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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- Overview
1. Advanced Manufacturing Technologies
  2. Agriculture and Food Products
  3. Aircraft and Parts
  4. Automotive
  5. Biotechnologies
  6. Business, Professional and Educational Services
  7. Chemicals, Plastics and Advanced Materials
  8. Construction Products
  9. Consumer Products
    - Apparel and Fur
    - Textiles
    - Footwear
    - Sporting Goods (including recreational watercraft)
    - Tools, Hardware and Housewares
    - Residential Furniture
    - Business and Institutional Furniture
  10. Cultural Industries
  11. Defence Products
  12. Environmental Equipment and Services
  13. Fish and Sea Products
  14. Forest Industries
  15. Information Technologies and Telecommunications
    - Sector Overview
    - Computers and Peripheral Equipment
    - Electronic Components
    - Geomatics
    - Instrumentation
    - Software Products and Computer Services
    - Telecommunications
  16. Medical and Health-Care Products and Services
    - Medical Devices
    - Pharmaceuticals
    - Health-Care Services
  17. Minerals and Metals
  18. Oil and Gas Products and Energy Equipment
  19. Power Equipment
  20. Primary/Secondary Industrial Machinery
    - Mining, Forestry, Pulp and Paper
    - Agricultural Technology, Machinery and Equipment
    - Ocean and Marine Shipboard Technology
  21. Rail and Bus Equipment
  22. Space
  23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Produits pétroliers et gaziers, et matériel d'exploitation de l'énergie.*



## Oil and Gas Products and Energy Equipment

The manufacturers of oil and gas products and energy equipment produce a wide variety of machinery and components used to explore for oil and gas deposits, to drill and service wells, and to produce and initially process oil and gas in the field. The industry encompasses manufacturers of geophysical prospecting equipment; drilling rigs and ancillary tools; pumping, cementing and well-fracturing units; and dehydrators, separators, treaters and other field-processing components. It also includes drilling and processing equipment on offshore platforms, but does not include the platforms or the undersea equipment. In addition, manufacturers supply custom-made equipment, such as drilling rigs and field-processing units, plus a wide range of standard products and high-volume production items.

### International Environment

World primary energy demand is projected to increase by 48 percent between 1991 and 2010, according to the International Energy Agency's (IEA) World Energy Outlook. East Asia will be the fastest-growing region over this time period, with an annual demand growth rate of 4.9 percent, compared with a world average of 2.1 percent.

According to the IEA, the rising standard of living is the major reason for the anticipated growth in Asian demand. Industry was the key sector driving growing energy demand in the 1970s and 1980s, and although it continues to grow, it has been overtaken by transport and residential demand.

China's energy demand rate is expected to grow by 4.1 percent annually as increasing urbanization leads to greater consumption, especially in the transport sector. Oil demand is expected to grow at 5.4 percent per annum. Although China's Tarim Basin provides potential for greater domestic oil production, the country is still expected to be a large net importer in 2010.

Latin America is also expected to have a relatively high rate of growth in primary energy demand, also due to increasing urbanization and private consumer demand.

In contrast, countries of the Organization for Economic Co-operation and Development (OECD) are expected to feel the effect of the deep

economic depression and, consequently, will have much lower demand growth rates. The average from 1991 to 2010 is expected to be 1.3 percent.

IEA projections point to the Pacific region (Japan, Australia and New Zealand) as likely to have the highest growth in the OECD. Japan will lead the way in this region, with demand for liquefied natural gas (LNG) expected to grow as it gradually replaces oil as a source of power generation.

The countries of the former Soviet Union (FSU) will see the lowest growth, with a rate of 0.1 percent over the 20-year period, as they adjust to the changes brought on by the move toward market economies. Central and Eastern Europe, after an initial shrinkage in energy demand, will recover and growth will average 1.3 percent (see Figure 1).

