

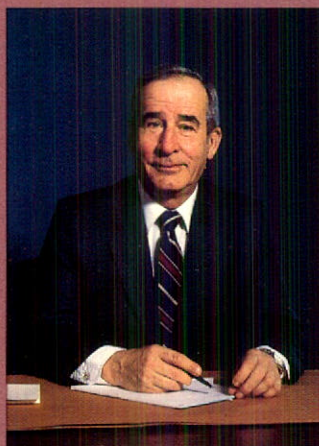
NUCLEAR ENERGY IS NOT A  
CREATION OF SCIENTISTS. IT IS,  
INSTEAD, A BASIC PART OF NATURE.  
THROUGH RESEARCH AND  
TECHNOLOGY WE HAVE LEARNED  
HOW TO TURN ITS BENEFITS TO OUR  
USE JUST AS WE LEARNED HOW TO  
CAPTURE THE ENERGY OF FAST-  
FLOWING WATER TO TURN MILL  
WHEELS AND, LATER, TO POWER  
ELECTRIC GENERATORS.





## LETTER OF TRANSMITTAL

The Honourable Marcel Masse,  
P.C., M.P.  
Minister of Energy, Mines  
and Resources  
House of Commons  
Ottawa, Ontario



BASIL A. BÉNÉTEAU

Dear Mr. Masse:

In accordance with subsection 152(1) of the Financial Administration Act, I am pleased to submit the annual report of Atomic Energy of Canada Limited for the fiscal year ended March 31, 1987, together with the financial statements and the report of the auditor general.

It is with a great deal of pleasure that I submit this report, the first since my appointment as chairman of the board of directors, and I am confident that, with your co-operation and assistance, this corporation will make excellent progress in the years ahead.

I take pleasure in welcoming to the board, two new members – Mrs. Louise Martin and Dr. Kris Rao. Mrs. Martin has established a distinguished career in law in the Province of Quebec and will make a significant contribution to this corporation. Dr. Rao, a prominent member of Saskatchewan's medical community, is a specialist in therapeutic radiology, and I know he takes a particular interest in advancing the peaceful uses of atomic energy.

We look forward to maintaining our close relationship with you in order to ensure that Canada's nuclear industry continues to work for the benefit of all Canadians.

Respectfully,

A handwritten signature in dark ink, appearing to read 'B. A. Bénéteau', written in a cursive style.

Basil A. Bénéteau

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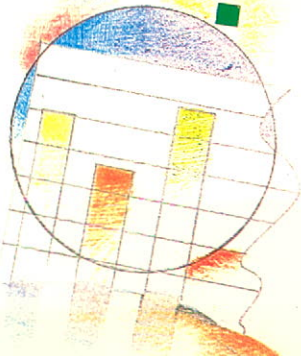
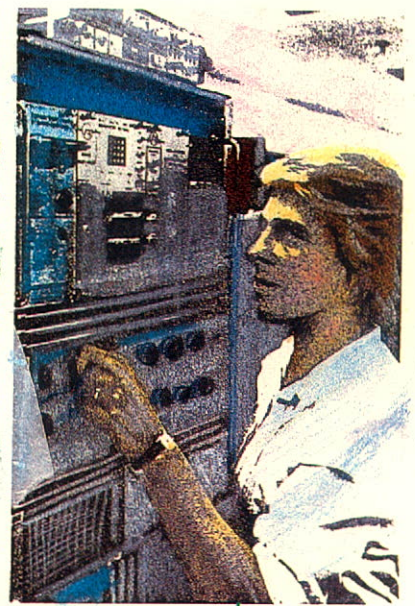
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# FINANCIAL HIGHLIGHTS

(millions of dollars)

	1987	1986
Commercial Operations		
Revenue	268	260
Operating Profit	21	28
Net Income	17	17
Parliamentary Appropriations	218	275
Research and Development Operations	223	212



THE ECONOMY





Over the past year, we again faced a number of major strategic issues as we addressed our prime objective of sustaining a sound Canadian nuclear power option.

Measured in terms of safety, reliability, economy and environment, Canada's nuclear power program is a success and a tribute to the efforts of a great many Canadians and the governments who supported them. The fact that in 1986 less than 20% of the general public was absolutely in favor of future nuclear development and that 40% was opposed, denegrates this success and demonstrates that our industry must communicate more effectively with the public. During the current year, AECL will take additional steps to address the public's deep concern with nuclear technology and to help improve Canadian understanding of the scope of this industry and its significance to the country.

Part of the public's concern was precipitated by the nuclear accident at Chernobyl, around which original reports of death and destruction were grossly exaggerated. Yet, in spite of the accident, most countries with ongoing nuclear activities have reaffirmed their confidence in the technology and are proceeding with their programs. New units were committed in Korea, China, France, Japan, and the United Kingdom.

Here in Canada, the excellent performance of the operating units at Pickering, Bruce, Gentilly and Point Lepreau continue to demonstrate the economics of nuclear power. The start up in 1987 of the

two retubed Pickering units and the beginning of operations at Darlington later in the decade will reinforce the lifetime economic picture for Canadian nuclear power. It is difficult to imagine, therefore, that the predicted growth in electrical demand will not call for new Canadian commitments as we approach the next decade.

Determining the appropriate size and shape of AECL to protect current commitments and to meet this future demand continues to require priority attention. After five years of staff reductions, we are approaching critical levels at CANDU Operations and in the Research Company. Great ingenuity has been demanded to preserve irreplaceable skills, although diversification programs in both areas are sustaining morale while providing meaningful revenues. As some of these new projects mature, we can look forward to a more self-reliant future.

#### **FORTY YEARS IN NUCLEAR MEDICINE**

Pride of place this year must go to our radiochemical activities. While celebrating 40 years of Canadian involvement with nuclear medicine, this area of the corporation recorded substantial improvements in revenues and earnings.

Our Radiochemical Company, a Canadian success story that is little known to any but its satisfied customers around the globe, manufactures and supplies radioactive elements used to diagnose and

treat a wide range of illnesses and human physical dysfunctions. At its headquarters in Kanata, northwest of Ottawa, the Radiochemical Company also designs and builds equipment used to sterilize disposable medical goods and eliminate insects and microorganisms from food. Last year, it sold these industrial irradiators and a range of other products and services to many customers around the globe, some as far away as China. Further, it maintained its position as the world's largest supplier of cobalt-60, the radioactive element used in these irradiators and in the cobalt machines which treat cancer.

The Radiochemical Company owes its existence and its initial technical success to the scientists who probed, explored and experimented at AECL's Chalk River Nuclear Laboratories, where Canada's major nuclear research programs have been conducted for the past 40 years. Its commercial success arose from the foresight and skills of a succession of AECL managers and staff, who moulded it into a viable, profitable business now recognized as a leader around the world.

We have consistently believed that this sector of our corporation could profit from the business flexibility available in the private sector. The Canadian government continues to examine this option.

The successful technical and business development of the Radiochemical Company serves as a model for future businesses which are emerging from our current and planned research and development programs.

A sister division, AECL Medical, has seen the turn-around programs of 1985-86 turn into business success in 1986-87. More cobalt cancer therapy machines were ordered than at any time in the past 10 years and our advanced treatment planning systems were successfully introduced.

#### **CANDU: THE MAJOR THRUST**

In terms of commercial activity, however, AECL's major thrust historically has been toward the design, construction and marketing of the CANDU nuclear power system through CANDU Operations and this activity will remain a priority of the corporation. Yet, for the sixth year in a row, CANDU Operations has completed the year with no new power station orders due to the dearth of opportunities worldwide. This temporary hiatus in the marketplace is primarily the result of a combination of poor economic conditions in many developing countries and an over-supply of electrical generation in developed nations.

While we know that nuclear-power programs around the world will escalate dramatically over the next decade to provide solid opportunities for our technology, our current activities are restricted to a handful of prospects which are difficult to realize for a variety of reasons, some of them independent of the corporation's endeavors.

Despite a supreme effort by our CANDU Operations marketing and technical personnel, we are unable



at this time to conclude a contract with the Turkish authorities due to financing difficulties. Also, our failure to win a contract this year against the toughest of American interests in the Republic of Korea has only made us more determined to convince Korea Electric Power Company that their successful Wolsung CANDU can be economically repeated.

Once again we have had to reduce our complement of engineering staff, bringing us near to critical levels. The realignment studies in this area, which began in 1981, continue, although the final form of a national CANDU corporation benefiting from the combined skills of AECL, Ontario Hydro and Canadian industry still awaits a construction program around which to coalesce.

Development of the new CANDU 300 has proceeded exceptionally well. Discussions with many countries have confirmed strong interest in this reactor, and further promotion now awaits a Canadian demonstration unit. Toward this end, a major effort, supported by the federal government, is underway to negotiate with New Brunswick Power to commit to expansion of its nuclear generating program at the Lepreau site based on the CANDU 300.

