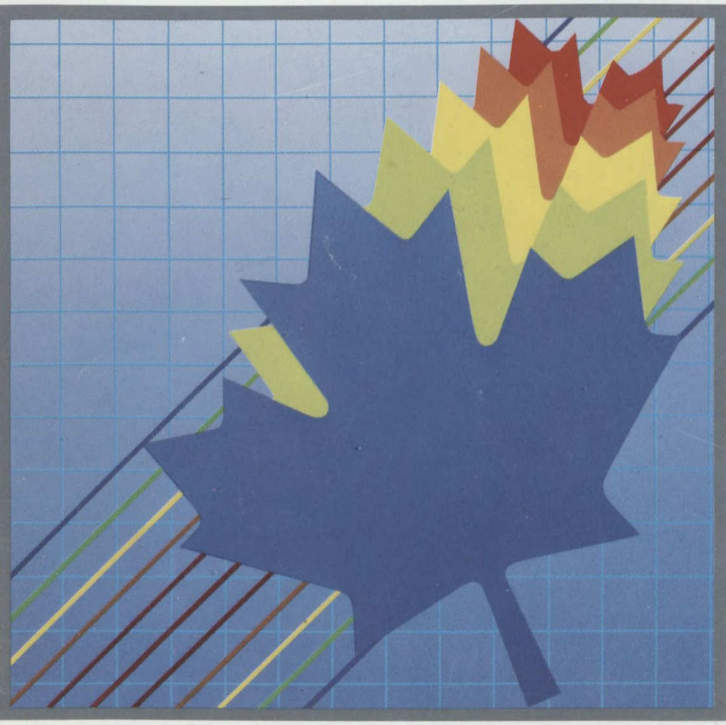
Ministry of State
Science and Technology Canada

Ministère d'État
Sciences et Technologie Canada

The Government of Canada's Support for Technology Development 1987



Canada

The Government of Canada's Support for Technology Development

A Summary of Federal Programs and Incentives

1987

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Minister of State
Science and Technology

CANADA

Ministre d'État
Sciences et Technologie

The Honourable Frank Oberle

The Government of Canada's Support for Technology Development

The development and application of new technologies are vital to Canada's economic growth. Accordingly, the Government of Canada places the highest priority on the development and widespread dissemination of state-of-the-art technology to Canadian industry. Not only is this important to our new and growing high technology sector, but it is also vital to the traditional, resource-based industries. The investment we make in the new technologies will stimulate our domestic economy and will increase our competitiveness in world markets.

In 1986/87, the federal government will spend an estimated $4.2 billion on science and technology. While the largest proportion of these expenditures is spent on basic and applied research (performed in federal laboratories, universities and industry), a significant amount is channelled towards support for technology development. This amount is even greater when account is taken of such assistance as tax incentives and federal/provincial agreements on science and technology.

This booklet is a summary of the programs, incentives and other support mechanisms provided by the federal government to assist and encourage technological development in Canada. After each brief program description, a contact address and phone number are provided.

Although not all federal government organizations have specific technology transfer programs, or support mechanisms, many of them use existing contracting-out policies and the targeted programs of other departments and agencies listed in this publication. They thus can provide an invaluable resource to Canadian business and industry in providing advice and assistance in finding the best form of support for the purpose at hand. Federal government departments and agencies are pleased to be able to offer advice and assistance wherever possible to Canadians involved in technology development.

Oberle

Frank Oberle

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Tax Incentives

Section 37 of the Income Tax Act allows taxpayers to deduct all qualifying current and capital expenditures for research and experimental development (R&D) conducted in Canada in the year in which they were incurred or in a subsequent year. Qualifying current expenditures for R&D conducted outside Canada may also be deducted.

For taxation years ending after October 31, 1983, the rates of credit for expenditures on scientific research and experimental development have been increased by 10 percentage points. The basic investment tax credit is 20 per cent of the taxpayer's expenditures in Canada on R&D, except for expenditures made in the Atlantic provinces and the Gaspé where it is 30 per cent. For Canadian-controlled private corporations eligible for the small business deduction in the year, the investment tax credit is 35 per cent for R&D expenditures made in Canada in a taxation year ending before 1985. For taxation years ending after 1984, small firms whose taxable income, combined with that of any associated companies, did not exceed $200,000 in the previous taxation year are entitled to a tax credit of 35 per cent on the first $2 million of current and capital R&D expenditures incurred in the year by the associated group. The basic rates of 20 per cent and 30 per cent apply to R&D expenditures in excess of this amount.

Credits for expenditures made after April 19, 1983 may be used to fully offset federal taxes otherwise payable. Any balance of such tax credits in the year may be carried back for three years or carried forward for seven years to offset federal taxes. For current R&D expenditures not eligible for the 100 per cent refund described below, and for capital R&D expenditures, 40 per cent of unused credits earned in the year may be refunded for small firms, individuals and certain trusts (20 per cent for all other taxpayers including large corporations). This refund applies to expenditures made after April 19, 1983, and before May 1986.

The federal budget of February 26, 1986, proposes to extend these partial refundability provisions past their current expiry date of April 30, 1986 to December 31, 1988.

Increased Refunding of Tax Credits for Small Canadian R&D Firms

For expenditures made after May 23, 1985, the 35 per cent tax credit earned by small Canadian firms for current expenditures on R&D has been made 100 per cent refundable. This refund is available in respect of the first $2 million of current R&D expenditures in Canada and could result in a refund of up to $700,000 per annum to an eligible firm. This increased refund provision for R&D is not subject to an expiry date. Credits earned on capital expenditures continue to qualify for the existing partial 20 or 40 per cent refund as outlined above.

Revenue Canada has established a special assessing and audit group to administer claims to provide refunds to R&D firms as soon as possible.

Improved Definition and Administration of R&D

Significant changes have been made to the meaning of qualifying R&D expenditures. The "wholly attributable" rule has been relaxed with the introduction of the term "all or substantially all of the expenditure is attributable" to the prosecution of scientific research. This will permit, for example, the minor or incidental use of R&D capital equipment for non-R&D purposes. Similarly, the provision to allow "directly attributable" current expenditures will permit firms to claim R&D tax incentives for the direct costs of personnel who are not solely involved with R&D, but who perform R&D part of the time or who support or supervise R&D personnel.

Revenue Canada has established a group of technical experts to aid tax auditors and taxpayers in the determination of qualifying R&D activities, and has introduced a standard prescribed form to facilitate the processing of claims for R&D tax incentives.

Contact: Revenue Canada — Taxation
District Taxation Offices
(listed in Government Services section of local telephone directories)

Financial Assistance for Research and Development

Industrial and Regional Development Program (IRDP)

The primary objective of IRDP is to stimulate investment to enhance the productivity and international competitiveness of Canadian industry. The program provides support to viable projects at various stages of the innovation and business development processes. Companies, consultants, research institutes, and even individuals may be eligible for IRDP assistance, depending on the nature and location of the project and various other criteria.