Consequently, total world output for oil and gas equipment is estimated at US\$30 billion per year. With capital spending by international oil and gas producers expected to approach US\$200 billion per year for the next five years, growth in the oil and gas equipment sector is expected to remain high. Much of this business will be directed toward suppliers of exploration and development drilling equipment, plants and transportation systems.

While oil and gas well drilling is declining in the United States, important gains in petroleum drilling and production are taking place in Venezuela, Saudi Arabia, the Commonwealth of



Independent States (CIS), Norway, Colombia, Argentina, the North Sea, India, China and Iran. Many of the major oil companies, including smaller Canadian firms, are expanding their exploration and production budgets for foreign operations. In addition, many countries (such as India) are making changes to their legal and business practices. These modifications (e.g. privatization) are attracting significant Western participation.

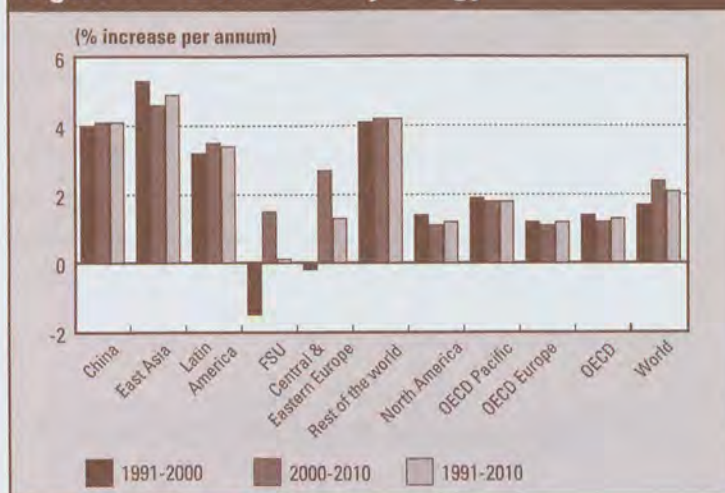
A large portion of the demand for petroleum equipment is from oil and gas companies that are owned or controlled by government. Occasionally, the granting of a government licence to explore for petroleum is linked to the purchase of locally produced petroleum equipment.

Foreign markets are expected to take a larger share of this industry's output in the long term (see Figure 2). Oil companies are likely to spend a large portion of their exploration and development expenditures outside North America. The desire of many foreign petroleum-producing countries to earn hard currency through petroleum exports should encourage them to reduce restrictions on foreign investment and imports of petroleum equipment.

The development of new drilling and production techniques will stimulate the design of more productive oil field equipment. Further refinements in three-dimensional survey equipment, measurement while drilling (MWD) instruments and horizontal drilling machinery will likely improve the productivity of drilling rigs. The increase in the use of coiled tubing for well-servicing and -drilling operations is also expected to continue.

The worldwide market for oil and gas exploration and production (E&P) equipment and services (excluding China and the CIS) was \$45 billion in 1993, and is expected to grow to \$1.2 trillion over the next two decades. Canadian suppliers can capture \$60 billion or 5 percent of that market.

**Figure 1 — World Primary Energy Demand**



Source: IEA

Perhaps the most compelling factor in favour of E&P equipment exports to developing countries is the rapid pace of technological change. Many developing countries need to maintain oil production to earn foreign exchange, and cannot afford to wait for development of their domestic technical expertise.

