



**Trademark of the Alberta Heritage Foundation
for Science and Engineering Research*





* Tradename of the Alberta Heritage Foundation for Science and Engineering Research

Who Are We?

The Alberta Ingenuity Fund is the tradename of the Alberta Heritage Foundation for Science and Engineering Research, established by the Government of Alberta in 2000, with an Act of Legislature that included provision for an endowment of \$500 million.



Cover photo: *Frédéric Walter, a University of Calgary Masters student, stands in front of glaciated Bylot Island in Canada's far north. His comparison of one glacier, which is melting, and an adjacent glacier which is not, will add to the information about global climate change. Mr. Walter is one of hundreds of Alberta graduate students eligible for our first grant competition for studentships.*

PHOTO COURTESY OF BRIAN MOORMAN

The Alberta Heritage Foundation for Science and Engineering Research is an independent body at arms-length from the Government, but accountable to it, reporting through the Minister of Alberta Innovation and Science. The Foundation is governed by a Board of Trustees and led by a President/CEO.

A portion of the interest from the endowment is used to support a balanced long-term program of research based in Alberta.

Our Mandate:

To nurture the discovery of new knowledge and encourage its applications to benefit Albertans. Our support of world-class research will also advance science and engineering internationally.

Our Objectives:

To stimulate research in science and engineering,

To promote effective means of using science and engineering resources available in Alberta,

To support science and engineering research laboratories and related facilities in Alberta,

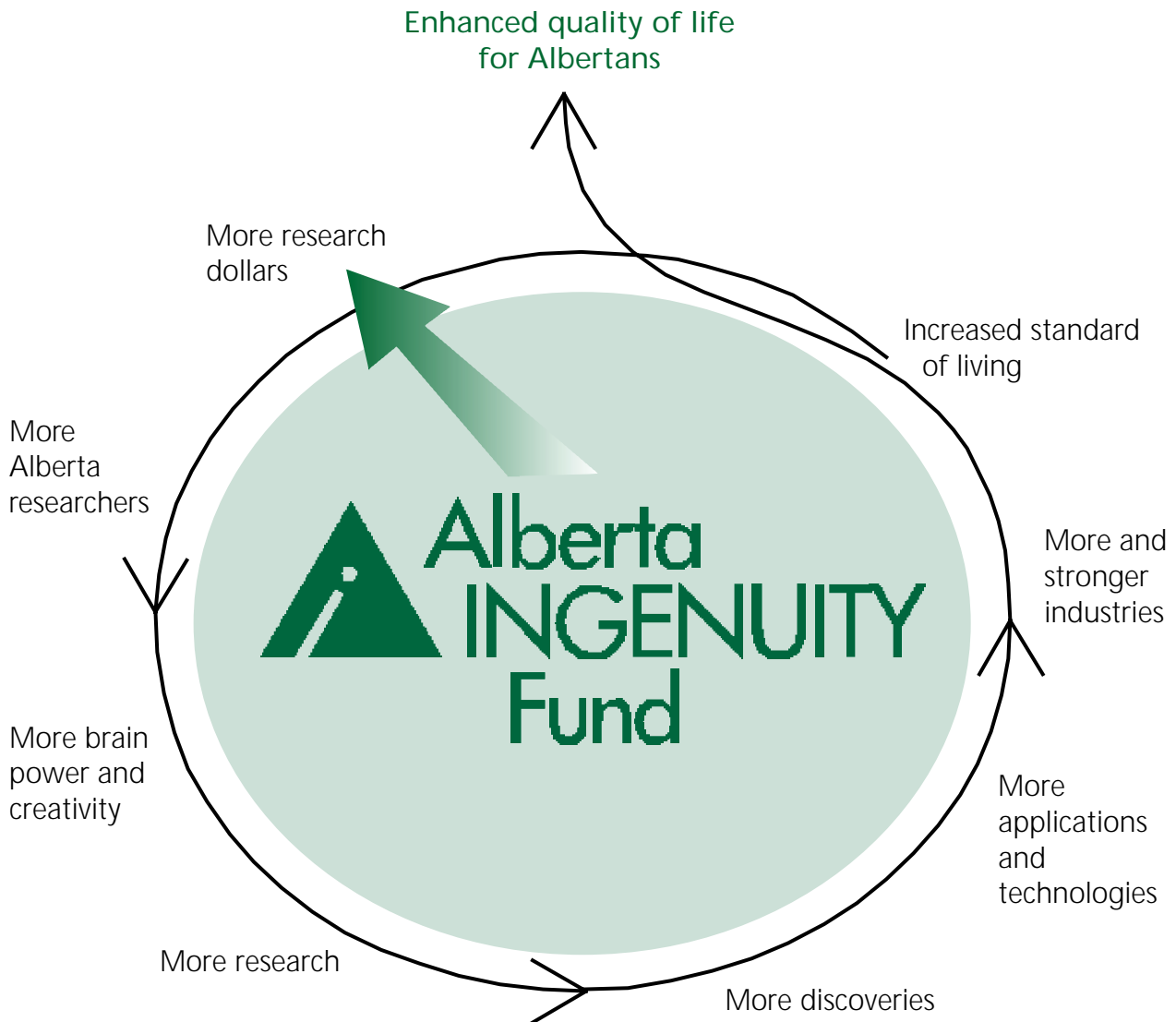
To promote co-operation in Alberta science and engineering research to minimize duplication and promote concentration of effort,