IRDP is divided into four major program elements designating the type of project eligible for IRDP support. Each has its own criteria of eligibility conditions and levels of support which reflect regional and industrial development needs in various parts of the country. These program elements are:

Innovation

- — Studies on technology transfer, market research, venture capital search and project feasibility
- — Development of new, technically risky projects or processes
- — Development of companies' technological capacities
- — Development and demonstration of products and processes involving little technical risk
- — Industrial design
- — Research, development, demonstration or adaptation of pollution abatement technology

Establishment

- — Studies of prospective business establishment projects
- — Plant establishment

Modernization/Expansion

- — Studies
- — Modernization of existing processes and services
- — Expansion of existing processes and services
- — Industrial adaptation of microelectronics/electronics technology

Marketing

- — Assistance to organizations promoting Canadian products
- — Market research and strategy studies

Contact: Department of Regional Industrial Expansion (DRIE) Office nearest you.

Newfoundland and Labrador	(709) 772-4917
Nova Scotia	(902) 426-2018
New Brunswick	(506) 857-6444
Prince Edward Island	(902) 566-7400
Quebec	(514) 283-8185
Ontario	(416) 365-3737
Manitoba	(204) 949-4090
Saskatchewan	(306) 975-4400
Alberta	(403) 420-2944
British Columbia	(604) 666-0434
Northwest Territories	(403) 920-8568
Yukon	(403) 668-4655

Defence Industry Productivity Program (DIPP)

DIPP is designed to develop and maintain strong defence-related industries across Canada that are capable of competing successfully over the long-term in domestic and export markets. The objective includes the development and maintenance of a defence-related production capability and of an advanced defence-related technology capability. The industrial environment is characterized by relatively

high commercial, technical and financial risk and by foreign firms that are typically heavily supported directly and indirectly by their respective governments.

Contributions are extended toward the eligible costs of:

- Research and development of defence-related products and for sustaining the associated technology base
- Establishing qualified Canadian suppliers of defence-related products
- Acquiring advanced production equipment to modernize or upgrade engineering and/or manufacturing capability in Canada for defence-related products
- Market feasibility studies, to establish the specifications and characteristics of defence-related products required to meet market demand or determine market sector characteristics for those products when needs have been identified in Canada or export markets.

Contact: Defence Industry Productivity Program (DIPP)
Department of Regional Industrial Expansion (DRIE)
235 Queen Street
Ottawa, Ontario
K1A 0H5

Electronics and Aerospace Branch

Electronics

Deputy Director, Defence Development (Electronics)
(613) 954-3338

Aerospace

Deputy Director, Airframe Division
(613) 954-3157

Deputy Director, Propulsion and Aircraft Subsystem Division
(613) 954-3292

Deputy Director, Space and Specialist Firms Division
(613) 954-3299

Machinery and Electrical Equipment Branch

Manager, Planning, Analysis and Programs Division
(613) 954-3214

Consumer Goods, Services and Resource Processing Sector

Senior Incentives Officer
(613) 954-2871

Automotive, Marine and Rail Branch

Manager, Program Planning and Coordination Division
(613) 954-3388

Industrial Research Assistance Program (IRAP)

Established in 1962, IRAP is a National Research Council (NRC) support mechanism to Canadian companies in their efforts to expand through new product development. It encourages applied research in Canadian industry, with the objective of increasing the calibre and scope of industrial R&D in Canada in a business environment.

IRAP now incorporates the Technical Information Service Program and the Program for Industry/Laboratory Projects (PILP). The five elements of the program are grouped under a decentralized Field Network and a centrally administered Laboratory Network.

IRAP Field Network

IRAP-C — Field Advisory Service

The Field Advisory Service of IRAP has officers stationed in 50 locations across Canada. These individuals are either NRC employees or

are designated to work on behalf of IRAP in provincial research organizations, technology centres or consulting engineering firms. They provide information and guidance on appropriate technology and techniques to develop better products and systems for improving the effectiveness of company functions and production operations. Experienced industrial engineers from the field offices will visit companies on request to advise them on the collection of relevant facts and data, the analysis of this data and on possible corrective actions. They will also help companies gain access to the other types of assistance provided by NRC and other government departments. The Industrial Technology Advisors also have access to both the consulting and the university communities and make available technologies from other countries.

IRAP-H — Contributions to Firms Employing Undergraduates

This element of IRAP pays the salaries of university and technological college students who, under the supervision of experts, help small firms with problems related to production, manufacturing and preparation of product designs, quality control and plant layout.

IRAP-L — Contributions to Laboratory Investigations

This element provides financial assistance to small companies (up to 200 employees) to permit them to contract problem-solving investigations with appropriate research laboratories, institutes or consulting services. Under this sub-program, the total amount per project is limited to 65% of authorized project costs to a maximum of $4,000. Eligible projects may involve a total cost of $10,000.

IRAP-M — Contributions to Small Projects

The purpose of this program is to encourage small companies to solve specific technical problems with their own staff and/or with the aid of external facilities in a selected research organization.

Companies may have up to 200 employees and must be incorporated provincially or federally. Financial assistance will cover salaries of professionals and technicians working on the approved project. This includes those under the sub-contract to the cooperating research organization. The IRAP contribution towards a project could be up to $100,000 for a maximum of 12 months.

IRAP Laboratory Network

IRAP(PILP) — Major Collaborative Projects

This IRAP program element was initiated in 1975 and is administered by the National Research Council (NRC). It is designed to promote a more rapid transfer of results from NRC laboratories, other federal laboratories, and university or international laboratory resources to industry in situations where there are important opportunities for Canadian industrial exploitation. The program is designed to help overcome barriers to industrial use of the research results of public and international laboratories by funding work that will advance development, allow better identification of the eventual product, expose the economic factors affecting the product or process, and identify its place and position in the marketplace.

Projects for funding under IRAP(PILP) are selected from proposals which:

- are aimed at an important Canadian need or opportunity
- involve technology transfer from or collaboration with public research organizations in Canada or from foreign technological resources
- involve as prime performers Canadian companies with technical capability and an adequate business base
- give evidence of intent of the performer to commercialize the results either alone or along with other identified parties in Canada.

Another major consideration is the probability of high economic return if the project is successful. Funds are provided through the negotiation of a contribution agreement with Canadian companies.

A Biotechnology Development Program has been established within the IRAP(PILP) Program to link the needs of the developing biotechnology industry in Canada and the skills of researchers in universities and provincial research organizations. The initial areas of focus for the program are: plant strain development, nitrogen fixation, novel aspects of cellulose utilization, waste treatment and utilization, bacterial mineral leaching, and human and animal health care products (involving biotechnology).

Contact: Industrial Research Assistance Program
National Research Council
Building M-55, Room 260-C
Ottawa, Ontario
K1A 0R6

IRAP Field Network (613) 993-0331
IRAP Laboratory Network (613) 993-0357

Strategic Grants Program (NSERC)

Strategic grants (administered by the Natural Sciences and Engineering Research Council) enable university researchers to conduct project-oriented research in areas of national concern. Seven areas are targeted for investigation: biotechnology, communications and computers, energy, environmental toxicology, food/agriculture, industrial materials and processes and oceans. Research proposals in critical technologies outside these areas are accepted in an "open" category. Industrial support is desirable but not mandatory.

University/Industry Program (NSERC)

NSERC offers a special program to accelerate partnerships between Canadian universities and industry. NSERC will help companies locate university-based expertise and will make substantial contributions to the cost of industrially relevant research conducted by universities. It also provides financial support to enable companies to hire undergraduates and recent PhD graduates.