#### **COMMITMENT TO RESEARCH AND DEVELOPMENT**

The Research Company completed its first full year of operation after a substantial realignment of its financial and human resources.

We feel this part of our corporation has successfully rationalized

all of its programs to meet the demands of current and future CANDU customers while enlarging its commercial research and development activities. The focused thrust into commercial work will allow it to earn a larger portion of the funds it requires to sustain its programs in underlying nuclear research.

The judgement on the size of the research base required for a unique Canadian reactor program is a most complex one. To support one of the only two surviving nuclear systems at levels of one-tenth and one-fifth of American and Japanese research investment respectively, is a great tribute to the ingenuity of our staff and the Canadians who back it. I believe our current levels are indeed critical and well balanced.

We confidently anticipate securing financial support for our programs from our client utilities, particularly Ontario Hydro.

Together with the federal government's long-term commitment, albeit at reduced funding levels, this will enable us to maintain the research activity levels essential for a meaningful nuclear program.

Overall corporate financial results for the year were again satisfactory given the very difficult power reactor environment. Net income was similar to last year's at \$17 million, well above plan levels, due to satisfactory resolution of Argentina's debt situation and the continuing growth in the radiochemical sector. Cash resources remained reasonably stable at \$58 million.

The employees of all divisions responded well to these difficult times. A reducing workforce and

the absence of substantial recruitment limits the corporation's ability to manoeuvre in employment enhancement. Nevertheless, we remain dedicated to providing an environment which strengthens the concepts of employment equity, broad participation, and a satisfying and challenging working life for as many Canadians as possible.

I would like to pay tribute to two Canadian nuclear pioneers who died during the year – Dr. W. B. Lewis, the father of the CANDU, and our past president, J. Lorne Gray. More than any others, these two complementary leaders of AECL ushered in the nuclear age in Canada. Their integrity, ingenuity, dedication, and their contribution to the nation's technology storehouse will be remembered by all who were privileged to know and work with them.

In summary, we met our goals during the past year and we are confident our future can be secured by the dedication and skills of all our staff. We cannot but be concerned however, about the erosion of popular support for nuclear power. A renewed effort is under way to address this issue. It is our belief that a full understanding of the domestically developed technology will give Canadians added confidence in their long-term energy future.



James Donnelly  
President



JAMES DONNELLY



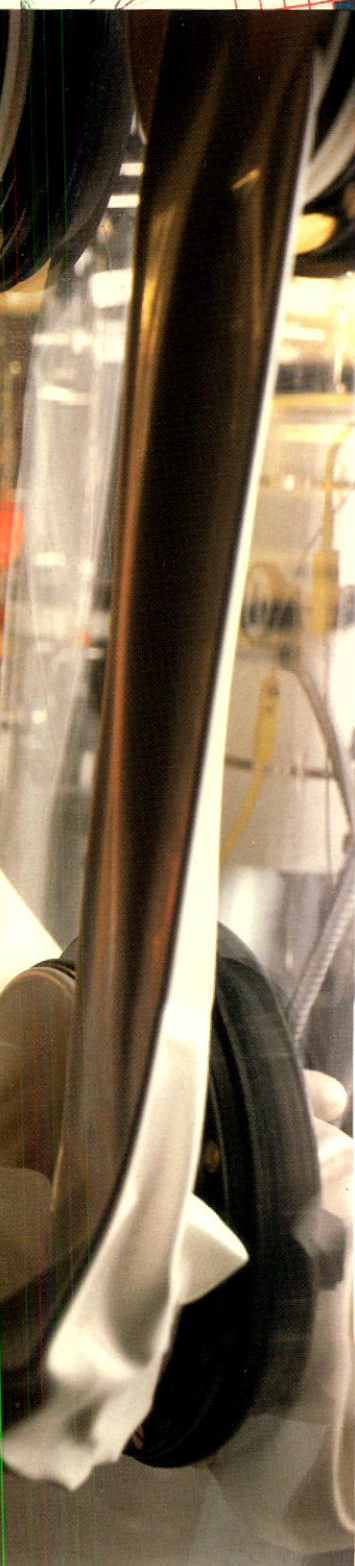
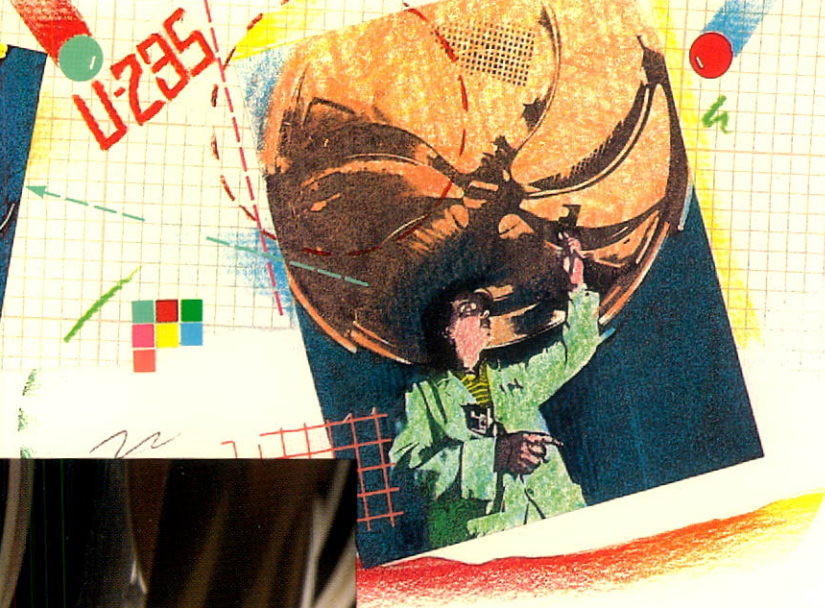


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JOAN MILLER, SECTION LEADER OF TRITIUM TECHNOLOGY IN THE CHEMICAL ENGINEERING BRANCH OF THE RESEARCH COMPANY, IS WORKING WITH NEW TRITIUM EXTRACTION EQUIPMENT AT THE FIRM'S CHALK RIVER NUCLEAR LABORATORIES. THE EXTRACTION PLANT WILL OFFER GOOD POTENTIAL BUSINESS OPPORTUNITIES IN THE AREA OF REACTOR DETRITIATION SERVICES. TRITIUM, A RADIOACTIVE ISOTOPE OF HYDROGEN, ALSO HAS USES IN REMOTE AIRFIELD RUNWAY LIGHTING AND RESEARCH ACTIVITIES.







The reorganized Research Company moved steadily forward in 1986-87 on its mission to perform the research, development, demonstration and marketing required to apply nuclear sciences and associated technologies for the benefit of Canadians. It was the first full year of operation with a new structure designed to streamline the management function, increase customer orientation and improve operating efficiency.

The official opening of a new \$12-million, atom-smashing Tandem Accelerator Superconducting Cyclotron (TASCC) marked a major achievement in pure research. TASCC was conceived, designed and built by AECL scientists and engineers. The program of fundamental nuclear physics which it makes possible involves a record number of participating university scientists.

A joint-funding arrangement with universities was approved in 1986-87 for construction of neutron-scattering equipment to study the physics of solids and liquids. This program is leading to commercial spin-offs in the measurement of distortions in materials caused by industrial processes such as bending and welding.

Last year, AECL became responsible for managing Canada's national fusion program. This research area is on the leading edge of nuclear technology with attractive business opportunities for Canada. AECL will participate in the operation of the \$40-million Tokamak de Varennes fusion test facility near Montreal and in the

Canadian Fusion Fuels Technology Project as well as in overall international co-operation in fusion.

AECL's SLOWPOKE Energy System, which will produce heat, electricity, or both simultaneously, reached a milestone in 1986-87 with completion of the SLOWPOKE Demonstration Reactor (SDR). The SDR is an extension of a series of small research reactors and is intended to demonstrate its potential as a commercial heating system in the 2- to 10-megawatt thermal range. The prime market for the unit lies in areas not connected to energy distribution systems and where heat and/or electricity is generated using oil transported from distant sources. Major goals of SDR in 1987-88 are to demonstrate remote monitoring of the reactor and to supply heat to buildings at the Whiteshell Nuclear Research Establishment.

AECL's nuclear fuel waste management research program took another positive step forward last year. Construction of the Underground Research Laboratory (URL) near Lac du Bonnet, Manitoba, reached an advanced stage and preparations began to extend the access shaft from a depth of 240 metres to 455 metres. Funding for this expansion resulted from an \$81.8-million co-operation agreement with the U.S. Department of Energy.