## Canadian Position

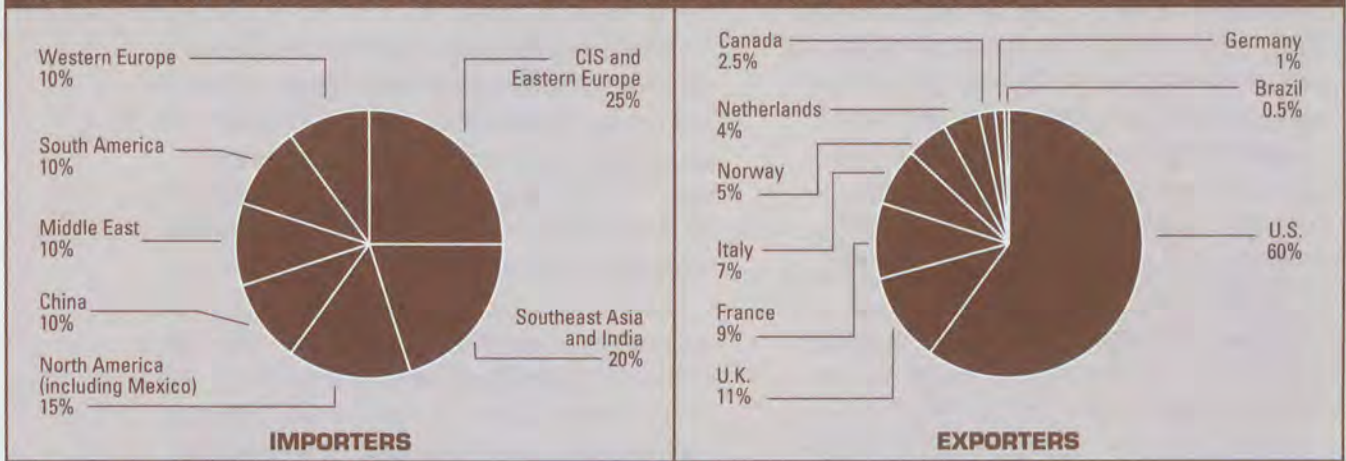
The Canadian oil and gas equipment industry is composed of approximately 220 small- to medium-sized establishments employing a total of about 5000 people, including many skilled workers and professionals. In 1993, shipments were estimated at \$1.2 billion. Of this total, \$500 million or 41.6 percent were exports (see Figure 3).

Canada's share of the world export market in 1994 was approximately 2.5 percent (see Figure 2). Canadian imports were estimated at \$210 million, representing 29 percent of the domestic market. About 97 percent of imports came from the United States.

About 9400 wells were completed in Canada in 1993. The forecast for 1994 is about

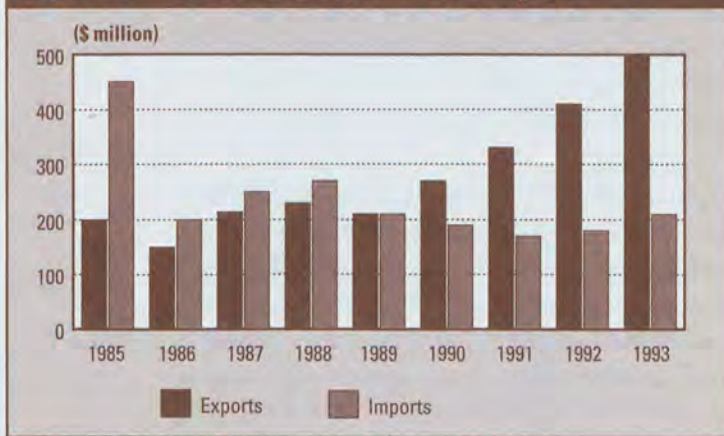


**Figure 2 — Key Players in the Oil and Gas Field Equipment Market, 1994 (% of Total Market)**



Source: Industry Canada

**Figure 3 — Canadian Exports and Imports**



Source: Industry Canada

11 400 wells, with total spending for drilling and completions estimated at \$3.2 billion.

The Canadian industry is strong in the areas of technology, product quality and after-sales service, particularly in specialized equipment developed to accommodate Canada's resource characteristics (sour gas, heavy oil and oil sands).

Canadian firms have developed advanced technologies related to drilling as well as specialized recovery and processing products, often in co-operation with their key customers. These advanced technologies include automatic

computer controls to reduce manual labour, to optimize processes and performance, and to improve safety in operations on the rig floor. With a solid track record, Canadian firms have created the confidence in their equipment that is needed to gain and sustain markets based on a reputation for supplying high-quality products.