The following are examples of the shared-cost ventures NSERC supports under this flexible program:

Cooperative Research and Development Projects

Grants for projects ranging from short-term endeavours to commercialize a university innovation to longer-term university research in a technology relevant to Canadian companies.

Industrial contribution and involvement required.

Shared Equipment and Facilities

Contributions towards joint acquisition or upgrading of research equipment for use by industrial and university researchers.

Industrial Research Chairs

A major initiative that allows universities to build strengths in scientific and technological fields important to industry. Grants pay for salaries of research professors of international calibre, and for equipment and research costs.

Industrial contribution and research collaboration are mandatory.

NSERC Visiting Fellowships

Salary support for senior researchers either in industry or universities who take leave in the other sector. The objectives are to enhance the industrial orientation of university laboratories and to stimulate productive interchange between sectors.

Workshops and Seminars

Contributions towards the organization of workshops, seminars and exhibits involving participants from both sectors. Subjects may range from a technology of interest to a company to an in-depth analysis by university researchers of a particular industrial problem.

Industrial Research Fellowships

Provides up to three years salary support for a company hiring a recent doctoral graduate to its research and development team.

Industrial Postgraduate Scholarships

Contributes to the salary of industrial employees returning to university for an advanced degree.

Industrial Undergraduate Student Research Awards

Salary support for qualified undergraduate students wishing to obtain industrial research experience.

Contact: Natural Sciences and Engineering Research Council
200 Kent Street
Ottawa, Ontario
K1A 1H5
(613) 995-6295

Matching Grants Policy for University Research

The federal government announced a new matching grants policy in its February 26, 1986 budget. Starting in 1987-88 and applying to the Natural Sciences and Engineering Research Council, the Social Sciences and Humanities Research Council and the Medical Research Council, the federal government will provide up to $369 million over four years to the three Councils to match private sector contributions to research and related activities at Canadian universities. The $369 million in federal matching funds are in addition to the $537 million annual base-budget allocation to the three Councils.

The objectives of the matching grants policy are to encourage greater research collaboration between the private sector and universities and to increase the overall level of support for university research.

The matching policy is administered by the respective Granting Councils.

Contact: Leo Derikx
Natural Sciences and Engineering Research Council
200 Kent Street
Ottawa, Ontario
K1A 1H5
(613) 995-6449

Mary-Anne Lipke
Medical Research Council
Jeanne Mance Building
Tunney's Pasture
Ottawa, Ontario
K1A 0W9
(613) 954-1814

Louise Dandurand
Social Sciences and Humanities Research Council
255 Albert Street
P.O. Box 1610
Ottawa, Ontario
K1P 6G4
(613) 992-5125

Scientific and Technical Information

Canadian Patents and Development Limited (CPDL)

CPDL is the Crown Corporation responsible for arranging the commercial exploitation of inventions and other technological advancements arising from research carried out by government departments, universities and public research institutions. Businesses and individual entrepreneurs may obtain rights to develop and produce inventions and other technological advancements commercially by way of licenses or other suitable arrangements.

CPDL maintains an inventory of technology which is available for such commercial exploitation. This technology is brought to the attention of industry by means of trade shows, technical publications and an "Inventions" listing.

The Corporation sponsors, in conjunction with the Department of Regional Industrial Expansion, the Inventor's Assistance Program at the Canadian Industrial Innovation Centre, Waterloo, Ontario, and the Centre d'Innovation Industrielle in Montreal, Quebec. The program is designed to offer inventors an assessment of the technical and commercial feasibility of their inventions along with recommendations on the need for further development, markets, etc. This service is provided to inventors for a nominal flat fee. The inventor retains full rights to the invention.

The Corporation also conducts technology transfer seminars across Canada in conjunction with government, university and other sponsoring organizations.

Contact: Marketing and Licensing
Canadian Patents and Development Limited
275 Slater Street
Ottawa, Ontario
K1A 0R3
(613) 990-6100

Intellectual Property Directorate

The Intellectual Property Directorate, which is part of Consumer and Corporate Affairs Canada, administers legislation dealing with patents, trade marks, timber marks, copyright and industrial designs.

The Patent Branch examines applications for patents to ensure compliance with Canadian laws and practice, grants patents accordingly, maintains search files of Canadian and foreign patents, grants compulsory licences, and disseminates technological information found in patents.

The Trade Marks Branch examines applications for the registration of trade marks, registers the marks, registers licensed users of registered trade marks, and maintains registers and indexes for search purposes.

The Copyright and Industrial Design Branch is responsible for the registration of copyrights and industrial designs. Because copyright protection is automatic under Canadian law, there is no examination of copyright applications other than to assess the suitability of subject matter for registration.

Contact: Intellectual Property Directorate
Enquiries Section
Consumer and Corporate Affairs Canada
Place du Portage
Hull, Quebec
K1A 0C9
(819) 997-1936

Patent Information Exploitation (PIE) Program

The PIE Program, established by the Intellectual Property Directorate of Consumer and Corporate Affairs Canada, aims to stimulate technology transfer, to promote industrial innovation, and to provide research and development support through the exploitation of technological information contained in patents.

The PIE Program is directed at small and medium-sized businesses, research establishments, and government agencies. Under this program the Patent Office offers a "state-of-the-art" patent search service designed to help clients discover solutions to technical problems, avoid duplication of R&D, generate ideas for new products and processes, locate domestic and foreign technologies for licensing, and evaluate alternate technologies. To ensure convenient access to PIE Program services, the Intellectual Property Directorate has created a nationwide network of intermediaries including provincial research organizations, industrial innovation centres, and various other federal and provincial agencies through which clients can request patent information.

The PIE Program also includes a Public Education and Awareness component which provides specially trained experts to speak on subjects relating to intellectual property at selected meetings, conferences, and seminars.

Contact: Intellectual Property Directorate
Information and Technology
Exploitation Branch
Consumer and Corporate Affairs Canada
Place du Portage
Hull, Quebec
K1A 0C9
(819) 997-1936

Canada Institute for Scientific and Technical Information (CISTI)

Operated by the National Research Council, CISTI has one of the largest and most comprehensive collections of scientific and technical literature in the world. Documents from this collection are made available to businesses of all sizes, through the loan and photocopying service. CISTI offers a complete range of information services, including direct access to its databanks of bibliographic and numeric information, current awareness, literature searching, help in finding translated versions of foreign-language materials, reference, and referral to experts.

Contact: Canada Institute for Scientific
and Technical Information
National Research Council
Montreal Road
Building M-55
Ottawa, Ontario
K1A 0R6
(613) 993-1600

D

Training Activities

Two programs under the Canadian Jobs Strategy — Skill Shortages and Skill Investment — provide funding to support training and training-related activities.

Skill Shortages

The workplace-based option of the Skill Shortages Program offers financial assistance to employers to develop and provide training for their workers relating to occupational skills designated as being in shortage. In effect, employers who provide a plan for their human resource needs may receive assistance to train employees in the necessary skills. Skills will be designated regionally and where necessary nationally, so that training relates to the needs of employers in the community.

Skill Shortages is primarily "employment-led". It is up to industry to identify its human resource needs and to work with local officials to meet these needs. Assistance is in the form of reimbursement of wages and training costs for a combination of off-the-job and on-the-job training.