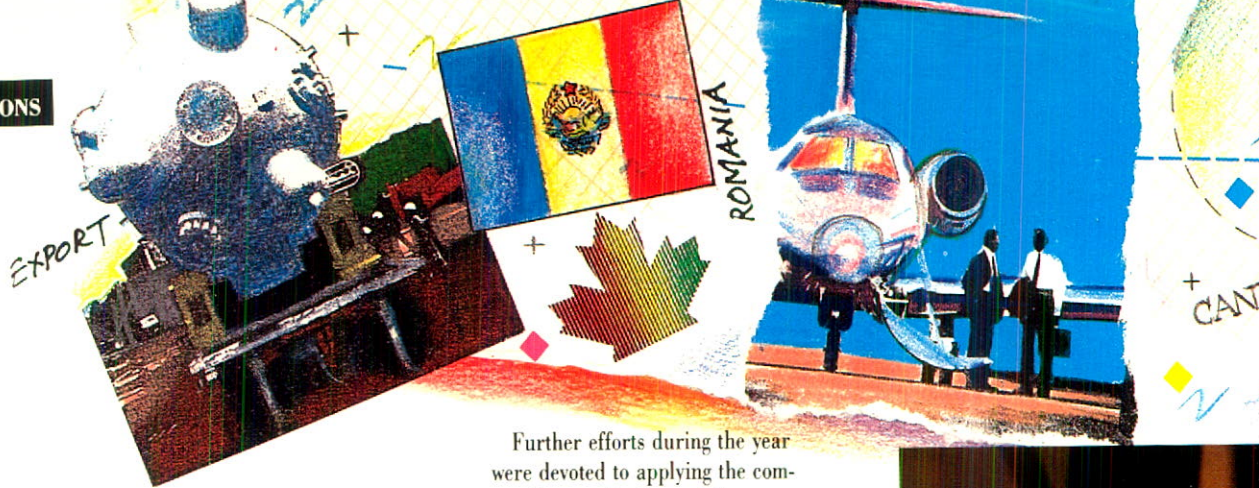
Construction of the Tritium Extraction Plant (TEP) for the removal of tritium from heavy water is nearing completion with initial operation expected in early 1988. Tritium is valuable for

research and industrial use and offers good potential business opportunities. Completion of the extraction plant is expected to lead to tritium sales for remote airfield runway lights and detritiation services for reactors.

Research Company scientists and engineers will be building on the achievements of the past year in reaching for new targets in 1987-88. These targets include:

- Initial operation of a low-power accelerator for radiation applications research to play a lead role in research and development necessary to support increased use of ionizing radiation from isotope and machine sources for industrial radiation processing.
  - Research to develop a practical test to determine the sensitivity to radiation of both nuclear workers and the general public. This test will be used to screen the population at large for increased sensitivity to radiation and chemicals.
  - Continued development of the MAPLE family of light-water, research reactors which use low-enriched uranium and have worldwide potential as neutron sources and for production of radioisotopes for medical, industrial and research applications. The MAPLE is intended to satisfy some unique needs of developing countries for a flexible reactor to be used for isotope production, physics experiments and testing of power reactor fuel.
  - First operation of the Tokamak de Varennes fusion test facility.
- Bolstered by a successful year of transition, the Research Company is facing these new challenges of 1987-88 with renewed confidence as it maintains its standards of excellence in research and development, expands the commercial exploitation of this research and development work and develops new businesses. Increased funding from sources other than the federal government are expected to play a key role in realizing objectives.





Last year CANDU Operations provided engineering and procurement services to nuclear power stations under construction plus technical services to operating stations and other clients. But no new CANDU orders materialized and a bid for Korea units 11 and 12 was lost.

The business lull resulted in lower revenue, restraint measures, staff reductions and organizational realignment. Nevertheless, funds were generated to support development work, particularly on the CANDU 300, and ongoing marketing, while breaking even in the total business.

Responding to international interest in smaller nuclear units, CANDU Operations continued development of the CANDU 300 model, moving from the conceptual design phase to pre-project engineering work. Improvements to the CANDU 600 design, to upgrade power output and reliability, are also under way.

Construction of the five-unit station in Romania continued and major components were shipped from Canadian manufacturers. The first of the fuelling machines, built by Canadian General Electric, and computers manufactured by CAE Industries were delivered to the Sheridan Park Engineering Laboratory. The fuelling machine is being tested and used for operator training, while station computers are used for testing software prior to shipment to Romania. Equipment orders shipped from Canadian manufacturers for Romania to date are valued at \$163 million.

The initial stage of decommissioning of the Gentilly 1 prototype station in Quebec was completed on schedule in April 1986. Decommissioning of the Douglas Point

station in Ontario reached the stage where construction of the above-ground, concrete fuel-storage casks was completed in preparation for transfer of spent fuel from the station. These activities produced an AECL team experienced in decommissioning project management, decontamination and fuel-storage technologies, and radiation protection and health physics. The two heavy-water plants in Nova Scotia were also decommissioned and partly dismantled, with only a small surveillance and maintenance crew remaining.

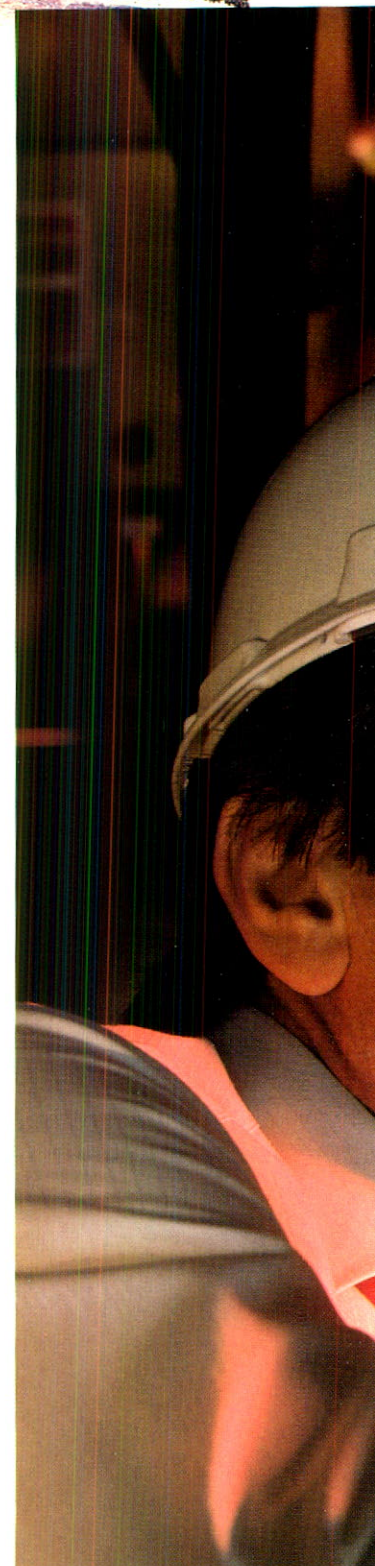
CANDU Operations participated in joint-business ventures with other AECL operating units last year. One of these was to supply Indonesia with a nuclear mechatronic laboratory. The project progressed on schedule, and in mid-1986, Indonesia called for bids on the final phase of its nuclear research centre. AECL is bidding for this multi-million-dollar project. Towards year end, Indonesia requested that AECL participate in studies for its first nuclear power project.

CANDU Operations also submitted a proposal to Yugoslavia in June 1986 for a program based on CANDU reactors. And discussions continue with The Netherlands, where AECL is providing information for the technical evaluation of nuclear power. Engineering services licence agreements were signed with NUCON Engineering and Contracting of The Netherlands and IVO International of Finland. CANDU Operations also maintained offices in Ankara, Bucharest, Buenos Aires, The Hague, Seoul, Tokyo and Zagreb. New offices were opened in the United States.

Further efforts during the year were devoted to applying the company's expertise beyond the CANDU engineering sector. Among the extended services now provided are undertakings which apply to non-CANDU nuclear systems, to non-nuclear aspects of power engineering and to other industrial applications. Growth potential was identified and pursued in several fields, particularly in advanced systems applications, such as materials handling based on our nuclear engineering experience. Specific contracts include automated water-jet cutting of automobile dashboard trim, reliability studies for an automated computer tape library, and development of a loading arm robot to handle welding materials for underwater pipeline repairs. Clients for high-technology services included American Motors, Rohm & Haas, COMEX and Woodbridge Foam Corp.

Organizational streamlining, simplification of methodology and practices, and stringent management of overhead and development costs will continue in the coming year as we strive to meet our objectives of extended markets, competitive positioning, customer satisfaction, and an early commitment to a major CANDU project.

During this year's celebration of Canada's engineering centennial, CANDU was acknowledged as one of the nation's top 10 engineering achievements. Benefits derived from CANDU are evident, and recognition extends even to countries which have chosen other nuclear systems. A September 1986 report prepared for Japan's Ministry of International Trade and Industry said: "The CANDU, developed in Canada, is an economically field-proven reactor. It is the most efficient of all existing reactors in utilizing uranium resources."

