



NATIONAL

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ENERGY

A n n u a l

BOARD

R e p o r t



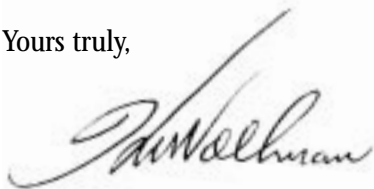
29 March 1999

The Honourable Ralph Goodale, P.C., M.P.
Minister of Natural Resources
Ottawa, Ontario

Dear Mr. Goodale:

I am pleased to submit the Annual Report of the National Energy Board for the year ending 31 December 1998, in accordance with the provisions of Section 133 of the *National Energy Board Act*, R.S.C. 1985. C. N-7.

Yours truly,

A handwritten signature in cursive script, appearing to read "K. Vollman".

Kenneth W. Vollman
Chairman

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as represented by the National Energy Board

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Chairman's Letter

In 1998, the Board sat for 121 days of hearings on a number of applications for new pipeline facilities. In the course of these proceedings, three important themes emerged: a desire for increased choice in gas transportation services; the need for clarity in the environmental review process; and increased public involvement in Board hearings.

The major hearing of the year was the application by Alliance Pipeline Ltd. for a new high-pressure pipeline that would transport natural gas and natural gas liquids from northeast British Columbia and northwest Alberta to the Chicago area. The application was approved after 77 hearing days. Once constructed, this project will provide an alternative transportation option for natural gas and natural gas liquids producers who wish to access markets in the U.S. midwest.

The Board approved applications by AEC Suffield Gas Pipeline Inc. and Northstar Energy Corporation for short pipeline projects that would bypass NOVA Gas Transmission Ltd.'s system in southeast and southwest Alberta respectively. The dominant issues in these hearings were increased choice for natural gas shippers and the potential impacts of the new projects on existing pipeline systems. The estimated capital cost of these and other pipeline projects approved in 1998 is approximately \$3.6 billion.

The Alliance application featured the completion of a Comprehensive Study Report (CSR) by the Board, pursuant to the *Canadian Environmental Assessment Act*. The CSR required approval by the Minister of the Environment after completion of the Board hearing, and this additional post-hearing step introduced considerable uncertainty into the process. In partnership with the Canadian Environmental Assessment Agency and other federal departments, the Board developed a pilot process under which project applicants would prepare the CSR and submit it for Ministerial approval prior to a regulatory hearing. The Board expects that this approach will provide greater certainty to parties with respect to the overall regulatory process for major new pipeline projects.

The Board held detailed route hearings for Maritimes and Northeast Pipeline Management Ltd.'s project in Nova Scotia and New Brunswick, and for the proposed route of the Portland Natural Gas Transmission System, an extension of the Trans Québec & Maritimes Pipeline Inc. system to be built in southern Quebec. These were only the second and third detailed route hearings the Board has held, and are indicative of increased public interest in the potential impacts of pipeline facilities on landowners' rights, the environment and public safety.

The Board conducted extensive public consultations to assist in developing its long-term outlook, *Canadian Energy Supply and Demand to 2025*, scheduled for release in June 1999.

The Board was active in encouraging the industry to prepare for the Year 2000 computer issue and collaborated with a number of industry groups to develop a questionnaire for pipeline companies regarding their preparations. The Board is receiving quarterly updates and will monitor the situation to ensure that Board-regulated pipeline companies have taken the necessary steps to address the problem.

The Auditor General of Canada conducted a thorough audit of the Board's operations and submitted a comprehensive report to Parliament. The report contained seven recommendations which pertained to desired improvements in safety and environmental monitoring, and in internal managerial instruments. The Board welcomed the Auditor General's review of its operations and is implementing the recommendations.

1998 was my first year as Chairman of the NEB. By the end of the year, we had completed a comprehensive strategic planning exercise that clarified our key goals. As a result of this important undertaking, we will be in a position to better concentrate our energies on important safety, environmental, and economic efficiency aspects of NEB activities, and on meeting the needs of the public to effectively engage in NEB matters.

I am confident that our team of Board Members and staff will continue to deliver results that provide real benefits to Canadians.

A handwritten signature in cursive script, appearing to read "K. Vollman".

Kenneth W. Vollman

Highlights

The Changing Regulatory Landscape

In 1998, the Board witnessed major changes in the structure of the Canadian natural gas transmission industry. Most significantly, TransCanada PipeLines Limited (TransCanada) became the owner of NOVA Gas Transmission Ltd. (NGTL). The new company, known as TransCanada, is now the largest carrier of natural gas in North America. Through its ownership of ANG Pipeline and its majority interest in Foothills Pipe Lines Ltd. (Foothills), at year-end TransCanada effectively controlled all of the capacity to transport natural gas out of Alberta.