Any employer in the private sector, voluntary and non-profit organizations may apply. Trainees must have the capacity to be trained in designated occupational skills.

Contact: Skill Shortages Program
Employment and Immigration Canada
Place du Portage, Phase IV
140 Promenade du Portage
Hull, Quebec
K1A 0J9
(819) 994-2332
(819) 953-1811

Skill Investment

The Skill Investment Program gives employers and employees the chance to adapt to changing technological and competitive conditions which threaten job security. The program is designed to help employees and employers anticipate and adjust to job changes.

Skill Investment provides financial assistance in the form of wage subsidies and reimbursement of training costs for up to three years. Various training support options are offered to meet individual needs. Depending on the option, training may be on-the-job, off-the-job or a mix of both. Full- or part-time training may take place in the employer's firm, in another company, or at a community college or other training institution. Participants must be currently employed or self-employed and their jobs must be considered sensitive to technological and market changes.

Contact: Skill Investment Program
Employment and Immigration Canada
Place du Portage, Phase IV
140 Promenade du Portage
Hull, Quebec
K1A 0J9
(819) 953-1807
(819) 953-1806

Institutional Training

A variety of courses, ranging from basic skill development to advanced skill training, are given in provincial vocational schools, community colleges and training centres operated by non-government organizations. The federal government utilizes courses tailored to meet the labour market's demand for skills and the needs of individual clients. When taking courses, people receive training allowances or unemployment insurance benefits if they qualify.

Contact: Employment and Immigration Canada
Canada Employment Centres (CECs).
(listed in Government Services section of local telephone directories)

Northern Scientific Training Program

This program is designed to increase the number of graduate and other advanced students in Canadian universities who have specialized in some aspect of

northern studies, and who have northern research experience. To accomplish this, it provides support to Canadian universities giving advanced students professional experience in the North and encouraging them to develop a commitment to northern work.

Contact: Scientific Affairs Division
Circumpolar and Scientific
Affairs Directorate
Indian and Northern Affairs Canada
Les Terrasses de la Chaudière
Ottawa, Ontario
K1A 0H4
(613) 997-9666

Research Manpower Programs (NSERC)

The Natural Sciences and Engineering Research Council is the largest federal granting council and the mainstay of Canada's research effort in fields that range from biotechnology to artificial intelligence, from materials science to engineering and high energy physics. Through its extensive programs of grants and scholarships for university-based research, the Council provides both the advanced knowledge base and the skilled graduates needed to ensure competitiveness in the most demanding technological environments.

Canada's performance in science and technology depends on the creation of a supply of young scientists and engineers to fill the many advanced positions that will open in industry, government, and universities in the future. NSERC places a high priority on training these researchers and offers a range of programs of scholarships and fellowships to undergraduate and graduate students, postdoctoral fellows and university scientists and engineers. Most awards are decided in open competitions and pay a stipend to the holder.

Contact: Natural Sciences and Engineering
Research Council
200 Kent Street
Ottawa, Ontario
K1A 1H5
(613) 995-6424

Technology Support Through Procurement

Contracting-Out Policy

In 1972, the government established a contracting-out policy which directs that government requirements for mission-oriented science and technology are to be contracted-out to the private sector, preferably to Canadian industry, unless a department can justify intramural or foreign performance.

The policy applies to present and new requirements in all scientific and technological activities in the natural sciences and to human science and technology requirements in the fields of urban, regional and transportation studies.

Although the contracting-out policy is primarily a procurement policy, it is intended to promote the development of a Canadian industrial R&D capability.

Unsolicited Proposals (UP)

In 1974, the government expanded the contracting-out policy to cover unsolicited science and technology proposals which are submitted by industry and which fall within the mission of a government department. The Unsolicited Proposals Program, managed by Supply and Services Canada, permits the government to respond quickly to sound, unique proposals from the private sector in support of government science missions.

Part of the UP program is a fund that provides bridge financing for proposals which are accepted from the point of view of sponsorship, scientific merit and uniqueness, but which cannot be funded from the sponsoring department's current appropriations.

The Unsolicited Proposals Program was expanded in 1985 to allow projects that aim at demonstrating new technologies in operational settings within the government. This program expansion is specifically targeted at small Canadian businesses.

Contact: Science Programs Branch
Supply and Services Canada
Place du Portage
Phase III, 12C1
Ottawa, Ontario
K1A 0S5
(819) 997-7428
or
(819) 997-5296.

Profit Policy

Administered by Supply and Services Canada, this directive sets out the policy and guidelines for the calculation of the profit applicable to negotiated contracts with Canadian suppliers for both product and services with total costs of $50,000 or over.

The amount of profit to be applied will be calculated on the basis of four factors: capital employed, general business risk, contractual risk, and contractor's contribution to a Canadian Value Added Strategy. The following are the areas in which recognition of the Canadian Value Added will be made for profit purposes:

- — reduction of regional disparities
- — promotion of R&D in Canada
- — Canadian content program

Contact: Policy and Evaluation Branch
Supply and Services Canada
Place du Portage
Phase III, 14A1
Ottawa, Ontario
K1A 0S5
(819) 997-7119

Technology Support Through Institutes

Technology Centres

The primary function of technology centres, which are supported through federal grants, contributions or contracts, is to support industry needs for new technology or specific technical skills. The centres may be operated by the federal or provincial governments, by universities, or by industry.

In a recently introduced policy, all federal laboratories with a significant service-to-industry mandate will be brought under a new management regime. The aim of the new policy is to make industry-oriented laboratories more responsive to user needs.

Contact: Federal Program Review and
Development Branch
Government Research and
Universities Sector
Ministry of State for Science
and Technology
235 Queen Street
8th Floor West
Ottawa, Ontario
K1A 1A1
(613) 993-4215

Technology Outreach Program (TOP)

The Technology Outreach Program will consolidate and redirect existing federal assistance to technology centres outside the federal establishment. TOP will provide start-up assistance for new centres as well as sustaining assistance for existing centres.

Start-up assistance will be provided only if tangible industry assistance is forthcoming and there is no other centre in existence that serves the related market with the proposed services. Sustaining assistance will be available for not-for-profit, separately incorporated technology centres. In general, assistance will not be directed towards a centre's cost-recoverable activities, but will support, fully or in part, technology development and diffusion services that cannot be expected to recover full costs.

Contact: Office of Industrial Innovation
Department of Regional Industrial Expansion
235 Queen Street
5th Floor
Ottawa, Ontario
K1A 0H5
(613) 954-3468

IRAP Field Network
Industrial Development Office
National Research Council
Montreal Road
Building M-55
Ottawa, Ontario
K1A 0R6
(613) 993-0331

Communications Research Centre (CRC)

Located near Ottawa, the Communications Research Centre is the Department of Communications' main research establishment and employs 500 scientists, engineers and support staff. The Centre undertakes research in radar and communications technology, information technology and systems R&D and space technology and applications.

Companies can become involved with CRC in a number of ways including:

- the contracting-out of R&D and product fabrication
- arrangements for staff exchanges
- the provision of advice to firms and universities upon request, and assistance, as required, to perfect the skills of these organizations.