To encourage young Albertans to pursue research careers in science and engineering.

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www.albertaingenuity.ca

The Alberta Ingenuity Fund brings more to Alberta...



“The endowment is an investment in Alberta’s strong science and engineering base at our post-secondary institutions and in the industrial sector, and is a vital part of the province’s commitment to continue to expand Alberta’s emerging knowledge-based economy.”

—Honourable Premier Ralph Klein
On announcing the new Foundation January 26, 2000.

Message from the Chairman, Mr. Alvin Libin

On February 17th, 2000, Alberta Premier Ralph Klein tabled the first Legislative bill of the new millennium to create the Alberta Heritage Foundation for Science and Engineering Research. It was the beginning of an exciting venture to extend our frontiers of research so that Albertans can enjoy its applications and benefit from a strong knowledge economy. On behalf of my fellow Trustees, I am pleased to present this report of the first year activities of the Foundation, now known by the tradename, Alberta Ingenuity Fund.



The Board of Trustees

Front row, left to right: James Horsman, Bernie Kotelko, Alvin Libin, Ron Triffo, Marvin Moore
Back row, left to right: Eric Newell, Scobey Hartley, John Moldon, Janice Rennie, Elizabeth Cannon, Ted Newall, Darrel Danyluk.

Our first goal was to establish an effective organizational structure to initiate operations. The general structure of the Alberta Ingenuity Fund is dictated by the Legislative Act, and is modelled after the highly successful Alberta Heritage Foundation for Medical Research. Our organization is governed by the Board of Trustees; led by a President/CEO; and advised by an international science and engineering advisory council.

The Trustees appointed an interim management committee to preside over initial operations during the first year. We are most grateful to its hard-working members: Dr. Roger Palmer, then Deputy Minister of Alberta Innovation and Science, Dr. John Kendall, Computing Science Professor at the University of Calgary, Dr. John McDonald, Physics professor at the University of Alberta, and Dr. Matthew Spence, President/CEO of the Alberta Heritage Foundation for Medical Research. Dr. Spence's experienced counsel was especially valuable to the Alberta Ingenuity Fund during this beginning stage.

The Trustees also appointed 13 distinguished members to the international Science and Engineering Advisory Council to advise the Ingenuity Fund on policy and programs.