At the same time that TransCanada was extending its market position, it was also facing the prospect of entry by new companies. The Board heard and approved an application by Alliance Pipeline Ltd. (Alliance) to construct the Canadian portion of a new high-pressure natural gas pipeline from northeast British Columbia and northwest Alberta to the Chicago market area. The Alliance project, planned to be in-service by 1 November 2000, will introduce direct competition to TransCanada and Foothills for the transportation of Canadian gas to the U.S. midwest market.

In the Maritimes, construction started on Maritimes & Northeast Pipeline Management Ltd.'s (M&NP) pipeline system, which will carry natural gas produced offshore of Nova Scotia to markets in Nova Scotia, New Brunswick and New England.

Once the M&NP project and the Alliance project are completed, the Canadian gas transmission industry will be dominated by a few large companies. The entry of Alliance raises the prospect of competition with significant benefits to gas shippers, while posing challenges to incumbent pipelines. At the same time that competition may be enhanced, some of these

companies will have a large degree of market power, particularly in regional markets.

These changes in market structure will challenge the Board to ensure that Canadians have access to a range of pipeline services that meet their needs at reasonable prices, while also ensuring that pipeline companies have an opportunity to earn a fair return on their investment capital.

Increased Choice in Transportation Services

Perhaps the most significant regulatory event for the Board in 1998 was the proceeding on the Alliance application, which spanned 77 hearing days and three provinces. The Board heard extensive commercial opposition to the Alliance project until an accord was signed by a number of parties, which resulted in TransCanada and NGTL withdrawing substantial portions of evidence filed in opposition to the application.

The Alliance proceeding also featured considerable evidence submitted by individual landowners and environmental groups who were concerned about the potential impacts of the project. To fulfil the requirements of the *Canadian Environmental Assessment Act* (CEA Act), the Board completed a Comprehensive Study Report (CSR) and submitted its recommendations to the Minister of the Environment. The report found that the project was not likely to cause significant adverse environmental effects as long as appropriate mitigation measures were implemented. The Minister accepted the Board's recommendations and returned the report to the Board to complete its process. The Canadian portion of the Alliance project was approved by the Board in November.

The Board also heard applications from AEC Suffield Gas Pipeline Inc. (AEC Suffield) and Northstar Energy Corporation (NEC) to build pipelines to carry natural gas from southern



Alberta to southwest Saskatchewan and southeast British Columbia, respectively. Both pipelines would allow shippers to bypass the NGTL system, thereby offering increased choice for the transmission of gas out of southern Alberta.

During the AEC Suffield and NEC hearings, the Alberta Department of Energy (ADOE) filed motions challenging the Board's jurisdiction over these facilities. The Board denied the ADOE's motions and approved both the applications. The ADOE subsequently applied to the Federal Court for leave to appeal the Board's ruling and for a stay of the Board's approval of the NEC application. The Federal Court granted ADOE's leave to appeal and stayed the Board's decision to approve the project.

Expansion of Existing Facilities

Canada's existing pipelines continued to expand their transmission systems in 1998. Of particular significance were expansion applications from Enbridge Pipelines Inc. (Enbridge, formerly IPL Energy Inc.), TransCanada and Trans Québec & Maritimes Pipeline Inc. (TQM).

The Board considered an application by TransCanada to construct new pipeline and compression facilities on its natural gas transmission system. In the application, TransCanada indicated that it would construct facilities to meet only a portion of its forecasted net incremental requirements because it expected that some shippers would be decontracting on its system. TransCanada proposed other arrangements (referred to as the Alternative Mechanism) by which it would satisfy the remaining volumes. The Board approved TransCanada's application, and found TransCanada's reliance on the Alternative Mechanism, in this instance, to be an appropriate means of reducing the contract and equipment cancellation risks faced by the company.

The Board also approved an application by TQM to extend its system from Lachenaie to

East Hereford, Quebec. The extension will supply markets in the Eastern Townships of Quebec and transport natural gas to the Portland Natural Gas Transmission System (PNGTS) in New Hampshire. The Board conducted a public hearing in Montreal and Magog-Orford, Quebec and prepared a CSR in conjunction with the Department of Fisheries and Oceans.

Following a public hearing in April, the Board approved the first phase of Enbridge's Terrace expansion project. The project involves the construction of 15 new sections of pipe to connect existing loops and the creation of a fifth pipeline between Kerrobert, Saskatchewan and Gretna, Manitoba. The pipeline will be used primarily to satisfy export markets. It features a tolling agreement between Enbridge and its shippers under which Enbridge's return on equity on the capital invested is partly dependent on the cost effectiveness of construction.