Contact: Communications Research Centre
Department of Communications
3701 Carling Avenue
P.O. Box 11490
Station A
Ottawa, Ontario
K2H 8S2
(613) 998-2325

Canadian Workplace Automation Research Centre (CWARC)

Also connected to the Department of Communications, the Canadian Workplace Automation Research Centre is located in Laval, Quebec, northwest of Montreal. Its main task is to study all aspects of the workplace of the future. Through CWARC, cooperative efforts between private companies, universities and government agencies concentrate on improving office systems, hardware and software, and on the social and organizational impact of office automation.

CWARC's major objective is to provide leadership in applied research on computerized office systems and to adapt the findings to enhance productivity in the public and private sectors.

Areas of research include office communications (teleconferencing, cable and satellite communications), as well as bilingual and multilingual systems; electronic information flow; organizational methods and structures as they pertain to workplace productivity and performance; computer-assisted translation; expert systems; and data management.

Contact: Canadian Workplace Automation
Research Centre
1575 Chomedey Blvd.
Laval, Quebec
H7V 2X2
(514) 682-3400

or

Department of Communications
Industry and Economic Development Branch
300 Slater Street
Ottawa, Ontario
K1A 0C8
(613) 990-4295

Northern Scientific Resource Centres

Three scientific resource centres are now in operation at Inuvik, Igloolik and Frobisher Bay. These centres are intended to assist government, university, and industrial scientists, and any other research workers with a valid interest in northern science. They provide facilities to allow a range of laboratory investigations to be carried out in the North, and act as bases from which scientific field parties can be mounted and supported. They are open throughout the year, and arrangements can be made for the centres' staff to take routine readings for investigators when they are absent.

Contact: Scientific Affairs Division
Circumpolar and Scientific Affairs Directorate
Indian and Northern Affairs Canada
Les Terrasses de la Chaudière
Ottawa, Ontario
K1A 0H4
(613) 997-9666

Canadian Home Builders Association (CHBA)

Energy, Mines and Resources Canada funds the Canadian Home Builders Association under agreement until 1991, to deliver the R-2000 Home Program to the residential construction industry. Working through CHBA's provincial affiliates, the Program provides training workshops for builders, sub-trades and inspectors and in the techniques of building and marketing energy-efficient housing.

Contact: New Housing Division
Energy Conservation Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-1118

Heating, Refrigeration and Air Conditioning Institute of Canada

Funded by Energy, Mines and Resources Canada (EMR), this Institute trains and certifies designers and installers of ventilation systems for R-2000 homes and industry development. In addition, EMR funds the refinement and establishment of standards for new technology used in R-2000 homes through the Canadian Standards Association and the testing of new products and equipment, such as Canadian-made heat recovery ventilators at the Ontario Research Foundation.

Contact: New Housing Division
Energy Conservation Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-1118

G

Technology Support Through Economic and Regional Development Agreements

Economic and Regional Development Agreements (ERDAs) are designed to facilitate the development of economic and regional development policies, programs and activities at the federal and provincial levels of government. Each agreement contains its own set of objectives that reflect the strategic priorities agreed upon by both governments.

Specific initiatives under each ERDA are implemented by Subsidiary Agreements which are developed, negotiated, signed and implemented jointly by responsible federal and provincial ministers.

The following is a list of Subsidiary Agreements with science, technology and/or research components that may be of assistance to the private sector.

Alberta

(1) *Canada-Alberta Subsidiary Agreement on Agricultural Processing and Marketing (1986-1991)*

Program III: *Research and Development Assistance*

Developing new or improved products or processes, pilot projects.

Contact: Ernie Belsek
Department of Regional Industrial Expansion
10179-105th Street
Suite 505
Edmonton, Alberta
T5J 3S3
(403) 420-2944

(2) *Canada-Alberta Subsidiary Agreement on Forest Resource Development (1984-1989)*

Program II: *Applied Research and Diffusion Technology*

Program is designed to stimulate the transfer, adaptation and diffusion of technology.

Contact: Steve Price
Canadian Forestry Service
Northern Foresty Centre
5320 122th Street
Edmonton, Alberta
T6H 3S5
(403) 435-7210

British Columbia

(1) *Canada-British Columbia Subsidiary Agreement on Industrial Development (1985-1990)*

Program I: *Program in Support of Modernization*

Program is designed to support resource-based industries, primarily forest products, in meeting a range of modernization needs through use of advanced technology.

Program III: *Industrial Diversification Component — Strategic Industrial Incentive Program*

Assistance to stimulate investment in major industrial ventures.

Program IV: *Industrial Development Support Component — Institutional Support Program*

Assistance to stimulate the transfer, adaptation and diffusion of technology.

Contact: Business Information Office
Department of Regional Industrial Expansion
1055 Dunsmuir Street
Suite 1101
Vancouver, British Columbia
V7X 1K8
(604) 661-2204

(2) *Canada British-Columbia Subsidiary Agreement on Agri-Food and Regional Development (1985-1990)*

Program I: *Productivity Enhancement*

Technology development, technology transfer, market and new product development.

Contact: John Barry
Agriculture Canada
Room 307
80-6th Street
New Westminster, British Columbia
V3L 5B3
(604) 666-6344

(3) *Canada-British Columbia Subsidiary Agreement on Small Business Incentives (1985-1990)*

Program A: *Assistance Program for Small Business*

Program B: *Industrial Development Assistance Program*

Both program A and B are designed to encourage the establishment, modernization and expansion of commercial operations for high technology firms and also manufacturing firms.

Program C: *Aquaculture Assistance Program*

This program is designed to encourage the establishment and expansion of viable aquaculture operations.

Contact: Business Information Office
Department of Regional Industrial Expansion
1055 Dunsmuir Street
Suite 1101
Vancouver, British Columbia
V7X 1K8
(604) 661-2204

Manitoba

Canada-Manitoba Subsidiary Agreement on Urban Bus Industrial Development (1984-1990)

Program I: *Research and Development*

The objective of this program is to pursue selected technologies identified as strategic to the development of an advanced urban bus industry in Manitoba. For activities under this program, the participation of industry and other interested parties will be pursued.

Program II: *Production Design and Demonstration*

The objective of this program is to support the design, development and demonstration of pre-production models of advanced urban bus technology.

Contact: Gary Hosea
Department of Regional Industrial Expansion
Manager, Industry and Trade Development
Capital and Industrial Goods
Bank of Montreal Building
608 - 330 Portage Avenue
P.O. Box 981
Winnipeg, Manitoba
R3C 2V2
(204) 949-2952

New Brunswick

(1) *Canada-New Brunswick Subsidiary Agreement on Industrial Development (1985-1990)*

Program A: *Development Climate and Industrial Support Program*

A program of financial incentives aimed at overcoming specific

weaknesses within the business support environment in the area of: entrepreneurial development, the hiring of skilled personnel, and encouraging the introduction of computer technology into small firms.

Program B: *Industrial Diversification*

This program offers assistance to encourage the introduction of new products through the purchase of manufacturing rights or licenses, particularly the non-resource based industrial sector.

Program C: *Market and Trade Development Program*

This program provides assistance to business in developing its marketing capability — market identification, planning and feasibility studies — in order to strengthen their position in domestic and foreign markets.