After an extensive search, the Trustees appointed the first Alberta Ingenuity Fund President and CEO, Dr. William Bridger. He takes up his position on September 1, 2001. Dr. Bridger has impressive leadership experience in research and administration in Alberta and Ontario, and the Trustees look forward to working with him.

One of the rewarding aspects of working with the Ingenuity Fund has been learning about the many innovative researchers already in this province. We welcome the opportunity to fund them and the recruitment of others who will also lead science and engineering in promising new directions. As this report describes, in our first year we concentrated on identifying research needs, prior to developing our grant programs. We thank our advisors in Alberta universities, colleges, and technical institutes, who have helped us with this.

Our first two grant programs for students and newly recruited researchers were announced in March 2001. We established these grants first because the Alberta research community told us they were urgently needed.

When the Provincial Government set up the Alberta Heritage Foundation for Science and Engineering Research, it established a \$500 million endowment that provides interest revenue to support the research. As responsible stewards, the Trustees worked with Alberta Revenue to develop spending guidelines, based on the outlook for endowment performance and financial market conditions.

To keep operational costs to a minimum in Alberta Ingenuity's start-up phase, Trustees arranged to share the Alberta Heritage Foundation for Medical Research infrastructure and some personnel time for financial and scientific business. We are most grateful for this assistance. Also, much credit goes to Alberta Ingenuity's first and only administrator, Anne Thomas, who cheerfully and efficiently handled many of the tasks facing a new organization.

Launching this organization has been challenging and satisfying. I thank the Trustees for the outstanding abilities, valued experience, and dedicated leadership they have given Alberta Ingenuity to meet the challenges.

We look forward to new challenges as we find strategic ways to help keep our research stars here, and attract more of the brightest and best in academia and industry. We're committed to supporting an environment that will foster their discoveries and give well-trained young people a head start in their research careers.

With the endowment, the Alberta Ingenuity Fund has been given a tremendous opportunity to make Alberta's vibrant science and engineering research community even stronger in a competitive world that is increasingly shaped by science and technology. Working with our many partner organizations, we will make the most of this opportunity for Albertans.



Mr. Alvin Libin
Chairman, Board of Trustees

The People at Alberta Ingenuity Fund

Dr. William A. Bridger
President & CEO
(Effective September 1, 2001)



“Alberta already has a thriving science and engineering research community, and the opportunity for the Alberta Ingenuity Fund to expand it is huge. I think there is a real chance we will have a significant impact on both academia and the Alberta economy in a relatively short time.”

—Dr. Bill Bridger

Board of Trustees

Mr. Alvin Libin, Chairman (Calgary)
Mr. Ronald P. Triffo, Vice-Chairman (Edmonton)
Dr. Elizabeth Cannon (Calgary)
Mr. Darrel Danyluk (Calgary), Representative of the Association of Professional Engineers, Geologists and Geophysicists of Alberta
Mr. Scobey Hartley (Calgary)
Mr. James D. Horsman, Q.C. (Medicine Hat), Representative of the University of Lethbridge
Mr. Bernie Kotelko (Vegreville), Representative of the Alberta Institute of Agrologists
Dr. W. John Moldon (Redcliff), Representative of the Council of Board Chairs of the Public Colleges and Technical Institutes of Alberta
Mr. Marvin Moore (Debolt)
Mr. Ted Newall (Calgary), Representative of the University of Calgary
Mr. Eric Newell (Fort McMurray), Representative of the University of Alberta
Ms. Janice Rennie (Edmonton)

Management Committee 2000-2001

Dr. John Kendall, University of Calgary
Dr. W. John McDonald, University of Alberta
Dr. Roger Palmer, Alberta Innovation and Science
Dr. Matthew W. Spence, Alberta Heritage Foundation for Medical Research (Committee Chair)

Executive Administrator

Anne Thomas

Administrative Operations

The Alberta Ingenuity Fund office is located in downtown Edmonton, and houses a small administrative staff. Alberta Ingenuity does not conduct research itself nor hire researchers. Rather, it provides funding to researchers employed by Alberta universities, colleges, and technical institutes to conduct their investigations in these institutions. Programs are also being developed to support research in private industry, and foster collaborations between academia and industry.