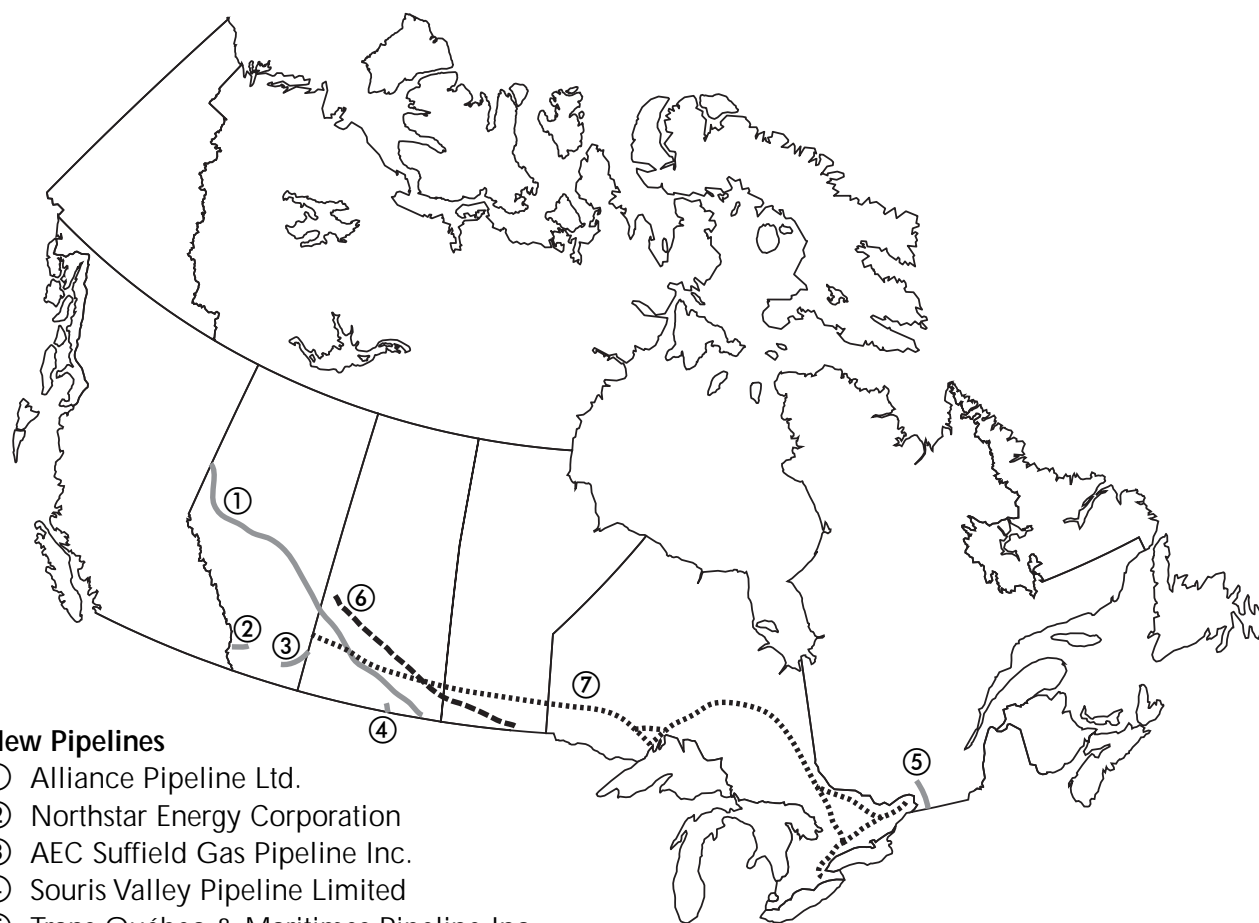
Throughout the course of the year, the Board issued five certificates for pipeline projects exceeding 40 kilometres in length and over 100 orders for smaller pipeline projects. To obtain more detailed information on these projects, please refer to Appendices B1, B2, C1, C2 and D1 in the companion document to this report.

Increased Public Involvement

During 1998, the NEB witnessed unprecedented interest from the public in the detailed routes proposed for approved pipeline projects.

After receiving Board approval to build a natural gas pipeline from Goldboro, Nova Scotia to St. Stephen, New Brunswick, M&NP asked the Board to approve a detailed route. In response to 35 written statements of opposition concerning the detailed route, the Board held public hearings in Fredericton and Moncton, New Brunswick and in New Glasgow, Nova Scotia. Of the 17 cases considered during the hearings, the Board approved M&NP's proposed route for 12, denied the proposed route for three, and

Figure 1
Significant Pipeline Approvals in 1998



New Pipelines

- ① Alliance Pipeline Ltd.
- ② Northstar Energy Corporation
- ③ AEC Suffield Gas Pipeline Inc.
- ④ Souris Valley Pipeline Limited
- ⑤ Trans Québec & Maritimes Pipeline Inc.

