i>	September 30, 2017	March 31, 2017
Trade payables	\$ 8,046	\$ 5,864
Other payables and accrued expenses	17,949	19,027
Accrued payroll liabilities	1,484	3,555
Amounts due to related parties	37,846	35,832
Amounts due to Shareholder	675	1,080
Provisions	6,276	6,153
	\$ 72,276	\$ 71,511

The carrying values of trade and other payables are considered to be a reasonable approximation of fair value due to their short-term nature.

The Amounts due to Shareholder represent royalty revenues. The Amounts due to related parties represent cash proceeds from the sales of heavy water (Note 12 of the annual audited consolidated financial statements dated March 31, 2017).

Provision amounts are short-term in nature and are not discounted and include exposure to claims related to life extension projects, as well as 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		Six Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Payments by employees	\$ 212	\$ 188	\$ 519	\$ 401
Payments by employer	548	427	2,066	1,209

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) Employee Future Benefits

AECL provides certain voluntary termination compensation (VTC) and other post-employment benefits as described in Note 3(i) of the annual audited consolidated financial statements dated March 31, 2017. 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 of \$24.3 million (March 31, 2017: \$25.2 million).

The VTC included in the reported Employee future benefits liability is \$10.3 million (March 31, 2017: \$10.5 million) and is payable in instances of future voluntary resignations and retirements.

AECL's total expense for employee future benefits was \$0.4 million for this quarter (Q2 2016-17: \$1.6 million). On a year-to-date basis, the total expense for employee benefits was \$0.9 million (year-to-date 2016-17: \$2.3 million).

6. Decommissioning and Waste Management Provision

AECL has an obligation to decommission its nuclear facilities and other assets in order 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.

<i>(thousands of Canadian dollars)</i>	September 30, 2017	March 31, 2017
Carrying amount - Beginning of period	\$ 6,492,243	\$ 6,763,423
Liabilities settled	(136,729)	(250,002)
Unwinding of discount	125,933	262,387
Revision in estimate and timing of expenditures	-	(293,390)
Waste, decommissioning and site restoration costs from ongoing operations	5,336	9,825
Carrying amount - End of period	\$ 6,486,783	\$ 6,492,243

The undiscounted future expenditures, adjusted for inflation, for the planned activities comprising the liability are \$16,403.2 million (March 31, 2017: \$16,539.9 million).

The provision was discounted using a rate of 3.88% as at September 30, 2017 and March 31, 2017.

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.

<i>(thousands of Canadian dollars)</i>	September 30, 2017	March 31, 2017
Carrying amount - Beginning of period	\$ 1,081,866	\$ 1,109,493
Liabilities settled	(50,614)	(84,378)
Unwinding of discount	11,798	24,409
Revision in estimate and timing of expenditures	-	32,342
Carrying amount - End of period	\$ 1,043,050	\$ 1,081,866

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 30 years after implementation. The liability is discounted using net present value techniques at a rate of 2.18%. The estimated total undiscounted expenditures are \$1,162.9 million (March 31, 2017: \$1,213.5 million).

The balance of the contaminated sites liability represents 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 that resulted from past practices, no longer considered acceptable by today's standards, for which the original owner can no longer be reasonably held responsible.

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, 2017	\$ 184,512	\$ 82,654	\$ 416,808	\$ 447,238	\$ 1,131,212
Additions and transfers	55,321	25	(1,606)	7,417	61,157
Disposals and transfers	(5,836)	-	(376)	(1,018)	(7,230)
Cost at September 30, 2017	233,997	82,679	414,826	453,637	1,185,139
Accumulated amortization at March 31, 2017	-	34,765	193,311	308,462	536,538
Amortization	-	1,937	4,543	12,623	19,103
Disposals	-	-	(381)	(791)	(1,172)
Accumulated amortization at September 30, 2017	-	36,702	197,473	320,294	554,469
Net carrying amount at March 31, 2017	184,512	47,889	223,497	138,776	594,674
Net carrying amount at September 30, 2017	\$ 233,997	\$ 45,977	\$ 217,353	\$ 133,343	\$ 630,670

9. Parliamentary Appropriations

AECL segregates its Parliamentary appropriations to ensure funds are spent in a manner consistent with the purpose for which they were approved. Approved Main Estimates and Supplementary Estimates include amounts for the operations of the Nuclear Laboratories, including the safe operations of the Chalk River Laboratories.

Parliamentary appropriations were recognized as follows:

<i>(thousands of Canadian dollars)</i>	Three Months Ended		Six Months Ended	
	September 30		September 30	
	2017	2016	2017	2016
Parliamentary appropriations for operating and capital expenditures				
Amount received during the period for operating and capital expenditures	\$ 320,400	\$ 167,980	\$ 584,400	\$ 517,696
Amount receivable from a previous period	-	147,596	(94,430)	(19,400)
Amount received related to the next period (Deferred funding)	(187,100)	(167,980)	(187,100)	(167,980)
Total Parliamentary appropriations recognized	\$ 133,300	\$ 147,596	\$ 302,870	\$ 330,316

In Q2 2017-18, AECL received \$320 million and recognized a sum of \$133 million (Q2 2016-17: \$168 million received and \$148 million recognized). On a year-to-date basis, AECL received \$584 million and recognized \$303 million in Parliamentary appropriations (year-to-date 2016-17: \$518 million received and \$330 million recognized). The difference between received and recognized Parliamentary appropriations relate to amounts received but related to either a previous or subsequent quarter.

The amounts approved for operating and capital expenditures totaled \$970 million for the year ending March 31, 2018 and \$845 million for the year ended March 31, 2017 based on the approved funding profile.

10. Contractual Arrangement

As of September 13, 2015, AECL has been delivering its mandate through a long-term contract with CNEA for the management and operation of CNL under a Government-owned, Contractor-operated model. Prior to this date, CNL operated as a wholly-owned subsidiary of AECL.

Under the Government-owned, Contractor-operated model, the assets, sites and facilities continue to be owned by AECL, but are being managed and operated by a private-sector company. As such, AECL makes payments to CNL and CNEA ("Contractual amounts paid or payable") as per the terms of the contractual arrangement.

The following contractual expenses were incurred:

<i>(thousands of Canadian dollars)</i>	Three Months Ended		Six Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Contractual amounts paid or payable	\$ 225,818	\$ 254,950	\$ 430,291	\$ 449,878
Less: Costs charged to Decommissioning and waste management provision and Contaminated sites liability	(95,188)	(101,791)	(186,121)	(181,681)
Less: Costs charged to Construction in progress	(32,404)	(37,164)	(55,322)	(69,662)
Less: Costs classified as Cost of sales	(15,642)	(15,867)	(25,375)	(36,373)
Contractual expenses	\$ 82,584	\$ 100,128	\$ 163,473	\$ 162,162

Contractual amounts paid or payable on account of the current year include fees paid to CNEA, in accordance with the long-term contractual arrangement between AECL and CNEA and CNL.

11. Comparative Figures

Certain of the September 30, 2016 comparative figures have been reclassified to conform to the financial statement presentation adopted in the 2017-18 fiscal year.



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