The sector has increased its productivity over the past 10 years by rationalization, by installing more automated production equipment, and by a variety of other production improvements. Numerous cost-reduction programs have been successfully implemented. As a result, the sector has been able to maintain its viability and expand exports, despite the downturn in equipment requirements.

Despite its small world market share, the Canadian oil field manufacturing industry is recognized as one of the leading suppliers of niche advanced petroleum equipment and technologies in the following areas:

- Canada is a world leader in specialized mining equipment for extracting oil sands (for example, heavy-duty draglines) and sour gas gathering and treatment facilities. In the field of sour gas, Canada's expertise is unparalleled. Because of the high concentration of hydrogen sulphide (H<sub>2</sub>S) in a number of its fields,

Canada has developed some of the largest and most efficient gas plants in the world, and has become the world leader in sour gas technology for sweetening, dehydration, cryogenic natural gas liquids recovery, and sulphur processes. Canadian equipment designed especially for heavy oil, sour gas and tar sands is being exported to other nations that have similar reserves, such as India, the People's Republic of China and the CIS.

- Canadian manufacturers of petroleum equipment have extensive experience in providing technical expertise, training and advanced technologies to foreign countries with difficult oil formations. This fact is likely to stimulate exports.
- Canadian firms have developed specialized techniques and equipment for secondary recovery from wells that have reached a low rate of productivity (e.g. well stimulation by fracturing equipment and thermadrive boilers).
- Canadian companies have also made major advances in the development of top motor drives, winterized drilling rigs, directional and horizontal drilling techniques, computer-controlled automatic coring controls and automatic pipe-handling systems.

Financial, institutional and regulatory barriers to the sale of Canadian supplies vary regionally. Because relatively few OECD countries have enough oil and gas reserves to support a major oil industry, there will be few sales to major Canadian trading partners such as Germany and Japan.

Most of the E&P equipment sold abroad by Canadian firms is manufactured in Canada, although the trend is changing toward manufacturing locally in the country of operation.

The CIS is the most attractive market, since its economy has developed a high degree of reliance on oil production and oil exports that may be difficult to sustain without state-of-the-art technology. Three major barriers impede participation by private firms: the chaotic state of the economy, the difficulty of expatriating profits and getting

paid in hard currency, and the laws restricting private ownership.

The international market for oil field equipment will be stimulated by technological advances and product improvements. The opportunities are greatest for those firms that have the experience and technology to develop and exploit a specialized market niche, as well as those producing small, custom-designed process plants.

To penetrate foreign markets, Canadian oil and gas equipment companies are establishing foreign subsidiaries and joint ventures in the United States, Europe, Latin America, the CIS, India and Southeast Asia. In addition, manufacturers are establishing a worldwide network of agents, distributors and service companies to ensure that parts and services will be readily available to foreign customers. In general, developing countries wish to maintain or expand their petroleum production while increasing their portion of the value-added domestically. This should assure growth for Canadian equipment exports.

The major export market opportunities for Canada during the 1990s will be the Middle East, including Saudi Arabia and Iran, East Asia (China and Viet Nam), Mexico, the CIS, some South American countries (Colombia, Argentina, Peru and Bolivia) and Africa. Canadian companies can also expect to benefit from increased business opportunities in the Eastern Bloc countries, which have recently made changes to their laws regarding ownership and joint ventures. This applies to Poland, Hungary and Romania, which all have indigenous oil and gas industries. Norway also presents major opportunities for Canadian companies, with exploration development, production and pipeline investments exceeding \$11.5 billion in 1993.

Opportunities exist in the CIS for Canadian oil and gas machinery, equipment and technology that has been designed for Northern Alberta and the Arctic. The Shtokomanovskoye gas field in the Northern Barents Sea will cost \$20 billion to develop. In Western Siberia's Tyumen province

alone, only 150 of the 530 known oil and gas deposits are developed and producing. At least 25 000 Russian wells are out of service, and an estimated 1000 drilling rigs would be required to restore production to 1982 levels.