Additions to Existing Pipelines

- ⑥ Enbridge Pipelines Inc.
 (15 new segments of pipe totalling 619 km)
- ⑦ TransCanada PipeLines Limited
 (156.1 km of new pipeline looping)

reserved its decision on the remaining two, pending the filing of additional information from M&NP.

The Board also held a detailed route hearing for the proposed route to bring natural gas onshore for the Sable Offshore Energy Project (SOEP) and approved the onshore pipeline route proposed by SOEP.

Thirty written statements of opposition to TQM's proposed detailed route for the PNGTS Extension led the Board to hold a public hearing in Magog-Orford, Quebec. In its decision, the Board determined that TQM had chosen the best possible detailed route for the pipeline and had committed to the most appropriate methods and timing of construction.

In an effort to facilitate public involvement in, and a greater understanding of, the Board's activities, public information sessions continue to be held across the country. During the past year, the Board held public hearings in six provinces. The Board conducted public seminars at ten different locations to explain the hearing process and the process through which detailed routing and land acquisition matters are addressed. The Board also conducted consultations on the assumptions for its next Supply and Demand report in eight cities across the country.

Continued East Coast Activity

Pipeline activity continued to be strong on Canada's East Coast in 1998. Construction of the first significant offshore pipeline approved under the *National Energy Board Act* (NEB Act) commenced near Sable Island in late 1998. M&NP began tree clearing for a new pipeline right of way in November and the installation of a major gas plant commenced near Goldboro, Nova Scotia.

In addition to the M&NP and SOEP detailed route hearings, the Board approved an application from M&NP to build and operate a natural gas lateral pipeline from the company's main transmission pipeline near Goldboro to Point Tupper, Nova Scotia. In 1999, the Board expects to hear applications from M&NP to construct laterals to Halifax and Saint John.

First Commodity Pipeline Approved by the Board

An application from Souris Valley Pipeline Limited to build a carbon dioxide pipeline resulted in the Board's first public hearing to consider transmission facilities for a commodity other than oil or gas. After hearing considerable evidence concerning safety issues, the Board approved the construction of the pipeline which will carry carbon dioxide from the North Dakota border to the Weyburn oil field near Goodwater, Saskatchewan. The carbon dioxide

will be used to extend the life of the existing oil field by an estimated 25 years.

Regulatory Efficiency and Industry-Sponsored Solutions

During the past year, a number of activities were undertaken by the Board and external parties in an effort to reduce unproductive regulatory burden on companies.

In partnership with the Canadian Environmental Assessment Agency and other federal departments, the Board developed a process to reduce the regulatory uncertainty currently associated with the preparation of CSRs. Under this process, the Board will continue to administer the review process as lead responsible authority under the CEA Act, but applicants will now be responsible for preparing the CSR. By requiring an applicant to complete the CSR prior to a regulatory hearing, parties will know earlier in the process whether a project will be referred for a panel review. In cooperation with M&NP, the Board plans to pilot the new process in 1999 for the proposed Halifax and Saint John lateral projects.

Following the 1997 incentive-based negotiated toll settlement between Westcoast Energy Inc. (Westcoast) and its shippers, the Board approved the *Framework for Light-Handed Regulation* as applied for by the same parties. The Framework outlines the mechanism by which Westcoast's tolls for gathering and processing services will be increasingly governed by market forces and negotiation, rather than through active financial regulation by the Board.

The tolls on most of the major pipelines under the Board's jurisdiction are determined to a large extent by the terms of negotiated settlements. The settlements are designed to eliminate the need for costly annual rate hearings, to provide incentives to pipeline companies to deliver cost-effective service that meets their shippers' needs, and to provide opportunities for the pipelines to increase their earnings.

To reflect the findings of past inquiries, incident investigations, and revised technical standards, the Board has been drafting new *Onshore Pipeline Regulations* (OPR). The revised OPR will be more focussed on pipeline maintenance and will be more goal oriented. Goal-oriented regulation identifies the results that pipelines must achieve and gives them some latitude as to how the results are met.

The Board and the Canadian Energy Pipeline Association also worked together during 1998 to identify tools that could be updated or developed to facilitate the processing of routine applications made pursuant to section 58 of the NEB Act.

Safety and Environmental Regulation

The Auditor General of Canada conducted a comprehensive review of the Board's operations in 1998. The Auditor General's report contained three recommendations pertaining to the Board's management of its safety and environmental monitoring and inspection processes.