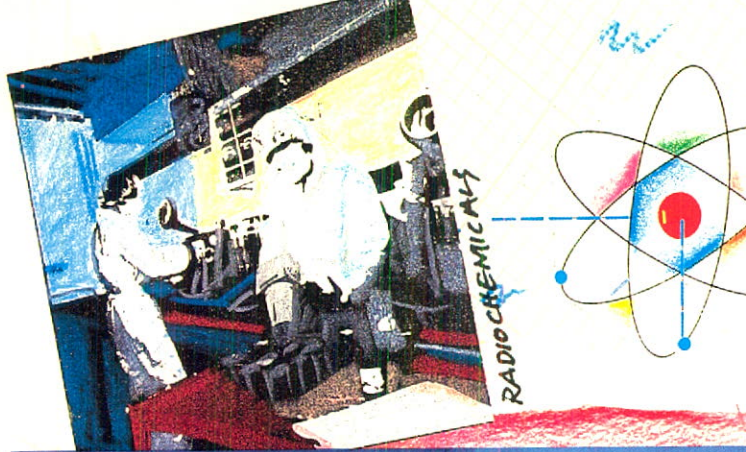






ERWIN RUMMEL, MANAGER OF THE  
SHERIDAN PARK ENGINEERING  
LABORATORY, INSPECTS A FUELLING  
MACHINE BEING TESTED PRIOR TO  
SHIPMENT TO CERNAVODA,  
ROMANIA, WHERE A CANDU  
STATION IS CURRENTLY UNDER  
CONSTRUCTION.

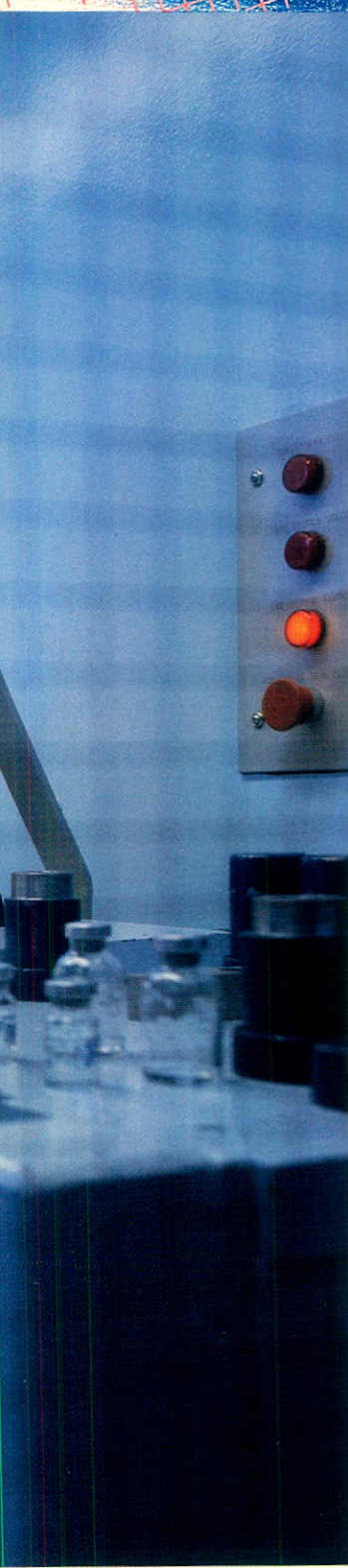




ANNE McLAY AND JEAN-PIERRE  
DESJARDINS ARE TWO OF THE  
RADIOCHEMICAL COMPANY'S HIGHLY  
SKILLED TECHNICIANS WHO WORK IN  
THE COMPUTER-CONTROLLED, SEMI-  
AUTOMATIC PROCESSING FACILITY  
WHICH PRODUCES TECHNETIUM  
RADIOPHARMACEUTICAL GENERATORS.







The Radiochemical Company serves market niches in the world's health-care industry. As a leading supplier of nuclear-based medical and industrial products, it services nuclear medicine and radiation-processing markets through its Isotope and Industrial Irradiation Divisions.

The Isotope Division supplies about two-thirds of the world's bulk, reactor-produced isotopes, as well as cyclotron- (particle accelerator) produced isotopes and a range of related technologies, equipment, and services. It also develops and produces its own finished radiopharmaceuticals.

During the year, a computer-controlled, semi-automatic processing facility for producing technetium radiopharmaceutical generators was installed. The new technetium generator production facility adds adequate capacity to supply the entire Canadian market for this product. This increased capacity is necessary in view of a manufacturing and distribution agreement concluded with Merck-Frosst Canada by which the Radiochemical Company will manufacture all radioactive pharmaceuticals marketed by Merck-Frosst in Canada. At the outset of this venture, the Radiochemical Company will supply more than half of Canada's radiopharmaceutical requirements.

In 1986, the company obtained U.S. and Canadian patents on its unique, high-purity iodine-123 production technology. Patent applications are also in the final review stages in the European Economic Community, Japan, and several other countries. Last year this technology permitted the company's cyclotron group to make the largest batch of high-purity iodine-123 ever produced. Ship-

ments from the Vancouver-based cyclotron doubled those of previous years as markets for this product firmed. This isotope is expected to find broader uses in brain and heart studies. Several promising diagnostic and therapeutic products also underwent initial hospital/patient tests in 1986. These products will potentially increase revenues if the clinical trials prove successful. One new product, iodine-123 labelled hippuran for kidney studies, was approved for clinical distribution in Canada in 1986.

The Industrial Irradiation Division produces and supplies radiation-processing equipment and radiation-emitting energy sources, primarily cobalt-60, to international industrial, medical and research markets. Radiation processing is used primarily to sterilize disposable medical products. The division achieved a notable milestone in October 1986, when total cobalt-60 shipments to date surpassed the 200 million curie mark.

Cobalt demand continues to increase, with annual requirements expected to double within five years. To meet this demand, the company completed the expansion of its shipping/receiving and maintenance facilities in September.

Product-development projects completed during the year include a Computerized Irradiator Monitoring System (CIMS), which is now sold as standard equipment on all new industrial irradiators and as retrofits to installed units. This microprocessor-based system provides computerized control and monitoring capabilities and provides the customer with information on product processing and overall irradiator performance.

The use of gamma processing to preserve food products shows good potential and 1986 saw growth in this market. The Radiochemical

Company designed, manufactured and shipped a full-scale food irradiator for a customer in the Republic of Korea, and installed another plant which will process food products in the People's Republic of China. The Canadian Irradiation Centre, a joint venture with the Institut Armand-Frappier, will be installed and commissioned in 1987-88. This research, training and demonstration facility includes a full-scale, multi-purpose irradiator, classrooms, laboratories, offices, and a warehouse. The centre, located at Ville de Laval, Quebec, will develop and promote Canada's radiation-processing technology.

In response to an urgent request, the company supplied three Gammacell 1000 clinical irradiators to the U.S.S.R. for use in connection with bone marrow transplants performed following the Chernobyl accident. These units were installed in two Moscow hospitals in a matter of days following the request.

The Radiochemical Company achieved significant growth in 1986-87 and its strategies to expand upon its present market base, will contribute to a prosperous future.

### MEDICAL PRODUCTS

The Medical Products Division develops, manufactures and markets cancer therapy and treatment-planning equipment. The participative-management strategy which began in 1985-86 continues, and an employee council was formed to further employee involvement in the division's activities. The results have helped the division make major strides toward a viable operation.

Results for the last half of the fiscal year were encouraging. Product sales are up dramatically from the previous three years. A new cobalt therapy machine, the "Phoenix" was successfully marketed in 1986-87. Also, a new version of AECL's treatment-planning equipment was introduced last year and marketing results are encouraging.



**CONFIDENCE BASED ON PERFORMANCE**

Atomic Energy of Canada Limited is confident nuclear power plant sales will increase early in the next decade. As oil prices rise, more nations will turn to electrical energy. Economic and environmental factors will dictate that nuclear generation become the choice over coal – the only alternative available to many countries.

We expect CANDU to win wide acceptance internationally for a number of reasons. Its safety and performance records are unrivalled; it uses natural uranium fuel, its design is standardized and it is available in a range of sizes from 300 megawatts. Finally, CANDU is backed by Canada's indigenous and respected research, development and industrial base.

CANDU's past performance is its best selling point. When eight units at the Pickering generating station and the seventh of the eight-unit Bruce station were completed, nuclear energy supplied 49% of Ontario Hydro's electricity in 1986, an increase of 7% from 1985.

Two of the Bruce units are ranked first and second in lifetime performance among the world's commercial reactors.

New Brunswick's Point Lepreau reactor is in fourth place in world lifetime performance. After its fourth year of commercial operation in February 1987, it had generated electricity that would have cost more than one billion dollars had it come from oil and had

earned \$470 million in electricity sales to U.S. utilities. The Gentilly 2 station in Quebec also performed well and has helped stabilize the province's electricity system. South Korea's CANDU at Wolsung is providing economical electricity vital to the country's fast-growing economy. And Argentina's Embalse plant also operated well, although its output was curtailed by grid restrictions.