Making Choices: What research will we fund?

It's easy to take for granted how science and engineering underpin almost everything we have and do. Consider the science and engineering behind: the food we grow and eat, our waterworks, computers for work and play, telecommunications that connect us, machines that run our farms, oil fields, factories, and offices, materials that house us at work and home, the roads and bridges we travel, the chemistry of manufacturing, the ecology of our environment, the math of finance, the geography of weather and cities, the physics of electronics, the biotechnology of food and drugs, the geology of oil and gas exploration, the astronomy that will eventually take us to the stars, and the intricate, elegant basic sciences that carry the seeds of future technologies to take us places we can barely imagine.

That's only a beginning list of the science and engineering specialties covered by the broad mandate given to the Alberta Ingenuity Fund. Where will we invest our research dollars? Given all the choices, how will we decide what people and research fields promise the most benefits to Alberta?

How We Assess Individual Applications

Alberta Ingenuity uses peer review to assess applications. This means they are judged by established researchers with expertise in the same or a similar field as the applicant. Major proposals are reviewed by several experts outside of Alberta and by Alberta review committees. These reviewers forward their recommendations to the executive and the Trustees who make the final decision.

The Big Picture

Alberta Ingenuity grant programs are based on these principles:

- **Relentlessly First Class**—all research supported must meet standards of excellence. These standards are maintained through a rigorous peer review system in which established researchers from Alberta and abroad judge the quality of applications.
- **People First**—If Alberta hosts the right ambitious, innovative, skilled researchers, the science and engineering advances will come. Alberta Ingenuity focuses on helping the research community in post-secondary educational institutions and industry recruit and keep excellent people, by giving them more support to succeed. Programs to educate and train graduate students are an important part of our “People First” philosophy.
- **Get the best advice on the planet**—Beginning with the international Science and Engineering Advisory Council, which advises on major funding policy and programs, Alberta Ingenuity will go anywhere in the world to find experts who can help judge the likely success of a major funding initiative or a recruitment prospect. The first of many application review committees was formed this year.
- **Partner for Power**—Because of its long-term resources based on the endowment interest, Alberta Ingenuity has the funding power to go where other funding agencies can not. However, the goal is to complement, not duplicate the support from more than 450 other private and public sources of research funds for scientists and engineers. Alberta Ingenuity will often partner with many other national and provincial funding agencies, and Ingenuity-supported researchers will attract more outside research dollars to Alberta.

Counsel from World Experts

The Alberta Ingenuity Fund is advised by a council of international experts. The Science and Engineering Advisory Council (SEAC) makes recommendations on major funding policies and programs. Council members represent a broad spectrum of expertise in physics, math, chemistry, computing science, biology, geology, agriculture, and diverse engineering fields.

As well as their outstanding achievements in their respective research areas, Council members bring leadership experience in: technology and public policy, commercialization of innovations, youth education, and championing the status of women in science and technology.

Input from the Council is one way of ensuring that the Alberta Ingenuity Fund maintains international standards of research excellence and supports the most promising new directions in science and engineering.

The Science and Engineering Advisory Council (SEAC)

Dr. Alan Astbury, R. M. Pearce Prof. of Physics, University of Victoria; Director of TRIUMF.

Dr. Khalid Aziz, Otto N. Miller Prof. of Earth Sciences & Prof. of Petroleum Engineering, Stanford University, California.

Dr. Christopher Chapman, Scientific Advisor, (Geophysics) Schlumberger Cambridge Research, Cambridge, U.K.

Dr. Arthur Dempster, Prof. of Theoretical Statistics, Harvard University, Cambridge, MA.

Dr. Richard de Neufville, Prof. of Engineering Systems & Prof. of Civil & Environmental Engineering, MIT; Cambridge, MA.