With respect to its environmental inspection program, the Board has strengthened its internal documentation practices to ensure that information obtained during inspections can be used in future inspections. The Board is examining the conditions for environmental protection that it typically imposes when approving a pipeline to determine whether they are accomplishing the desired results. The NEB has also begun to systematically monitor the compliance of regulated companies with these conditions.

To ensure that inspection resources are being used effectively, the Board has begun to use risk-based methodology to determine the appropriate level of inspections. The Board will also use this methodology to assist in the development of future inspection schedules.

With respect to safety programs, the NEB has initiated a program to track the status of, and to determine trends in, the recommendations issued by the Board following a pipeline incident. The database will include incidents that have occurred over a five-year period and will be continuously updated.

Energy Market Analysis

The NEB monitors energy supply and markets on an ongoing basis and publishes its findings in various reports. The Board is currently developing its long-term outlook, *Canadian Energy Supply and Demand to 2025*, aided by extensive public consultation. The initial consultations were conducted in April, and the preliminary results were released for further public comment. The release of the final report is scheduled for June 1999.



Energy Overview

As an expert regulatory tribunal, the NEB must have sound knowledge of energy matters relevant to its mandate. This overview provides a summary of Canadian energy supply, consumption, production, prices and trade over the last five years, with an emphasis on 1998 data and activities.

Canadian energy production and consumption continued to increase slightly during 1998. Energy imports increased by almost nine per cent in 1998, while energy exports rose by about five per cent.

The world oil market weakened in 1998 due to the dampening effects on world oil demand of economic problems in Asia. At the same time, production from non-OPEC countries continued to rise. Oil production cuts from OPEC and some non-OPEC producers failed to balance the market. Consequently, oil prices declined dramatically from the post-Gulf War highs achieved in 1997 to 12-year lows. The price for benchmark crude West Texas Intermediate (WTI) averaged approximately U.S.\$14.40 per barrel in 1998, down 30 per cent from 1997.

In Canada, conventional light crude oil production increased in 1998, primarily due to the East Coast offshore Hibernia field which completed its first full year of production. Synthetic crude, pentanes plus and bitumen production also rose. However, conventional heavy crude oil production declined as a significant number of wells were shut in because of low prices.

Overall, oil exploration and development activity decreased in Canada in 1998, as a result of the sustained low oil prices. Many western Canadian producers shifted their focus toward gas drilling. However, in contrast to the overall slowdown in activity in western Canada, the East Coast offshore regions and onshore areas north of the

60th parallel saw some increased oil and gas exploration and development.

North American natural gas prices were down slightly from 1997, and Canadian natural gas prices remained at lower levels than average U.S. market prices. Although natural gas production decreased slightly, exports increased by about six per cent over 1997 levels. Drilling for natural gas remained at similar levels to 1997 and, although data are not yet available, the Board expects that reserves additions replaced a large portion of production in 1998.

Canadian electricity exports fell slightly from the near-record levels seen from 1994 to 1997. Imports rose to meet increased domestic requirements, due in part to the temporary removal from service of seven nuclear power plants in Ontario.

For greater detail, statistical appendices have been prepared as a companion document to the Annual Report with details on crude oil, petroleum products, natural gas and natural gas liquids; electricity supply and disposition; industry activity; facility certificates; orders and licences for exports; and pipeline financial information (see List of Appendices in Supplement VI).

Energy and the Canadian Economy

Canada is a country endowed with large reserves of key energy resources, including petroleum, natural gas, coal and hydroelectric potential. By drawing on this great wealth, the energy sector plays an important role in the Canadian economy. However, the collapse of oil prices in 1998 resulted in a decline of almost two per cent in the total economic value of energy production from 1997 and an estimated 13 per cent decline in the value of all energy exports. In 1998, the energy industry accounted for approximately seven per cent of total Gross Domestic Product and about eight per cent of total merchandise

exports, and employed about 280,000 Canadians.

Canadian energy production expanded by about eight per cent between 1994 and 1998. Petroleum led the way with production rising 15 per cent, while natural gas production rose 11 per cent. In contrast, by 1998 nuclear power production had declined 37 per cent from 1994 highs. In 1998, natural gas and petroleum accounted for 72 per cent of total energy production in Canada (Table 1). Strong production levels have been stimulated by robust growth in the North American economy and by aggressive investment in exploration and development.