Given this performance record, we are confident CANDU will play a large future role in the international nuclear power business.

**RESEARCH AND DEVELOPMENT**

AECL's Research Company is Canada's centre of excellence in the disciplines associated with nuclear energy – from pure research in nuclear physics to metallurgy and chemistry. It has contributed to Canadian society by exploiting its scientific discoveries and spinning them off into the marketplace. That tradition continues. Further, Research Company scientists now offer their expertise to the marketplace in Canada and abroad – applying their skills to industry and governments on a commercial basis.

This vital element in Canada's research and development community is retaining its place as an innovative contributor to the nuclear industry and to other

facets of Canadian life. Many of tomorrow's products and services are being discovered and developed today in our laboratories at Chalk River, Ontario and Pinawa, Manitoba.

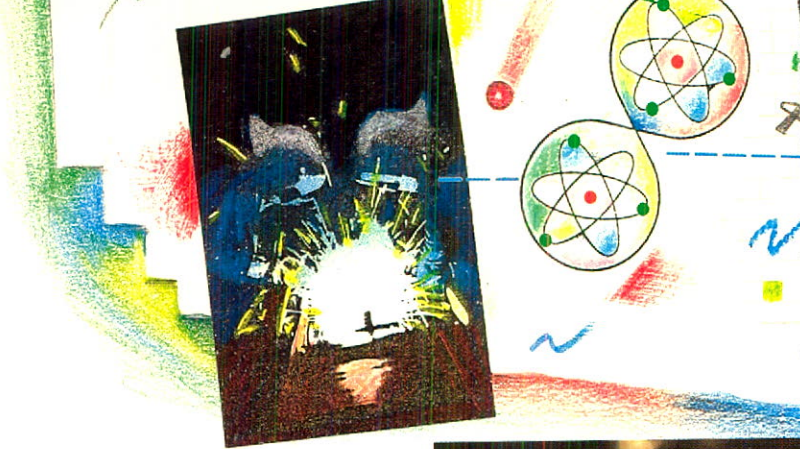
**RADIOCHEMICAL COMPANY**

For 40 years the Radiochemical Company has developed, manufactured and marketed nuclear-related products which serve mankind – from life-extending cobalt-60 for use in cancer therapy machines to the radioactive isotopes used in hospitals and medical clinics around the world. The company's business in irradiation products, which are used for industrial processing, sterilization of disposable medical products and the treatment of food, is growing rapidly. As one of the world's largest and most-experienced suppliers of all of these products, the Radiochemical Company's future is indeed bright.

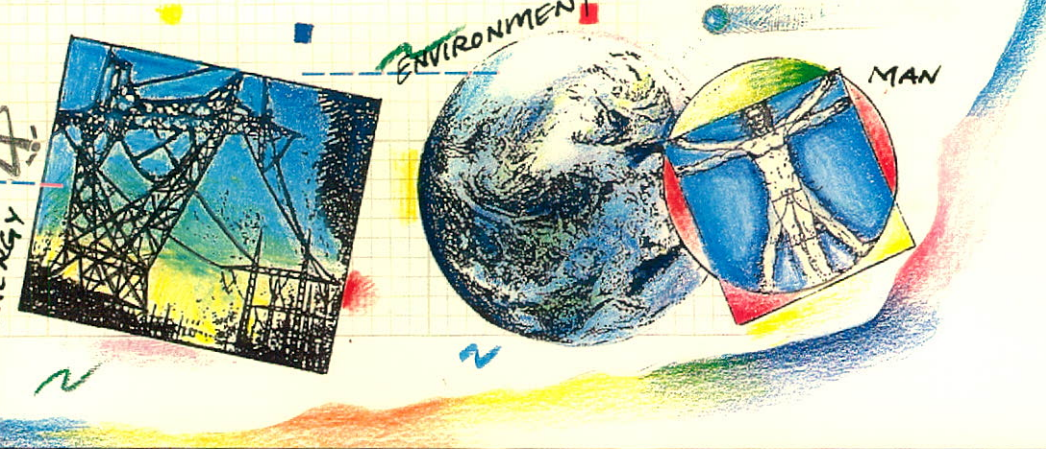
**EMPLOYEES**

AECL now employs approximately 5,000 people, primarily in Ontario, Manitoba, and Quebec. Given the core of nuclear expertise which these employees represent, we fully expect their continued contribution to Canada's economy and its international reputation as a nuclear leader.

Of interest to our employees and those outside the corporation, we have, after a complete review, approved a new, comprehensive conflict of interest policy for employees. Its purpose is to maintain public confidence in the integrity of AECL and its employees by establishing clear rules of conduct respecting conflict of interest.





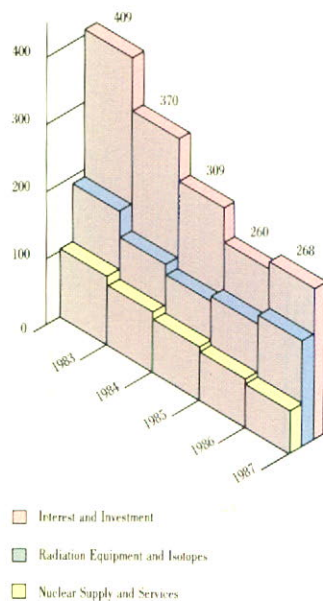


IN THE FUTURE, ATOMIC ENERGY OF CANADA LIMITED WILL CONTINUE ITS NUCLEAR-RELATED RESEARCH AND DEVELOPMENT ACTIVITIES IN THE AREAS WHERE IT HAS ACQUIRED WORLD-CLASS EXPERTISE. THE COMPANY EXPECTS THAT THE PRODUCTS AND SERVICES WHICH EMERGE FROM THESE EFFORTS WILL CONTRIBUTE TO THE BASIC QUALITY OF LIFE ENJOYED BY CANADIANS.

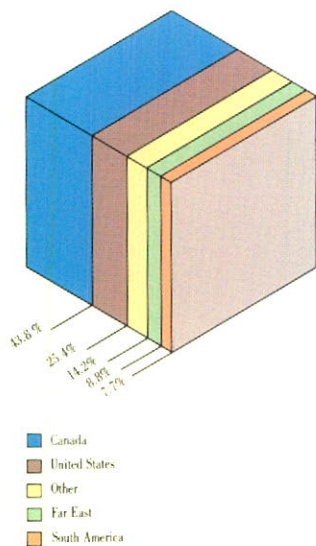


**Commercial Revenue**

Million of dollars



**Commercial Revenue by Geographical Area**



In financial terms the past year was a satisfactory one, given the continuing difficult market conditions for new reactor business and the funding problems of our research and development operations. Net income was closely in line with the earnings performance of the previous year and a small positive cash flow enabled the company to maintain its cash position at an adequate level. Both achievements exceeded expectations at the start of the year.

Consolidated net income of \$17.6 million was significantly higher than the \$8.0 million projected in our corporate plan. Operating profit (defined as commercial earnings before covering the net expenses of research and development) was \$20.7 million, a reduction of \$7.0 million from 1986. This arose mainly from increased costs in support of the CANDU project sector. One-time costs in this division were incurred for staff reductions and increased marketing and development emphasis was required to address the current low levels of business and to direct perspectives toward anticipated future market requirements.

In the Research Company, increased contract and other commercial work, together with stringent cost control and the deferral of some R&D projects to subsequent years, brought the division closer to a financial break-even position than in 1986. Research and development operations generated a charge of \$3.1 million against consolidated earnings, compared with \$10.2 million in the previous year.

The radiation equipment and isotope segment continued to grow impressively in terms of business volume and contribution to AECL's earnings. As increased sources of current product supply come on line and development efforts bear fruit, this growth pattern is expected to continue.

**COMMERCIAL OPERATIONS**

Consolidated revenue under this heading grew modestly over the year, from \$260 million in 1986 to \$268 million in 1987.

Within these totals there occurred an important increase, for the second year in a row, in sales of radiation equipment and isotopes. Following a 12% growth in 1986, sales increased by a further 20% to \$111 million in 1987. Industrial irradiation products provided \$53 million of these sales, an increase of no less than 37% over the previous year, while isotope product sales amounted to \$32 million, a smaller but still significant increase of 14%. Sales of therapeutic equipment and accessory product lines by our Medical Products Division remained stable at close to \$26 million.

Ontario Hydro's retubing program for Pickering Reactor Units 1 and 2 is expected to be completed by the end of calendar 1987. Revenue from the corporation's investment in these units is expected to resume during fiscal 1988/89.