Dr. George England, Prof. of Mechanics and Structures, Imperial College of Science, Technology and Medicine, London, U.K.

Dr. Maria Klawe, Dean of Science, University of British Columbia, Vancouver. (Research in math and computing science).

Dr. Larry Milligan, Vice-President (Research), University of Guelph, Ontario. (Research in animal science)

Dr. Mary Lou Pardue, Boris Magasanik Prof. of Biology, MIT, Cambridge, MA.

Dr. John Schaefer, President, Research Corporation in Tucson; President Emeritus, University of Arizona. (Ph.D. in Chemistry).

Dr. Adel Sedra, Vice-President, Provost and Chief Academic Officer, University of Toronto; Prof. of Electrical and Computer Engineering, U of T.

Dr. Christopher Somerville, Prof. of Biological Sciences, Stanford University; Founder and Chair of Mendel Biotechnology.

Dr. Dennis E. Teeguarden, Professor Emeritus of Forestry, University of California at Berkeley.

Responsive Grant Programs

Needs survey Conducted

Alberta Ingenuity asked researchers in post-secondary institutions, “What grant programs do you need most?” The universities submitted reports with recommendations and their senior administrators met with the Trustees. From university data, Alberta Ingenuity also compiled a list of private and public sources that currently support Alberta science and engineering researchers. This needs survey is now being used to inform the development of Alberta Ingenuity grant programs.

First Grant Programs Respond to Needs

In March, Alberta Ingenuity announced its first grant competitions, one for graduate students with a May and an October deadline, and an October competition for establishment grants. Both programs are designed to give Alberta academic research institutions a competitive edge in recruiting. The programs were developed in response to the research community, which has stressed how competitive the market is for recruiting top faculty researchers and the top graduate students.

Studentships support graduate students who execute a major research project to earn a masters or doctoral degree, under the supervision of a faculty researcher. The studentship program helps the host university or college attract the brightest students to Alberta and keep our best at home. This provides research career opportunities for young Albertans, and their contributions are crucial to the productivity of the senior researchers who mentor them.

Establishment grants provide new faculty researchers with funds to set up their labs and launch their studies more quickly than they otherwise could. These funds for equipment and personnel also expand the investigators’ capacity to conduct more studies. The availability of Alberta Ingenuity Establishment grants therefore becomes one more reason for researchers to stay in the province or move here.

For grant program updates see:
www.albertaingenuity.ca

“Our first grants are a direct response to what the research community has said are urgent needs—support for excellent graduate students and establishment funds to help new researchers set up their labs and quickly launch their studies.”

—Mr. Alvin Libin, Chairman,
Alberta Ingenuity Fund

Championing Science in the Community

Alberta Ingenuity is committed to encouraging youth to pursue science and engineering research careers, and to enhancing public appreciation of the contribution research makes to our society. Therefore, we support the following organizations.

ASTech Patronage: Alberta Ingenuity is a patron of the Alberta Science and Technology Leadership Awards (ASTech), which honour outstanding achievements in science and technology. The non-profit ASTech Foundation has greatly increased public awareness and appreciation of research and the many ways it benefits Albertans.

APEGGA Summit Award: Alberta Ingenuity initiated the APEGGA Summit Award for Leadership Award for Engineering Research, one of 10 annual Summit Awards presented by the Association of Professional Engineers, Geologists and Geophysicists of Alberta to its members.

Summer Camps for Children: Drop into the University of Calgary or the University of Alberta some summer day and you may run into children making rockets, an electric “light” shoe, or a gravity car. It’s all part of the science and engineering camps run by university students. Alberta Ingenuity is one of the sponsors of the Calgary program, called Minds in Motion, and the Edmonton program, called Discover-E (for excitement). Alberta Ingenuity sponsors school workshops, grandparent-grandchild workshops, a satellite camp in Grande Prairie, and bursaries for children who otherwise could not afford to attend.