**Table 1
Domestic Energy Production
by Energy Source
(Petajoules)**

	1994	1995	1996	1997	1998 ^{a)}
Petroleum	4 843	5 013	5 146	5 379	5 585
Natural Gas	5 353	5 648	5 846	5 950	5 919
Hydroelectricity	1 175	1 198	1 269	1 242	1 192
Nuclear	1 221	1 108	1 065	944	799
Coal	1 735	1 801	1 833	1 898	1 978
Renewables & Other	522	579	548	588	613
Total	14 848	15 346	15 707	16 001	16 086

a) Estimates

Canada's energy consumption per capita is traditionally quite high due to its climate, its energy intensive resource-based economy and the long distances between its population centres. Domestic energy demand has been growing at almost two per cent per annum since 1994, adding up to an eight per cent increase in total Canadian consumption by 1998. About 40 per cent of the energy consumed went to meet space heating and transportation requirements (Table 2).

Canada generates a large energy trade surplus which, over the 1994 to 1998 period, has yielded an average of \$11.0 billion dollars per year in revenue (Figure 2). In 1998, total gross

**Table 2
Domestic Energy Consumption
by End Use
(Petajoules)**

	1994	1995	1996	1997	1998 ^{a)}
Space Heating	1 874	1 915	2 001	1 993	2 030
Transportation	2 027	2 070	2 130	2 189	2 263
Other Uses ^{b)}	3 314	3 473	3 543	3 608	3 713
Non-Energy Use ^{c)}	745	727	845	807	829
Electricity Generation ^{d)}	1 979	2 029	1 901	1 885	1 902
Total	9 939	10 214	10 420	10 482	10 737

a) Estimates

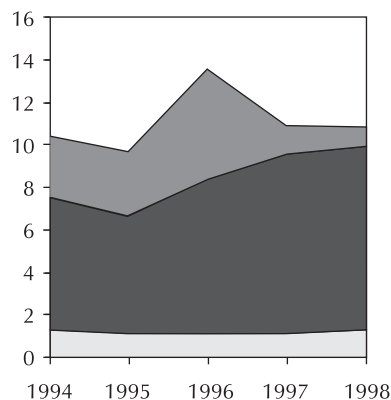
b) Includes energy used for space cooling and ventilation, as well as a variety of uses in the industrial sector

c) Includes energy used for petrochemical feedstock, asphalt, lubricants, etc.

d) Includes producer consumption and losses as well as a nuclear energy conversion requirement

export earnings for natural gas, petroleum and electricity were valued at \$19.7 billion, which led to an energy trade surplus of \$10.7 billion.

**Figure 2
Net Energy Export Revenues from
Major Exports
(\$ Billions)**



Petroleum export revenues fell to an estimated \$9.3 billion in 1998, down from \$12.3 billion in 1997. On the other hand, low oil prices also resulted in lower spending on petroleum imports. Imports fell to about \$8.5 billion, leaving Canada with a trade surplus in

petroleum of \$0.8 billion, down from \$1.2 billion in 1997. Natural gas export revenues continued their upward growth, generating \$8.8 billion in 1998. Moreover, since imports are minimal, natural gas accounted for 80 per cent of the total energy trade surplus.

Crude Oil and Natural Gas Liquids

International Markets

From a producer standpoint, oil markets deteriorated markedly in 1998. The over-supply situation that developed late in 1997 worsened in 1998 as the economic crisis which had started in southeast Asia affected other parts of the world. Despite several meetings of OPEC members and two separate agreements by OPEC to cut production, the actual production cuts were not sufficient to offset growing oil stocks. On average during 1998, the excess of supply over demand was estimated to be nearly 159 thousand cubic metres (one million barrels) per day and, consequently, crude oil prices declined steeply. The price of WTI at Cushing, Oklahoma dropped from U.S.\$17 to U.S.\$11, while the price of Brent (U.K.) crude fell below

U.S.\$10 in December (Figure 3). Warm winter weather at the beginning and at the end of 1998 also dampened the demand for heating fuel.

Production and Reserves Replacement

Canadian production of crude oil and equivalent totalled approximately 345 900 cubic metres (2.2 million barrels) per day in 1998, surpassing the record level set in 1997 by more than four per cent (Table 3). The first full year of production at Hibernia, offshore Newfoundland, added some 10 300 cubic metres (64,800 barrels) per day of conventional light crude oil to Canadian supply. The resumption of operations at the Cohasset platform also contributed to increased production levels from offshore Nova Scotia. In western Canada, production records were set for pentanes plus, bitumen and synthetic crude oil at both the Syncrude Canada Ltd. and Suncor Energy Inc. (Suncor) integrated mining plants. The increase in synthetic crude oil supply was especially significant at the Suncor plant where daily output jumped by about 50 per cent following the opening of its fixed plant expansion project