In the area of investment prospecting (strategic alliances), efforts should be targeted at the United Kingdom, France, Italy, Germany and Norway, as firms in these countries are willing to establish base activities in North America. In addition, alliances can help to overcome certain practices that hinder Canadian sales in these markets.

## Strategic Direction

The strategic priorities for the oil and gas products and energy equipment industry are shaped by the following bases of international competition:

- technological expertise in certain niche markets where Canadian firms have developed a superior product;
- the availability of complementary services, such as engineering and training;
- price competitiveness;
- a physical presence in the market;
- a proven international track record.

The key to the long-term growth of the Canadian oil patch relies on the successful expansion to countries with a strong and dynamic petroleum industry.

The Government, in co-operation with industry, will:

- organize and participate in recognized trade fairs outside Canada, including Offshore Europe in Aberdeen, Scotland and Neftgaz in Moscow, to increase export sales by 15 percent (Department of Foreign Affairs and International Trade [DFAIT]);
- organize and participate in incoming missions of foreign buyers to meet with Canadian firms, particularly in conjunction with Inter-Can 95 (DFAIT/missions, Petro-Trade);
- continue to identify investment opportunities and transfer foreign technologies and products (technology acquisition and transfer) through missions to and from countries such as France, the United Kingdom, Norway, the United States, Germany and Italy (IC, DFAIT/missions);
- in accordance with the memorandum of understanding (MOU) signed in 1993, work with the Petroleum Services Association of Canada (PSAC) to establish a presence abroad, and with Petro-Trade to encourage Canadian firms in this sector, either by opening offices directly or by hiring Canadian expatriates who have worked in the market as local representatives in the key markets. A local representative representing two to three Canadian companies can be a financially advantageous compromise for medium-sized companies (IC, PSAC, Petro-Trade);
- through the Program for Export Market Development (PEMD), encourage and help firms undertake more market opportunity analysis and identification, in order to develop a substantial, long-term and sustained presence in targeted foreign markets (IC, DFAIT);
- building upon Phase I of a market study for Southeast Asia, help PSAC and Petro-Trade to undertake Phase II. This will involve extensive consultations with industry and PSAC members to develop export strategies that are consistent with opportunities, supply capacity and global trade development activities (IC, DFAIT, PSAC, Petro-Trade);
- in evaluating export projects and building on Canadian know-how, place more emphasis on projects that highlight Canadian technology and expertise such as sour gas, heavy oil and secondary recovery projects (IC);
- through targeted visits to key markets and in collaboration with missions, deliver foreign market/project opportunity information, as

well as strategic information and analysis, to Canadian business (IC, DFAIT/missions);

- organize and participate in outgoing missions of Canadian firms to key countries such as Indonesia, Viet Nam, the CIS, Saudi Arabia, China and Iran (IC, DFAIT/missions);
- promote the involvement of Canadian suppliers in energy sector projects financed by international financial institutions (IFIs) by:
  - identifying projects in priority markets for which Canadian suppliers and technology are well suited;
  - providing project information to Canadian firms and trade associations as soon as it is available;
  - holding seminars across Canada on how to pursue IFI projects;
  - promoting the use of Canadian trust funds to finance studies in oil and gas/energy sectors (DFAIT/missions, IC).

## **Contacts**

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Fax: (613) 941-2463

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and International Trade  
Sectoral Liaison Secretariat  
Trade Planning and Operations Bureau  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 996-0670  
Fax: (613) 943-8820