Contact: Wayne Gunter
Department of Regional Industrial Expansion
590 Brunswick Street
P.O. Box 578
Fredericton, New Brunswick
E3B 5A6
(506) 452-3125

(2) *Canada-New Brunswick Subsidiary Agreement on Industrial Innovation and Technology Development (1986-1991)*

Program 1: *Strategic Technology Support*

The purpose of this program is to support and strengthen strategic technology resources and capabilities and to enhance technology transfer in the province. It includes the following sub-programs: opportunity identification and priorization; public sector-sponsored applied R&D; and applied technology infrastructure.

Program II: *Innovation Climate*

The purpose of this program is to support the creation of a climate which encourages entrepreneurs and innovators in response to proposed product/process development or improvement and business proposals.

Program III: *Direct Support to Private Sector*

The program is designed to provide financial and technical assistance directly to private firms, individuals or industry associations which are technology-based or facing issues which are technological in nature.

Contact: Nora Kelly
Department of Regional Industrial Expansion
590 Brunswick Street
P.O. Box 578
Fredericton, New Brunswick
E3B 5A6
(506) 452-3126

Newfoundland

Canada-Newfoundland Subsidiary Agreement on Ocean Industry Development (1984-1989)

Program A: *Ocean Industry Assistance*

This program will serve to provide financial assistance to Newfoundland-based firms engaged in applied R&D, the application/transfer of high and medium technologies to the manufacturing, processing and servicing industries, where such activities are in direct support of the ocean industry.

Program F: *Innovation and Productivity Support Program*

This program provides financial assistance to research institutions and firms for the acquisition of equipment and expertise of major significance to the ocean industry sector. Eligible activities will include the acquisition of equipment, expertise, and materials to facilitate product and process development initiatives, prototype design and fabrication, prototype testing, computer modelling, materials, analysis and technology demonstration projects.

Contact: Rick Comerford
Department of Regional Industrial Expansion
90 O'Leary Avenue
P.O. Box 8950
St. John's, Newfoundland
A1B 3R9
(709) 772-2456

Nova Scotia

Canada-Nova Scotia Subsidiary Agreement on Technology Transfer and Industrial Innovation (1985-1990)

Program I: *Modernization and Industrial Innovation*

This program consists of various initiatives to encourage businesses, research institutes and universities to become aware of, and begin adopting, advanced technologies relevant to their operation.

Program III: This program is designed to encourage entrepreneurs, inventors, technology-based firms, researchers and academics to identify, evaluate, develop and commercialize innovative ideas.

Contact: Office of the Regional Executive Director
Department of Regional Industrial Expansion
1496 Lower Water Street
P.O. Box 940, Stn. M
Halifax, Nova Scotia
B3J 2V9
(902) 426-3458

Ontario

Canada-Ontario Subsidiary Agreement on Mineral Development (1985-1990)

Program C: *Improving Productivity Through Mining and Mineral Technology*

This program is aimed at increasing efficiency and productivity while maintaining or improving safety in the Ontario minerals industry. Mining productivity and safety will be enhanced through programs such as those developing improved computer packages for mine design to maximize their usefulness.

Contact: Peter Andrews
Energy, Mines and Resources Canada
580 Booth Street
Ottawa, Ontario
K1A 0E4
(613) 995-9466

Prince Edward Island

Canada-Prince Edward Island Subsidiary Agreement on Agri-Food Development (1984-1989)

Program B: *Productivity Enhancement*

Assistance will be provided to producers and private sector organizations for the evaluation and demonstration of technology that will increase the quality, improve the productivity and decrease the unit cost of production of

potatoes, cereals and forages, beef and swine.

Contact: John Enman
Agriculture Canada
P.O. Box 2949
Charlottetown, P.E.I.
C1A 8C5
(902) 566-7300

Program C: *Technology Development*

Assistance is provided to private sector firms and educational institutions to develop better adapted cereal and forage varieties, improved management practices for potato production and storage, a system of intensive cereal management, and crop management practices which reduce soil erosion.

Contact: Bonita MacFarland
Agriculture Canada
Research Branch
P.O. Box 1210
Charlottetown, P.E.I.
C1A 7M8
(902) 892-5461

Quebec

(1) *Canada-Quebec Sub-Agreement on Scientific and Technological Development (1984-1990)*

Program A: *Opportunity or Feasibility Studies*

This program covers up to 75% of the eligible costs of studies for major R&D projects aimed at the development of new products, services or processes or application and diffusion of new technology.

Program B: *Modernization of R&D Equipment*

This program covers up to 50% of the eligible cost of scientific equipment required for major projects up to $1 million.

Program C: *New Initiatives in R&D*

This program covers up to 50% of the eligible cost of specific projects resulting from feasibility studies, pilot projects or other similar initiatives.

Contact: The Joint Office of Project Evaluation
Canada-Quebec Subsidiary Agreement on Scientific and Technological Development
P.O. Box 1690
Station 'B'
Montreal, Quebec
H3B 3L3
(514) 875-9517

(2) *Canada-Quebec Subsidiary Agreement on Communications Enterprises Development (1985-1990)*

Program I: *Special Communications Initiatives Fund*

Feasibility studies, marketing studies, pilot projects.

Program II: *Development and Marketing of Software and Programming*

Development, marketing and distribution of French-language programming, broadcasting, audio-visual products and new services.

Program III: *Development and Improvement of Communications Technologies, Infrastructure and Services*

Provide financial and technical assistance to encourage Quebec firms to launch research and development programs on new communication technologies.

Contact: Denis Lachance
Department of Communications
295 rue Saint-Paul est
Montreal, Quebec
H2Y 1M1
(514) 283-7737

(3) *Canada-Quebec Subsidiary Agreement on Industrial Development (1985-1990)*

Program II: *Major Industrial Projects*

This program offers financial assistance to cover technical and technological studies and project viability demonstration.

Contact: Regional Office
Department of Regional Industrial Expansion
800, Place Victoria
P.O. Box 247
Montreal, Quebec
H4Z 1E8
1-800-361-5367

Saskatchewan

Canada-Saskatchewan Subsidiary Agreement on Advanced Technology

Program I: *Innovation Climate Assistance Program*

This program provides financial contributions towards the direct costs of studies to identify and refine growth factors pertinent to the accelerated growth of the advanced technology industries in Saskatchewan. In addition, the program provides financial support for university level research pertinent to industry which in turn plays a key role in guiding the direction of the research.

Program II: *Industrial Assistance Program*

The intent of this program is to increase the level of investment by the private sector in industries, services or new product and process development. It is concerned with stability and diversification of advanced technology industries. This intent will be pursued by offering financial assistance for activities ranging from market research to capital investment for new establishments.

Contact: Dalton Tamney
Department of Regional Industrial Expansion
105-21st Street East
6th Floor
Saskatoon, Saskatchewan
S7K 0B3
(306) 975-5316

Energy Programs

Industry Energy Research and Development Program (IERD)

IERD is aimed at promoting the development of products, processes or systems that will increase the efficiency of energy use throughout industry, and at encouraging the use of the technology developed under the program. Canadian companies, individuals, trade and research organizations and consulting firms are eligible for assistance of up to 50 per cent of the eligible costs of a project.

Each project must have a sound technical basis and a reasonable chance of success; it must generate a significant amount of Canadian development work; it must be such that the technology can be generally applicable in one or more industrial sectors; and it must provide sufficient potential energy savings, considering all possible areas of application, to justify the Crown's investment.