SPARK: Research depends upon public support. University of Calgary students are learning how to communicate research to the public to help maintain that support. The students are given an opportunity to write about research for campus newspapers and other media. Alberta Ingenuity sponsors this program, called Students Promoting Awareness of Research (SPARK).

Looking Forward...

During the coming year, Alberta Ingenuity will focus on—

Assessing the research needs and funding opportunities in Alberta

Developing more new grant programs to meet these needs

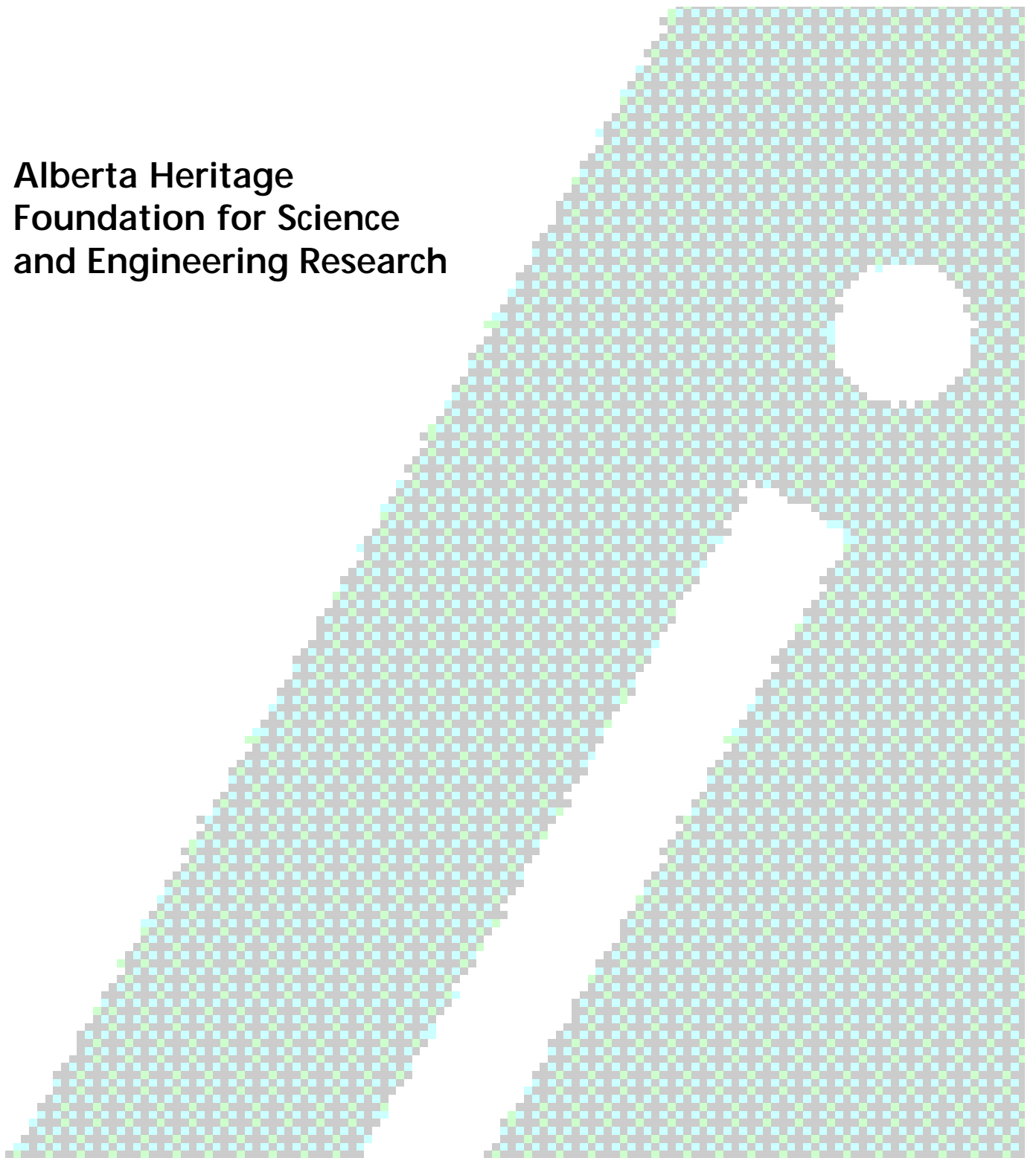
Two key questions are—

1 *What Alberta Ingenuity grant programs would best assist researchers in industry and facilitate research collaboration among academic institutions and private industry?*

2 *Given the wide scope of its mandate, how can Alberta Ingenuity provide balanced programs that offer broad support and accommodate the need to focus in some areas determined to most likely benefit Alberta?*

For updated information see our website:
www.albertaingenuity.ca

**Alberta Heritage
Foundation for Science
and Engineering Research**



FINANCIAL STATEMENTS

March 31, 2001

ALBERTA HERITAGE FOUNDATION
FOR SCIENCE AND ENGINEERING RESEARCH

FINANCIAL STATEMENTS

MARCH 31, 2001

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AUDITOR'S REPORT

To the Trustees of the Alberta Heritage Foundation for Science and Engineering Research:

I have audited the statement of financial position of the Alberta Heritage Foundation for Science and Engineering as at March 31, 2001 and the statements of operations, changes in net assets, and cash flows for the year then ended. These financial statements are the responsibility of the Foundation's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Foundation as at March 31, 2001 and the results of its operations and cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Original signed by
Peter Valentine, FCA
Auditor General

Edmonton, Alberta
June 22, 2001

ALBERTA HERITAGE FOUNDATION
 FOR SCIENCE AND ENGINEERING RESEARCH