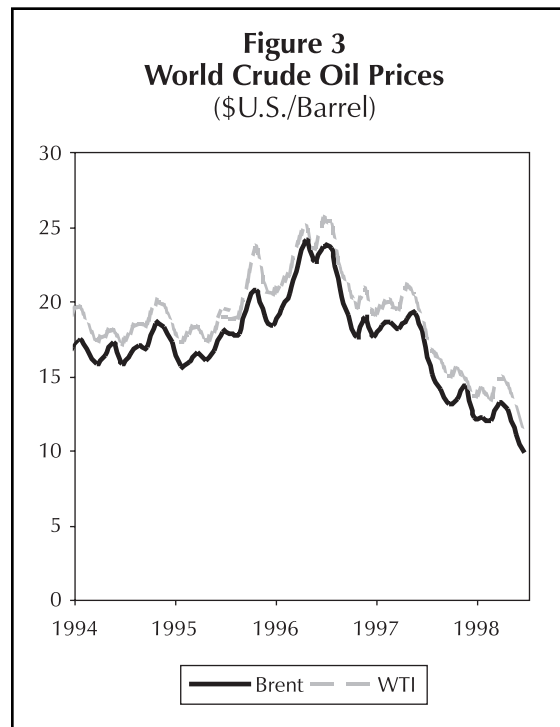


Table 3
Canadian Production of Crude Oil and Natural Gas Liquids
(thousand cubic metres per day)

	1994	1995	1996	1997	1998 ^{a)}
Conventional Light (East Coast)	4.4	4.3	3.7	2.7	13.6
Conventional Light (WCSB)	144.1	140.8	136.3	132	127.1
Synthetic	41.6	43.2	42.3	43.2	45.3
Pentanes Plus	24.6	25.0	26.4	27.4	27.8
Total Light	214.7	213.3	208.7	205.3	213.8
Conventional Heavy	65.7	73.4	82.2	88.4	86.8
In-situ Bitumen	21.2	23.7	26.1	37.8	45.2
Total Heavy	86.9	97.1	108.3	126.2	132.0
Total Crude Oil and Equivalent	301.7	310.4	317.0	331.5	345.9
Natural Gas Liquids	80.6	86.3	91.2	93.5	93.4

a) Estimates
Note: numbers may not total due to rounding

in July and its new Steepbank Mine in September.

Low world crude oil prices negatively affected the production of conventional crude oil in western Canada. It is estimated that about 10 000 cubic metres (62,900 barrels) per day of potential production, mainly heavier crude oil types, were shut in for economic reasons. This resulted in the first year-on-year downturn in conventional heavy crude oil production since 1982, and it exacerbated the decline in conventional light oil production from the Western Canada Sedimentary Basin (WCSB). Conventional light crude oil production declined by six per cent in Alberta, overshadowing increases in British Columbia, Saskatchewan and Manitoba.

While production was declining in the WCSB, the Hibernia Field produced four million cubic metres (25 million barrels) in its first full year of production. Hibernia wells are producing at high rates and are the most productive oil wells in Canada.

The Board's estimate of remaining conventional crude oil and crude bitumen reserves at year-end 1997, the last year for which data are available, is 1 280.4 million cubic metres (8.1 billion barrels), down two per cent from 1996 (Table 4). As a result of high exploration activity levels in 1997, remaining reserves, excluding bitumen, increased as reserves additions replaced 105 per cent of the production of conventional crude oil.

At year-end 1997, remaining reserves of conventional crude oil totalled 666 million cubic metres (4.2 billion barrels), an increase of four per cent from year-end 1996 (Table 5). From 1993 to 1997, on a cumulative basis, additions to established reserves of conventional light and heavy crude oil replaced 90 per cent of production. Remaining reserves of crude bitumen in active oil sands projects were estimated to be 614 million cubic metres (3.9 billion barrels) at year-end 1997, a decrease of seven per cent from 1996.

Industry Activity

In western Canada, a total of 9,744 wells were drilled in 1998, a decrease of 41 per cent from the record level seen in 1997 (Figure 4). Only

Table 4
Estimates of Established Reserves of
Crude Oil and Bitumen at
31 December 1997
(million cubic metres)