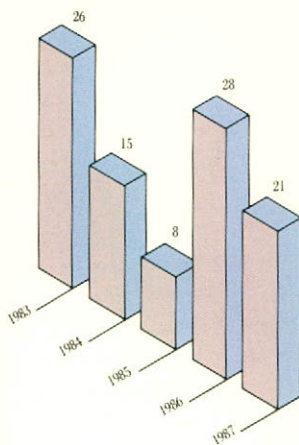
Interest on short-term deposits declined to \$6 million from \$10 million in the previous year, reflecting a substantially lower level of funds available for investment over the year as a whole.

**RESEARCH AND DEVELOPMENT OPERATIONS**

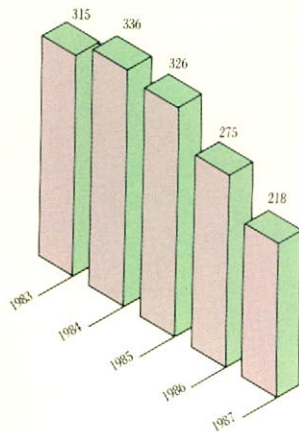
Federal funding of these operations, expressed in current dollars, increased from \$177 million in 1986 to \$182 million in 1987 thanks to \$6 million of specific new support for the co-ordination of a national fusion research program. Parliamentary appropriations for other established programs were reduced by \$5 million (1985 dollars), the second tranche of a total five-year cut back of \$100 million arising out of the 1985 federal budget. The first tranche of \$25 million was successfully absorbed in 1986.



Operating Profit



Parliamentary Appropriations



Overall, the activity level in research and development remained substantially unchanged from the previous year. This is reflected in total expenses of \$223 million compared with \$212 million in 1986, a 5% increase in line with the rate of inflation. By comparison with expectations in our corporate plan, however, it was necessary to curtail the level of spending by some \$27 million due to slower progress than we had hoped for in arranging funding contributions from program beneficiaries.

Nevertheless, revenue generated from research contracts and other commercial work increased by better than 50% over the previous year, from \$25 million to \$38 million, including revenue from the joint program with the United States Department of Energy on waste management.

Capital spending on property, plant and equipment, expensed as incurred and included in total research and development expenses, amounted to \$20 million.

#### DISCONTINUED OPERATIONS

Closure and decommissioning activities for redundant facilities continued during the year. The Gentilly 1 and Douglas Point prototype reactors are now on a safe-keeping basis; the two Cape Breton heavy-water plants are in the shutdown phase, with work proceeding on target. All discontinued facilities are expected to be in a storage mode in calendar 1987. The total discontinued operation costs for 1987, funded by parliamentary appropriations and recoveries from asset sales, amounted to \$36 million, a reduction of \$22 million from the previous year.

#### CHANGES IN FINANCIAL POSITION

Net cash flow from all sources contributed \$2.2 million to available funds over the course of the year. This contrasts with a \$67.2-million reduction in the previous year, of which \$50 million represented a special prepayment of long-term debt to the government.

Cash generated by operations totalled \$11.0 million compared with a cash loss of \$2.5 million in 1986. Progress with long-standing collection difficulties in Argentina made an important contribution.

Investing activities in 1987 were confined to the expenditure of \$9 million on commercial fixed assets and deferred costs, somewhat less than was spent in this way in 1986. In that and prior years, government-funded heavy-water production was also reported as an investing activity, although with no net cash impact. Following the plant shutdown in 1986 there was no new production in 1987.

Financing activities resulted in no net change in the cash position. In 1986 the special government payment mentioned above was the main element in a cash outflow of \$52.7 million under this heading.

With total cash resources of \$58 million at March 31, 1987, AECL has adequate working capital for its expected operating needs over the year now under way. This is subject to the satisfactory conclusion of arrangements for R&D funding contributions from program beneficiaries and for the financing of a much higher level of generic development spending on the new CANDU 300 in the hoped-for event that a commercial opportunity crystallizes this year.



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The financial statements and all other information presented in this annual report are the responsibility of the management and the board of directors of the corporation. The financial statements have been prepared in accordance with generally accepted accounting principles and include estimates based on the experience and judgement of management.

The corporation maintains books of account, financial and management control, and information systems, together with management practices designed to provide reasonable assurance that reliable and accurate financial information is available on a timely basis, that assets are safeguarded and controlled, that resources are managed economically and efficiently in the attainment of corporate objectives, that operations are carried out effectively and that transactions are in accordance with Part XII of the Financial Administration Act and its regulations, as well as the charter, the bylaws and policies of the corporation. The corporation has met all reporting requirements established by the Financial Administration Act, including submission of a corporate plan, an operating budget, a capital budget, and this annual report.

The corporation's internal auditor has the responsibility for assessing the management systems and practices of the corporation. The Auditor General of Canada conducts an independent examination of the financial statements of the corporation and reports on his examination to the Minister of Energy, Mines and Resources.

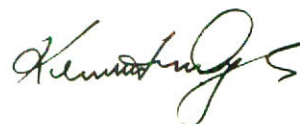
The board of directors' audit committee, composed of directors who are not employees of the corporation, reviews and advises the board on the financial statements, the auditor general's reports thereto and the plans and reports related to special examinations, and oversees the activities of internal audit. The audit committee meets with management, the internal auditor and the auditor general on a regular basis.

To the Minister of Energy, Mines and Resources

I have examined the balance sheet of Atomic Energy of Canada Limited as at March 31, 1987 and the statements of income, contributed capital, retained earnings and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the corporation as at March 31, 1987 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Further, in my opinion, the transactions of the corporation that have come to my notice during my examination of the financial statements have, in all significant respects, been in accordance with Part XII of the Financial Administration Act and regulations, the charter and the bylaws of the corporation.



Kenneth M. Dye, F.C.A.  
Auditor General of Canada

Ottawa, Canada  
May 8, 1987



These financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis. The most significant accounting policies are summarized below:

**FOREIGN CURRENCY TRANSLATION**

Transactions denominated in a foreign currency are translated into Canadian dollars at the exchange rate in effect at the date of the transaction, except those covered by forward exchange contracts, where the rate established by the terms of the contract is used. Monetary assets and liabilities outstanding at the balance sheet date are adjusted to reflect the exchange rate in effect at that date. Exchange gains and losses arising from the translation of foreign currencies are included in income.

**INVENTORIES**

Radiation equipment and materials are valued at the lower of average cost and net realizable value. Maintenance and general supplies are valued at cost. Heavy water is valued at the lower of average cost, less related parliamentary appropriations, and net realizable value. Heavy-water inventory not expected to be sold within the next year or used in operations is classified as non-current.

**INVESTMENT AND DEFERRED COSTS**

Investment and deferred costs are recorded at cost and charged to the revenue derived therefrom over the expected period of revenue generation.

**PROPERTY, PLANT AND EQUIPMENT**

Property, plant and equipment of a research and development nature are recorded at cost and expensed in the year of acquisition.

Other property, plant and equipment are recorded at cost and depreciated on a straight-line basis over the estimated useful life of the asset as follows:

Machinery and equipment	- 3 to 20 years
Buildings	- 20 to 50 years

Costs of decommissioning nuclear facilities are expensed when incurred.

**LONG-TERM CONTRACTS**

Revenue and costs on long-term contracts are accounted for by the percentage-of-completion method, applied on a conservative basis to recognize the absence of certainty on these contracts. Full provision is made for all estimated losses to completion of contracts in progress.

**PARLIAMENTARY APPROPRIATIONS**

The Government of Canada, through parliamentary appropriations, funds certain operations of the corporation as outlined in Note 2. The parliamentary appropriations are offset against the applicable expenditures except for the portion used to discharge certain loan principal which is recognized as an increase in contributed capital.

**PENSION PLAN**

Employees are covered by the Public Service Superannuation Plan administered by the Government of Canada. The corporation's contributions to the plan are limited to an amount equal to the employees' contributions on account of current service. These contributions represent the total pension obligations of the corporation and are charged to income on a current basis.

**EMPLOYEE TERMINATION BENEFITS**

Employees are entitled to specific termination benefits as provided for under collective agreements and conditions of employment. The liability for these benefits is charged to income as benefits accrue to the employees.