STATEMENT OF FINANCIAL POSITION
 MARCH 31, 2001

	2001
ASSETS	
Cash	\$ 35,397
Accounts receivable	1,875
Prepaid expenses	2,741
Capital assets (Note 4)	32,747
	\$ 72,760
LIABILITIES AND NET ASSETS	
Accounts payable and accrued liabilities	\$ 48,072
Net assets (Note 5)	24,688
	\$ 72,760

The accompanying notes are part of these financial statements.

STATEMENT OF OPERATIONS
 FOR THE YEAR ENDED MARCH 31, 2001

	2001
Revenue	
Transfers from Endowment Fund (Note 3)	\$575,000
Interest	3,886
	578,886
Expense	
Operations	
Peer review	79,533
Human resources	177,614
Communication and education	4,572
	261,719
Administration	
Office services	53,581
Information services	15,581
Governance and planning	220,474
Amortization of capital assets	2,843
	292,479
	554,198
Excess of revenue over expense	\$ 24,688

ALBERTA HERITAGE FOUNDATION
 FOR SCIENCE AND ENGINEERING RESEARCH
STATEMENT OF CHANGES IN NET ASSETS
 FOR THE YEAR ENDED MARCH 31, 2001

	2001		
	Invested in Capital Assets	Unrestricted	Total
Balance at beginning of year	\$ -	\$ -	\$ -
Excess of revenue over expense	-	24,688	24,688
Purchase of capital assets	35,590	(35,590)	-
Amortization of capital assets	(2,843)	2,843	-
Balance at end of year	\$ 32,747	\$ (8,059)	\$ 24,688

STATEMENT OF CASH FLOWS
 FOR THE YEAR ENDED MARCH 31, 2001

	2001
Operating activities	
Cash from operations	\$ 578,886
Cash for operations	(255,863)
Cash for administration	(252,036)
Net cash provided from operating activities	70,987
Investing activities	
Cash used for purchase of capital assets	(35,590)
Net increase in cash for the year	35,397
Cash at beginning of year	-
Cash at end of year	\$ 35,397

Note 1 Authority and Purpose

The Alberta Heritage Foundation for Science and Engineering Research (the Foundation) operates under the authority of the Alberta Heritage Foundation for Science and Engineering Research Act, Chapter A-26.5, Revised Statutes of Alberta 2000, as amended. The Foundation commenced operations on April 1, 2000 and is exempt from Income Tax under section 149 (1) (d.1) of the Income Tax Act.