Contact: Industrial Energy Division
Energy Efficiency Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-9447

Energy Demonstration Program for the Industrial, Commercial and Institutional Sectors

This program concentrates on the demonstration of proven energy conservation technologies in the industrial, commercial and institutional sectors. Its main objective is to accelerate the adoption and commercialization of energy conservation technologies by supporting industry in this regard and by increasing public awareness of these technologies. The program, which operates on a cost-shared basis, is available throughout Canada.

Contact: Industrial Energy Division
Energy Efficiency Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-9447

Bioenergy Development Program

The Bioenergy Development Program provides financial support for the research, development and demonstration of new methods and technologies aimed at substituting biomass for non-renewable fuels and chemicals. Biomass normally includes forest and forest products waste, agrifood residues, peat and municipal solid waste. Technology areas that are given support include direct combustion, biomass materials handling, densification, biochemical conversion (anaerobic digestion, ethanol, etc.) and thermochemical conversion (e.g. liquefaction and gasification).

The program will provide funding for approved R&D work. The requests for proposals for R&D are generally issued annually. Proposals for support of demonstrations may be submitted at any time, but a large percentage of the work is carried out in cooperation with the provinces under bilateral Memoranda of Understanding.

Contact: Bioenergy Division
Renewable Energy Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-9447

Solar Energy Development Program (includes small and low head hydro and wind)

A research, development and demonstration activity committed to developing and improving cost-effective renewable energy technologies through cost-shared programs.

Research and Development

The research and development component requires cost sharing of projects with industries that seek to develop new or improved products for near-term commercial or technologies exploitation. Projects that will advance the renewable energy option in the longer term are also eligible. The contractor should demonstrate the ability to provide a minimum of 25 per cent investment for the proposed project.

Demonstration

The Solar Domestic Hot Water Demonstration promotes the use of solar domestic water heating. This program assists the solar industry in marketing and installing systems across Canada. A contribution towards the installed cost of a solar domestic hot water system is made directly to a private company (solar manufacturer, installer, building contractor, etc.) that undertakes a group of such installations.

The Commercial/Industrial Solar Demonstration's objective is to demonstrate improved system cost/performance and provide opportunities to the Canadian solar industry to design, market, install and operate commercial/industrial solar energy systems. Private companies (manufacturers, installers, building contractors, etc.) and owners/operators of commercial/industrial buildings are eligible.

The Special Projects Demonstration supports innovative projects that hold promise for significant contribution to the development and application of active and passive solar, photovoltaics, wind and small hydro technologies. In addition, this program supports projects that accelerate the acceptance of such systems by the Canadian public and the commercial sector.

Private companies (manufacturers, installers, designers, building contractors, etc.) and owners/operators of commercial/industrial buildings are eligible.

Contact: Solar Energy Division
Renewable Energy Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-9447

Remote Community Demonstration Program

The Remote Community Demonstration Program is designed to promote viable energy alternatives and energy conservation options in remote communities through feasibility studies (Phase I now completed), demonstrations and information transfer (Phase II — ongoing to March 1989).

Those eligible are communities, provincial and territorial utilities, federal, provincial and territorial departments, Crown corporations, and other agencies responsible for, or directly interested in, energy supply and conservation for remote communities.

Contact: Remote Community Demonstration
Program Section
Renewable Energy Branch
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0E4
(613) 995-9447

Energy Conversion Program

The Energy Conversion Program is administered by the Canada Centre for Mineral and Energy Technology (CANMET), the research branch of Energy, Mines and Resources Canada. The program is designed to assist Canadian industry in applying their resources and expertise to the development of technology to use Canada's fossil energy resources. The program works on a 50/50 cost-shared basis and examines proposals under four broad categories. These include coal conversion and utilization, extraction and recovery of bitumen and heavy oil, bitumen/heavy oil and natural gas conversion and utilization, and synthetic crude oil upgrading. The program is

designed for all industries involved in energy supply, processing or utilization, and for other organizations interested in energy conversion.

Contact: Research Program Office
Canada Centre for Mineral and Energy Technology
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0G1
(613) 995-4295

Materials for Offshore Structures and Arctic Vessels — Steels

The Canada Centre for Mineral and Energy Technology has a cost-shared research and development program. The program incorporates the development and use of improved steels for the construction of future energy-related structures, such as offshore drilling/production platforms, icebreaking liquefied natural gas (LNG) and crude carriers, and oil and gas transmission pipelines. Of specific interest is the production of improved plate steels and the fabrication, inspection, non-destructive testing and repair of structural components.

The federal government will contribute up to 50 per cent of the costs of projects addressing the production of improved plate steels, and the fabrication, inspection, non-destructive testing and repair of structural components.

Contact: Research Program Office
Canada Centre for Mineral and Energy Technology
Energy, Mines and Resources Canada
Ottawa, Ontario
K1A 0G1
(613) 995-4295

Research Agreement Program

The Department of Energy, Mines and Resources awards research grants on an annual basis to applicants from any Canadian research organization that is not directly managed by the Government of Canada, including universities and colleges, provincial research agencies and private research groups. Grants are awarded on the basis of departmental research priorities in areas of the natural, physical and social sciences and engineering where research is most urgently needed. The Research Agreement Program (RAP) is designed to take advantage of the capabilities of a variety of disciplines and technologies available in Canada to facilitate the better use of our mineral and energy resources and to provide information on Canada's landmass.

Contact: Research Agreement Program
Energy, Mines and Resources Canada
580 Booth Street
20th Floor, Room 2068
Ottawa, Ontario
K1A 0E4
(613) 992-6304

Energy from the Forest (ENFOR)

This program finances research and development (R&D) related to the production and harvesting of forest biomass for energy. Specific R&D problem areas include biomass inventory, harvesting mechanization, environmental impacts, intensive silviculture and socio-economic influences. The program is currently phasing down and giving emphasis to economic assessments and technology transfer.

Contact: ENFOR Secretariat
351 St. Joseph Blvd.
Hull, Quebec
K1A 1G5
(819) 997-1107

Development and Demonstration of Resource and Energy Conservation Technology (DRECT) Program

The primary aim of the DRECT program is to promote the recovery/recycling of wastes and to save energy

through the development and demonstration of innovative new technologies. Funding up to 50 per cent of the total estimated cost of a project may be available.

Contact: Industrial Incentives Division
Technology Development and
Technical Services Branch
Conservation and Protection
Environment Canada
Ottawa, Ontario
K1A 0E7
(819) 997-1813

Strategic Grants Program (NSERC)

The Natural Sciences and Engineering Research Council's program of strategic grants in energy promotes high-quality, mission-oriented energy research and development in Canadian universities. The objective of these grants is to help bridge the gap between basic research programs in universities and applied energy research and development programs in government and industry.

Both fundamental and applied research proposals are eligible.

Contact: Natural Sciences and Engineering
Research Council
200 Kent Street
Ottawa, Ontario
K1A 1H5
(613) 995-6295

New Crop Development Fund (NCDF)

This Agriculture Canada program provides financial contributions on a cost-shared basis to Canadian organizations to undertake projects that demonstrate the commercial potential of new crops, varieties, technologies or production practices.