**STATEMENT OF INCOME**For the year ended March 31, 1987  
(thousands of dollars)

	1987	1986
<b>Commercial operations</b>		
Revenue		
Nuclear supply and services	\$ 87,603	\$ 93,269
Radiation equipment and isotopes	111,209	92,617
Interest on long-term receivables	63,355	64,197
Interest on short-term deposits	5,965	10,238
	<u>268,132</u>	<u>260,321</u>
Costs and expenses		
Cost of sales and services	114,094	119,467
Product development	17,820	10,332
Marketing and administration	57,222	40,593
Interest on long-term debt	58,303	62,231
	<u>247,439</u>	<u>232,623</u>
Operating profit	<u>20,693</u>	<u>27,698</u>
<b>Research and development operations</b>		
Expenses	222,870	211,683
Less: Revenue	38,039	24,867
Parliamentary appropriations	181,737	176,612
Net expenses	<u>3,094</u>	<u>10,204</u>
<b>Discontinued operations</b>		
Expenses	36,397	58,161
Less: Parliamentary appropriations	34,588	58,161
Recovery from asset sales	1,809	-
	<u>-</u>	<u>-</u>
Net income	<u>\$ 17,599</u>	<u>\$ 17,494</u>



**BALANCE SHEET**As at March 31, 1987  
(thousands of dollars)

	1987	1986
<b>ASSETS</b>		
<b>Current</b>		
Cash and short-term deposits	\$ 57,701	\$ 55,495
Accounts receivable	142,182	126,858
Inventories (Note 3)	59,595	61,667
	<u>259,478</u>	<u>244,020</u>
<b>Non-current inventory (Note 3)</b>	—	1,579
<b>Long-term receivables (Note 4)</b>	597,378	699,163
<b>Investment and deferred costs (Note 5)</b>	107,652	110,280
<b>Property, plant and equipment (Note 6)</b>	53,607	51,955
	<u>\$1,018,115</u>	<u>\$1,106,997</u>
<b>LIABILITIES</b>		
<b>Current</b>		
Accounts payable and accrued liabilities	\$ 124,594	\$ 133,759
Current portion of long-term debt	26,353	24,171
	<u>150,947</u>	<u>157,930</u>
<b>Deferred revenue</b>	14,592	64,255
<b>Provision for contracts in progress</b>	—	25,024
<b>Accrued employee termination benefits</b>	34,370	34,084
<b>Long-term debt (Note 7)</b>	622,545	648,898
	<u>822,454</u>	<u>930,191</u>
<b>SHAREHOLDER'S EQUITY</b>		
<b>Capital stock</b>		
Authorized — 75,000 common shares		
Issued — 54,000 common shares	15,000	15,000
<b>Contributed capital</b>	71,051	69,795
<b>Retained earnings</b>	109,610	92,011
	<u>195,661</u>	<u>176,806</u>
	<u>\$1,018,115</u>	<u>\$1,106,997</u>

Approved by the board:



B. A. Bénétiau, Director



James Donnelly, Director



## STATEMENT OF CONTRIBUTED CAPITAL

For the year ended March 31, 1987  
(thousands of dollars)

	1987	1986
Balance at beginning of the year	\$ 69,795	\$ 58,641
Parliamentary appropriations for loan principal repayment	1,256	11,154
Balance at end of the year	<u>\$ 71,051</u>	<u>\$ 69,795</u>

## STATEMENT OF RETAINED EARNINGS

For the year ended March 31, 1987  
(thousands of dollars)

	1987	1986
Balance at beginning of the year	\$ 92,011	\$ 74,517
Net income	17,599	17,494
Balance at end of the year	<u>\$109,610</u>	<u>\$ 92,011</u>



## STATEMENT OF CHANGES IN FINANCIAL POSITION

For the year ended March 31, 1987  
(thousands of dollars)

	1987	1986
<b>Operating activities</b>		
Net income	\$ 17,599	\$ 17,494
Depreciation and amortization	6,822	6,175
	24,421	23,669
Increase in operating working capital	(13,444)	(26,173)
Cash from (used in) operations	10,977	(2,504)
<b>Investing activities</b>		
Heavy-water production	-	(29,193)
Parliamentary appropriations for heavy-water production	-	29,193
Acquisition of commercial property, plant and equipment net of disposal	(7,438)	(4,947)
Increase in deferred costs	(1,758)	(6,985)
Cash invested	(9,196)	(11,932)
<b>Financing activities</b>		
Repayment of long-term debt	(24,171)	(83,013)
Proceeds from long-term notes receivable	23,340	19,126
Parliamentary appropriations for loan principal repayment	1,256	11,154
Cash from (used in) financing	425	(52,733)
<b>Increase (decrease) in cash and short-term deposits</b>	<b>2,206</b>	<b>(67,169)</b>
<b>Cash and short-term deposits at beginning of the year</b>	<b>55,495</b>	<b>122,664</b>
<b>Cash and short-term deposits at end of the year</b>	<b>\$ 57,701</b>	<b>\$ 55,495</b>



## NOTES TO THE FINANCIAL STATEMENTS

For the year ended March 31, 1987

### 1. Accounting policies

The summary of significant accounting policies is an integral part of these financial statements.

### 2. Parliamentary appropriations

Parliamentary appropriations were used during the year for the following purposes:

	1987	1986
(thousands of dollars)		
Research and development operations	\$181,737	\$176,612
Discontinued operations		
Prototype reactors	11,855	18,331
Heavy-water plant closures	18,839	35,382
LaPrade plant protection	1,850	2,302
Heavy-water plant loan interest	2,044	2,146
	34,588	58,161
Heavy-water production	—	29,193
Heavy-water plant loan principal	1,256	11,154
	\$217,581	\$275,120

### 3. Inventories

	1987	1986
(thousands of dollars)		
<b>Current</b>		
Radiation equipment and materials	\$ 44,916	\$ 37,763
Heavy water	9,653	20,904
Maintenance and general supplies	5,026	3,000
	\$ 59,595	\$ 61,667
<b>Non-current</b>		
Heavy water	\$554,787	\$556,366
Less: Accumulated parliamentary appropriations	554,787	554,787
	\$ —	\$ 1,579

Accumulated parliamentary appropriations are repayable, together with interest thereon, to the extent of future revenue from sales of related heavy water. At March 31, 1987 no significant contracts had been finalized for the sale of heavy water funded by parliamentary appropriations.

### 4. Long-term receivables

	1987	1986
(thousands of dollars)		
Notes receivable from provincial utilities in respect of the financing of nuclear facilities (refer to Note 7 for related debt).	\$600,219	\$623,559
Contract receivables maturing through 1995	34,069	96,064
Mortgages receivable and other	5,523	5,132
	639,811	724,755
Current portion	42,433	25,592
	\$597,378	\$699,163

During the year, a major project was completed and the terms of payment of amounts still outstanding under the contract were re-negotiated. As a result, the related provision for contracts in progress and deferred revenue balances as at March 31, 1987 are reflected as an allowance against contract receivables.



## NOTES TO THE FINANCIAL STATEMENTS

For the year ended March 31, 1987

5. Investment and deferred costs	1987	1986
	(thousands of dollars)	
<b>Investment in Pickering 1 and 2</b>		
The corporation, Ontario Hydro, and the Province of Ontario are parties to an agreement for the construction and operation of Units 1 and 2 of the Pickering 'A' nuclear generating station, with ownership of these units being vested in Ontario Hydro. Under the agreement, the corporation is entitled to receive payments until the year 2001 based on the net operational advantage of the power generated by Pickering Units 1 and 2 as compared with the coal-fired Lambton Units 1 and 2.	\$ 84,012	\$ 84,012
<b>Deferred costs</b>		
Costs incurred in modifying non-corporation owned facilities for revenue-producing purposes and other deferred costs.	23,640	26,268
	\$107,652	\$110,280

Pickering Units 1 and 2 remain shut down for replacement of the pressure tubes and therefore the corporation did not earn any revenue during the 1986 and 1987 years. As a result, no amortization of the investment was charged in either year. The reactors are currently scheduled to be back in operation in calendar 1987. Extension of the agreement beyond 2001 is currently being finalized with Ontario Hydro due to the shutdown.

Amortization of deferred costs for the year amounted to \$1.5 million (1986 - \$.5 million).

6. Property, plant and equipment	1987		1986	
	Cost	Government funding and accumulated depreciation	Net	Net
	(thousands of dollars)			
<b>Commercial operations</b>				
Land and improvements	\$ 2,419	\$ 1,067	\$ 1,352	\$ 1,587
Buildings	49,328	19,919	29,409	26,642
Machinery and equipment	39,787	19,673	20,114	20,866
	91,534	40,659	50,875	49,095
<b>Research and development operations</b>				
Land and improvements	9,689	9,689	-	-
Buildings	67,690	64,958	2,732	2,860
Reactors and equipment	240,350	240,350	-	-
Construction in progress	57,730	57,730	-	-
	375,459	372,727	2,732	2,860
<b>Discontinued operations</b>				
Prototype reactors	170,557	170,557	-	-
Heavy-water plants	802,881	802,881	-	-
	\$1,440,431	\$1,386,824	\$53,607	\$51,955

Depreciation of commercial property, plant and equipment for the year ended March 31, 1987 amounted to \$5.3 million (1986 - \$5.7 million).

Research and development property, plant and equipment expensed during the year amounted to \$20.1 million (1986 - \$17.9 million).



## NOTES TO THE FINANCIAL STATEMENTS

For the year ended March 31, 1987

The decommissioning of nuclear research and prototype facilities is an integral part of the nuclear program. A program has been developed and implemented to bring the facilities to a safe-storage mode as the initial stage of decommissioning. Currently, the Gently 1 and Douglas Point prototype reactors are on a safe-keeping basis. The balance of the Douglas Point program is proceeding on target, with an estimated cost to complete of \$3.2 million. The future net decommissioning costs of nuclear research and prototype facilities cannot be quantified at this time due to the uncertainty as to the exact nature, timing and ultimate disposal alternatives. In accordance with the corporation's accounting policy, any such costs will be expensed when incurred.