The Foundation supports and promotes a balanced long term program of science and engineering research based in Alberta directed to the discovery of new knowledge and application of that knowledge to improve the quality of Alberta's economy, communities and environment.

Note 2 Significant Accounting Policies and Reporting Practices

(a) Capital Assets and Amortization

Capital assets are recorded at cost less accumulated amortization. Capital assets are amortized on a straight-line basis over their estimated useful lives at the following annual rates:

Furniture	10%
Office equipment	20%
Computer equipment	33%

(b) Cash

Cash consists of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta. The Fund is invested primarily in securities maturing in less than one year which are either issued or guaranteed by the Canadian federal and provincial governments, deposits given by or guaranteed by chartered banks, or short-term investment-grade-quality notes of Canadian corporations. Interest is earned on the daily cash balance at the average rate of earnings of the Fund which varies depending on prevailing market interest rates.

(c) Fair Value of Financial Instruments

Short-term instruments are valued at their carrying amounts which are reasonable estimates of fair value due to the relatively short period to maturity of the instruments. This approach applies to cash, accounts receivable, accounts payable and accrued liabilities.

Note 2 Significant Accounting Policies and Reporting Practices (continued)

(d) Revenue Recognition

Contributions are recognized as revenue in the current period if the amount to be received can be reasonably estimated and collection is reasonably assured. Endowment contributions are recognized as direct increases in net assets.

(e) Grants and Awards Expense

Grants and awards approved by the Trustees of the Foundation are recorded as expenses when the awardee has been notified of the amount of the award and all terms and conditions of eligibility for payment of the award have been met.

Note 3 Alberta Heritage Foundation for Science and Engineering Research Endowment Fund

The Endowment Fund operates pursuant to the Alberta Heritage Foundation for Science and Engineering Research Act and consists of an initial endowment of \$500 million from the General Revenue Fund of the Province of Alberta together with cumulative earnings thereon, less cumulative transfers to the Foundation.

Transfers to the Foundation are available at the request of the Trustees of the Foundation provided that such transfers do not impair the real value of the Endowment Fund, over the long term.

At March 31, 2001, the net assets of the Endowment Fund valued at cost were approximately \$524 million and the market value of the investments was \$467 million.

Note 4 Capital Assets

	2001		
	Cost	Accumulated Amortization	Net Book Value
Furniture and equipment	\$ 7,841	\$ (273)	\$ 7,568
Computer hardware and software	27,749	(2,570)	25,179
	\$ 35,590	\$ (2,843)	\$ 32,747

Note 5 Net Assets

Expenses include the science and engineering programs of the Foundation which are funded from the transfers from the Endowment Fund and available cash balances. The Foundation's policy is to retain funds in the Endowment Fund and transfers are made only on an as needed basis.

Note 6 Salaries and Benefits – Trustees and Officers

	Salaries ^(a)	Benefits ^(b)	Total ^(c)
Chairman	\$ 11,850	\$ –	\$ 11,850
Board of Trustees	89,050	2,006	91,056
	\$ 100,900	\$ 2,006	\$ 102,906

- (a) Salaries include retainers, honoraria, and any other direct cash remuneration.
A CEO had not been appointed during the period.
- (b) Benefits consist of the Foundation's CPP contributions.
- (c) Salaries and benefits are included in governance and planning on the statement of operations.

Note 7 Budget

As the Foundation commenced operations in 2000 and has had limited activity, a budget for 2000-2001 was not prepared.

Note 8 Approval of Financial Statements

These financial statements were reviewed by the Audit Committee and recommended to the Board of Trustees for approval.