## Oil and Gas Products and Energy Equipment

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Bahrain Oil Show: Info Booth	Apr-95	Manama	DFAIT	613-944-6983
Moroccan Gas Mission: Incoming	Oct-95	Canada/Various	DFAIT	613-944-0396
Oil and Gas Mission to Chad & Cameroon	Nov-95	Yaoundé	DFAIT	613-944-6579
Market Study - Oil and Gas - Iran	Feb-96	Tehran	IC	613-954-3192
Oil and Gas Mission to Egypt and Israel	Feb-96	Cairo, Tel Aviv	DFAIT	613-944-6994
Oil and Gas Mission to Hassi Messaoud	Feb-96	Algeria	DFAIT	613-944-8134
Mediterranean Oil/Gas Exhibition & Conference - Mission	Feb-96	Valetta, Malta	DFAIT	613-944-8134
Oil and Gas Technical Show: Info Booth	Mar-96	Dubai	DFAIT	613-944-6983
Incoming Buyers from Iran to National Petroleum Show	Jun-96	Calgary	IC	613-954-3192
National Petroleum Show 1996 - Incoming Gulf Visitors	Jun-96	Calgary	DFAIT	613-944-6983
<b>Asia-Pacific South</b>				
Technical Seminar to Viet Nam	TBD	Hanoi, Ho Chi Minh	IC	613-954-3192
MOGPPE '95: Info Booth	Jun-95	Kuala Lumpur	DFAIT	613-996-5824
Incoming Mission from Asia/South Pacific	Jun-95	Calgary, Edmonton, Ottawa	DFAIT	613-992-0952
<b>Canada</b>				
Inter-Can '95	Jun-95	Calgary	DFAIT	403-292-6409
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Oil and Gas '95 Trade Fair: National Stand	Oct-95	Kiev	DFAIT	613-944-1437
Neftagaz '95: National Stand	Oct-95	Moscow	DFAIT	613-996-6429
KIOGE (Oil and Gas Exhibition): National Stand	Oct-95	Kazakhstan	DFAIT	613-992-8590
<b>East Asia</b>				
Canada-China Heavy Oil Tech Seminars/Symposium	Oct-95	Beijing	DFAIT	613-996-6987
SPE '95: National Stand	Nov-95	Beijing	DFAIT	613-996-6987
National Petroleum Show - Incoming Visitors from China	Jun-96	Calgary	DFAIT	613-996-6987
World Petroleum Congress '97: National Stand	May-97	Beijing	DFAIT	613-996-6987

Note: Dates and locations are subject to change.

<b>Activity</b>	<b>Date</b>	<b>Location</b>	<b>Dept.</b>	<b>Contact</b>
<b>Latin America and the Caribbean</b>				
Expetro AIPM: Info Booth	Apr-95	Veracruz	DFAIT	613-995-8742
Heavy Oil Mission from Latin America	May-95	Calgary, Edmonton	DFAIT	613-996-5548
National Oil Show: Info Booth	Jun-95	Port of Spain	DFAIT	613-943-8807
Argentina Oil and Gas Expo '95: Info Booth/Mission	Oct-95	Buenos Aires	DFAIT	613-996-5549
Society of Petroleum Engineers: Congress and Expo	Oct-95	Veracruz	DFAIT	613-995-8742
Mexican Chemical Engineers' Conference: Info Booth	Oct-95	Mexico	DFAIT	613-995-8742
Petroleum Show: Mission from Latin America & Caribbean	Jun-96	Calgary	DFAIT	613-996-3877
Oil & Gas Mission from Mexico	Jun-96	Calgary	DFAIT	613-995-8742
<b>United States</b>				
Offshore Technology Conference - National Stand	May-95	Houston	DFAIT	613-944-7486
Directory of Canadian Oil & Gas Equipment Suppliers	May-95	Ottawa	DFAIT	613-944-7486
<b>Western Europe and European Union</b>				
Offshore Europe: National Stand	05-Sep-95	Aberdeen	DFAIT	613-995-4730
Strategic Alliance Program with European Firms	05-Sep-95	Aberdeen	IC	613-954-3192
Oil and Gas Mission from Norway	Feb-96	Calgary, St. John's	DFAIT	613-995-4730
National Petroleum Show: Buyers from Western Europe	Jun-96	Calgary	DFAIT	613-992-7021

## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
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(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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