The closure of the heavy-water plants at Glace Bay and Port Hawkesbury commenced July 1985 and is close to completion, with an estimated cost of \$2.0 million for remaining work.

7. Long-term debt	1987	1986
	(thousands of dollars)	
<b>Loans from Government of Canada</b>		
To finance provincial utility nuclear facilities maturing through 2008 at fixed interest rates varying from 6.687% to 9.706% (refer to Note 4 for related receivables).	\$599,582	\$621,643
To finance leased heavy water and other assets, maturing through 2003 at fixed interest rates varying from 4.125% to 10%.	25,964	27,142
<b>Loans from third parties</b>		
To finance the purchase of the Glace Bay heavy-water plant, maturing through 1998 at an imputed interest rate of 8.875%.	23,352	24,284
	648,898	673,069
<b>Current portion</b>	26,353	24,171
	<b>\$622,545</b>	<b>\$648,898</b>

Loan repayments required over succeeding years are as follows (millions of dollars): 1988 - \$26.4; 1989 - \$47.7; 1990 - \$30.3; 1991 - \$32.9; 1992 - \$35.9; and subsequent to 1992 - \$475.7.

### 8. Related-party transactions

In addition to the transactions disclosed elsewhere in these financial statements, the corporation had the following transactions with the Government of Canada:

	1987	1986
	(thousands of dollars)	
Repayment of loans and interest	\$ 81,358	\$134,757
Payments to the Public Service Superannuation Plan	\$ 12,748	\$ 14,526

In the normal course of business, the corporation also enters into various transactions with the Government of Canada, its agencies and other Crown corporations.

### 9. Contingencies

Certain claims against the corporation have arisen in the course of its medical products business and were pending at March 31, 1987. While the amount of any ultimate liability cannot be determined at this time, the outcome of these matters in the opinion of management will have no material effect on the corporation's financial position or results of operations.



For the year ended March 31, 1987

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## 10. Supplementary information

### Incorporation

Pursuant to the authority and powers of the Minister of Energy, Mines and Resources under the Atomic Energy Control Act, the corporation 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) to develop the utilization of atomic energy for peaceful purposes.

The corporation is a Schedule C Part I Crown corporation under the Financial Administration Act. The corporation is exempt from income taxes.

### Operations

The operations of the corporation are reported in the Statement of Income as commercial operations, research and development operations, and discontinued operations.

Commercial operations consist of nuclear power engineering and design, project management, operating plant support services, manufacturing and selling of medical and industrial radiation equipment and radioisotopes, and investments.

Research and development operations consist of basic and applied nuclear research and development, and contract research and development services.

Discontinued operations consist of placing and maintaining prototype reactors in a safe-storage mode as the initial stage of decommissioning, as well as the activities associated with closure and protection of the heavy-water plants at Glace Bay, Port Hawkesbury and LaPrade.

### Insurance

The corporation assumes substantially all risks pertaining to the assets and operations of research and development, and prototype reactors. Commercial assets and operations, as well as heavy-water inventories, are insured to the extent considered appropriate.

### SALES AGENTS' REMUNERATION

Guidelines concerning the commercial practices of Crown corporations require disclosure of sales agents and the total remuneration paid to them during the year.

Remuneration and expenses paid to the following sales agents and representatives in 1987, primarily with respect to commercial operations, aggregated \$2.0 million (1986 - \$2.3 million):

Alnor Instruments AB, Sweden; Aristons Ltd., Sri Lanka; B.C. Simeon Park, U.S.A.; Bio Nuclear Diagnostica Industria E. Comercio Ltda., Brazil; Companhia Brasileira De Radiologia, Brazil; ETS F.A. Kettaneh S.A., Lebanon; Eastronics Limited, Israel; Gammaster, B.V., The Netherlands; Gemed Sistemas Medicos C.A., Venezuela; General Machinery Company Ltda., Chile; General Medica De Columbia Ltda., Columbia; Hamco Commercial S.C.R.L. Lima, Peru; International General Electric Co. (India) Ltd., India; Jardin Danby Ltd., Hong Kong; Korea General Trading Corporation, Republic of South Korea; Kostas Karayannis S.A., Greece; Marsman & Company Incorporated, Philippines; Marubeni Corporation, Japan; Medtel Pty Limited, N.S.W. Australia; Mundinter, Portugal; Novelait (Medical) Limited, Hong Kong; Nuclital, s.r.l., Italy; Pacific Economic Development Corporation, U.S.A.; P.I.I., U.S.A.; P.T. Sanga Kencana International, Indonesia; Radiotherapy & Medical Systems Pty Ltd., Australia; Societa Lombarda Di Televisione s.r.l., Italy; Tecnologia Em Radiacao Ltda., Brazil; Tamathe s.r.l., Argentina; Tareq Company, Kuwait; Zelin Limited, Pakistan.



## FIVE-YEAR FINANCIAL SUMMARY

	1987	1986	1985	1984	1983
	(millions of dollars)				
<b>Operations</b>					
Commercial revenue:					
Nuclear supply and services	88	93	146	196	219
Radiation equipment and isotopes	111	93	83	80	84
Investment	-	-	-	16	38
Interest	69	74	80	78	68
	<b>268</b>	<b>260</b>	<b>309</b>	<b>370</b>	<b>409</b>
Operating profit	21	28	8	15	26
Net income	17	17	10	9	23
Research and development operations	223	212	224	211	194
<b>Financial Position</b>					
Cash and short-term deposits	58	55	123	121	136
Long-term receivables	597	699	748	767	741
Investment and deferred costs	108	110	112	104	99
Capital expenditures	28	23	30	35	37
Property, plant and equipment	54	52	55	54	99
Total assets	<b>1,018</b>	<b>1,107</b>	<b>1,226</b>	<b>1,285</b>	<b>1,348</b>
Long-term debt	623	649	722	781	801
Shareholder's equity	196	177	148	143	179
<b>Other</b>					
Parliamentary appropriations	218	275	326	336	315
Export revenues	150	141	145	195	217
Number of employees	<b>5,007</b>	<b>5,540</b>	<b>6,767</b>	<b>6,978</b>	<b>7,327</b>



**THE BOARD OF DIRECTORS****OFFICERS****AECL LOCATIONS**

<sup>††</sup>= **B. A. BÉNÉTEAU**, B.Sc.,  
Chairman of the Board  
(from 22 January 1987)

**ROBERT DESPRÉS**,  
O.C., M. Comm., F.C.G.A., F.S.M.A.C.,  
Chairman of the Board  
(resigned 31 December 1986)

<sup>††</sup> **JAMES DONNELLY**, A.R.T.C.,  
President and Chief Executive Officer

<sup>††</sup>@ **L. J. CELESTE**, B.Sc.E.E.,  
President and Chief Operating Officer,  
The New Brunswick Telephone Co. Ltd.

**G. M. MACNABB**, B.Sc., D.Sc.,  
Associate to the Principal,  
Queen's University  
(resigned 22 January 1987)

<sup>†</sup> **L. MARTIN**, B.A., LL.L.,  
Partner,  
Clarkson, Tétrault  
(from 22 January 1987)

=@ **M. PAIKIN**, B.A., LL.D.,  
Chairman,  
Ontario Council on University Affairs

= **DR. K. RAO**, M.D., F.R.C.P.,  
Diagnostic Radiologist,  
Associated Radiologists of Saskatoon  
(from 22 January 1987)

<sup>†</sup>=@ **I. S. ROSS**, P. Eng., C. Eng. (U.K.), M.C.I.T.,  
Consulting Engineer

<sup>†</sup> **J. L. SCHLOSSER**, C.M.,  
President,  
Tri-Jay Investments

**Executive**

**B. A. BÉNÉTEAU**, B.Sc.,  
Chairman of the Board

**JAMES DONNELLY**, A.R.T.C.,  
President and Chief Executive Officer

**G. R. BOUCHER**, Ph.D., P. Eng., Adm. A.,  
Vice-President (Québec)

**P. R. COTE**, B.Sc., M.Sc., Ph.D.,  
Vice-President, Special Projects

**D. G. CUTHBERTSON**, C.A.,  
Vice-President, Finance and  
Chief Financial Officer

**H. T. HUGHES**, B.Comm.,  
Vice-President, Human Resources

**A. J. MOORADIAN**,  
M.Sc., Ph.D., D.Sc., D.Eng., F.C.I.C., F.R.S.C.,  
Senior Vice-President

**G. A. PON**, Ph.D.,  
Corporate Vice-President, Engineering

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Corporate Executive Vice-President

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