Contact: Crop Development Section
Agricultural Development Branch
Agriculture Canada
Sir John Carling Building
Ottawa, Ontario
K1A 0C5
(613) 995-9554

Communications Programs

The Department of Communications, through the Information Industry and Economic Development Branch, actively supports technology development in the areas of informatics equipment and services, communications equipment and software. Project proposals can be considered or coordinated by the Department under several federal programs described elsewhere in this publication.

Contact: Department of Communications
Information Industry and
Economic Development Branch
(613) 990-4295

Mobile Satellite Program (MSAT)

In May, 1986 final approval was announced for a funding package of $177 million that will lead to the implementation of a commercial mobile satellite (MSAT) system in Canada. By the early 1990s, MSAT will deliver portable two-way radio, telephone and data service anywhere in the country. Telesat Canada will own and operate the satellite as a commercial venture, investing over $260 million in the project. Up to $50 million will be allocated by the federal government over the next seven years to provide technology and product development support and to sponsor service trials for the program. Other federal support will include a bulk lease of service from Telesat for federal users.

Contact: Department of Communications
MSAT Program
300 Slater Street
Ottawa, Ontario
K1A 0C8
(613) 990-4111

Satellite Communications Applications Program (SCAP)

The objective of the SCAP program is to stimulate the development and utilization of satellite communications services, systems and products in Canada through technology transfer, industry support, information exchange, and the development and application of new services and technologies. Past activities under the program have included field trials, pilot projects, experiments and demonstrations. Projects which can be considered under this program include new satellite applications, earth station and new services development.

Contact: Department of Communications
Space and Telecommunications Division
Satellite Programs
300 Slater Street
Ottawa, Ontario
K1A 0C8
(613) 990-4113

Payload and Spacecraft Development and Experimentation Program (PSDE)

Canada will participate in the European Space Agency's PSDE Program. The program's objective is to prepare for communications-related space missions that are planned for the 1990's. Activities will include payload development and experiments and demonstrations with existing satellites and systems.

Funding for Canadian participation in the initial phases of the PSDE program has been approved. Potential benefits to Canadian industry are being examined, especially where this would lead to enhancement of existing Canadian expertise.

Contact: Department of Communications
Space and Telecommunications Division
Satellite Programs
300 Slater Street
Ottawa, Ontario
K1A 0C8
(613) 990-4113

Strategic Grants Program (NSERC)

The Natural Sciences and Engineering Research Council's program of strategic grants in communications and computers responds to research and development needs in Canada relating to: the development of the technologies and capabilities needed to be internationally competitive; the application of the new technologies and capabilities to resource-based activities; the use of communications and computers to replace physical transport; and the equalization of services between urban and rural areas.

Contact: Natural Sciences and
Engineering Research Council
200 Kent Street
Ottawa, Ontario
K1A 1H5
(613) 995-6295

Public Awareness Initiatives

Public Awareness Program for Science and Technology

The primary objective of the Public Awareness Program for Science and Technology is to increase general public awareness of scientific and technological achievements and potential, particularly those of Canadian origin or application. In addition, the program aims to stimulate greater public interest in, and understanding of, the role and impact of science and technology in contemporary society. The program is also intended to improve communications between scientists and non-scientists, between the creators and users of technology and between those who generate technological change and those who are affected by it.

The Public Awareness Program provides financial support for specific projects or activities that promote public awareness and understanding of science and technology. Support is allocated through regular national competitions. Applicants may compete for either core or project funding.

Contact: Programs Officer
Science Programs Branch
Science and Professional Services Directorate
Supply and Services Canada
12C1, Phase III, Place du Portage
11 Laurier Street
Hull, Quebec
K1A 0S5
(819) 997-7366

Canada Awards for Excellence

These awards honour Canadian businesses that have proven excellence in the following categories: innovation, invention, technology transfer, engineering design, marketing, productivity, labour-management cooperation, industrial design, and entrepreneurship.

Contact: Canada Awards for Excellence (XEDC)
Department of Regional Industrial Expansion
235 Queen Street
Ottawa, Ontario
K1A 0H5
(613) 954-4072

International Initiatives in Science and Technology

Technology and Investment Development Bureau

This bureau of External Affairs Canada is responsible for policies and programs designed to protect and advance Canada's international interests in science and technology, including space and telecommunications. Its three divisions handle S&T policy, technology marketing and technology investment. The bureau pays special attention to the inflow of foreign technology to be used by the private sector in Canada. It is also the focal point for the management of Canada's relations with multilateral organizations with science and technology functions, including United Nations agencies and the Organization for Economic Cooperation and Development (OECD).

Contact: Technology and Investment
Development Bureau (TTD)
External Affairs Canada
125 Sussex Drive
Ottawa, Ontario
K1A 0G2
(613) 996-0705

Technology Inflow Program (TIP)

This program promotes international collaboration that will provide the technological innovation needed to develop new or improved Canadian products, processes, or services. It does this in two ways. First, it makes use of Canadian government offices abroad to facilitate the flow of foreign technology to Canada. Second, it provides Canadian scientists and engineers with financial support to assist them in gaining first-hand knowledge of foreign technologies relevant to their needs.

The specialists at posts abroad include seven Science and Technology Counsellors and eight Technology Development Officers based in key posts in developed countries. The former perform a broad range of duties from reporting on S&T developments in their host country, to assisting industry in identifying opportunities for R&D collaboration. The Technology Development Officers, who are locally engaged, are responsible for identifying sources of technology requested by Canadian firms. The TIP Fund supports missions abroad and medium-term working visits, and is almost exclusively directed at supporting Canadian small- and medium-sized businesses acquire foreign technologies.

Contact: Technology Inflow Program
Science, Technology and Communications Division (TTS)
External Affairs Canada
125 Sussex Drive
Ottawa, Ontario
K1A 0G2
(613) 996-0971

Program for Export Market Development (PEMD)

This program helps incorporated Canadian businesses to develop, increase and sustain their activities by sharing with them the costs of specific export marketing efforts. PEMD is geared to:

— encourage businesses that have not exported previously to begin export marketing; and

— encourage established exporters to expand their activities into new markets.

PEMD provides up to 50 per cent of the costs incurred by a company in its penetration of new markets. These contributions are repayable if sales are made to that market.

Work is currently underway to restructure PEMD. Until that work is completed and a replacement program established, PEMD will continue to operate according to its current guidelines.

Work is currently underway to restructure PEMD. Until that work is completed and a replacement program established, PEMD will continue to operate according to its current guidelines.

Contact: Export Programs Division (TPE)
External Affairs Canada
125 Sussex Drive
Ottawa, Ontario
K1A 0G2
(613) 996-8708

Research on Impact of Technological Change

Technology Impact Program (TIP)

This contribution program has been established to financially support research into the human and social impacts of technological change in the workplace. It is designed to support practical workplace-related research studies and demonstration projects that develop a better understanding of the nature and effects of new technology on jobs, working conditions and workers. It specifically encourages projects that enhance productivity, improved health and safety and better implementation of technology in the work environment.

TIP contributions are up to a maximum of $100,000 per project and those above $50,000 require a contribution from the applicant. Priority is given to joint labour-management proposals and to those from labour organizations and other organizations or interest groups, such as women's groups, that are directly affected or likely to be affected by technological change. Each year there will be a deadline established for the submission of applications.

Contact: Technology Impact Program
Program Coordinator
Labour Canada
Ottawa, Ontario
K1A 0J2
(613) 997-5470