Conventional Crude Oil	Initial	Remaining
British Columbia ^(a)	110.8	23.4
Alberta ^(b)	2 451.7	326.9
Saskatchewan ^(c)	693.5	190.6
Manitoba ^(d)	37.1	4.7
Ontario ^(e)	13.7	1.8
NWT and Yukon:		
Arctic Island & Eastern Arctic Offshore ^(f)	0.3	0
Mainland Territories - Norman Wells	37.5	11.3
Nova Scotia ^(g) - Cohasset and Panuke	7.5	1.7
Newfoundland ^(h) - Hibernia	106.0	106.0
Total	3 458.1	666.4
Crude Bitumen		
Oil Sands - Upgraded Crude ^(b)	376.7	274.0
Oil Sands - Bitumen ^(b)	644.0	340.0
Total	1 020.7	614.0
Total Conventional & Bitumen	4 478.8	1 280.4

a) British Columbia Ministry of Energy and Mines and NEB common database

b) Alberta Energy and Utility Board and NEB common database

c) Saskatchewan Energy and Mines estimate for 31 December 1996, NEB updated to 31 December 1997

d) Manitoba Energy and Mines

e) Canadian Association of Petroleum Producers

f) Bent Horn abandoned 1996

g) Canada-Nova Scotia Offshore Petroleum Board

h) Canada-Newfoundland Offshore Petroleum Board

Note: numbers may not total due to rounding

Table 5
Conventional Crude Oil Reserves,
Additions and Production - 1993 to
1997
(million cubic metres)

	1993	1994	1995	1996	1997	Total
Additions	83	47	89	56	86	361
Production	75	78	80	81	81	403
Total Remaining Reserves	688	657	666	642	666*	

*Includes reserves from Hibernia

3,142 oil wells were completed during 1998, 63 per cent less than in 1997. Oil well drilling, except for production maintenance, was low due to depressed oil prices. The decline in drilling resulted in lower reserves additions for 1998 and, when data are complete, will likely show that production exceeded reserves additions. Horizontal well drilling, an indicator of the level of development drilling, was down 54 per cent. The average well depth in 1998 increased about 130 metres (to 1 240 metres) while the drilling success rate dropped slightly to just over 50 per cent.

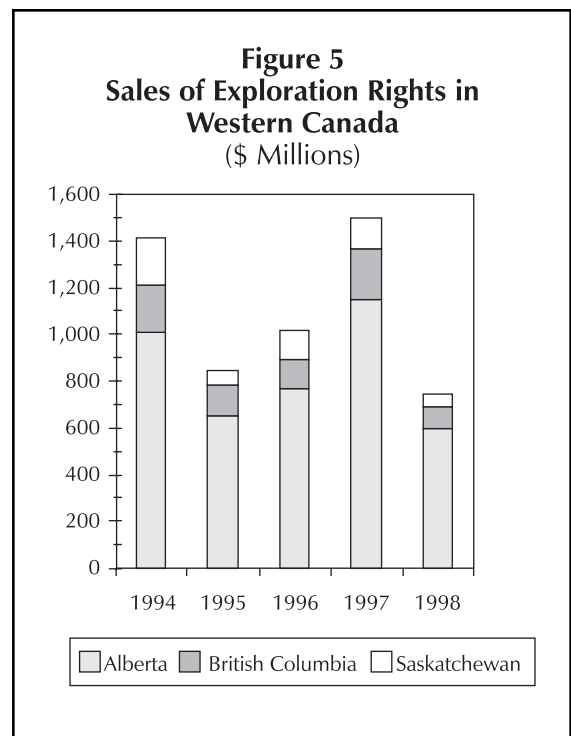
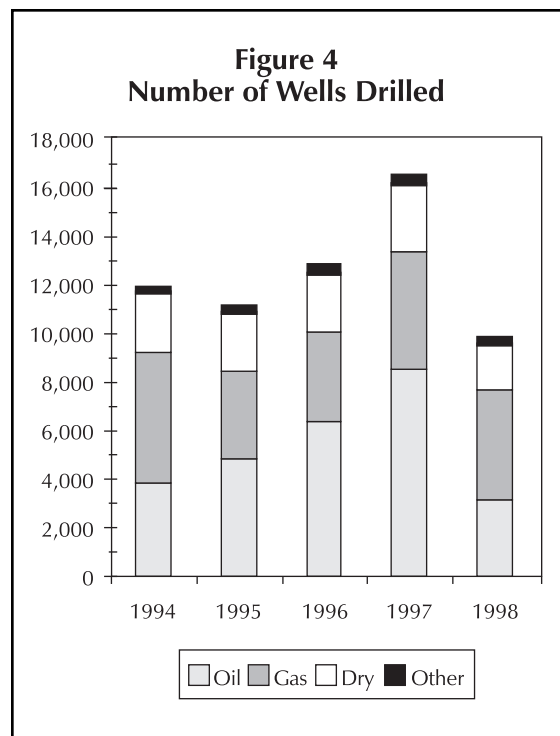
Total lease and licence sales in western Canada totalled 3.9 million hectares in 1998, down about 40 per cent from 6.9 million hectares in 1997. Revenues from land sales also dropped to \$747 million from \$1.5 billion the previous year (Figure 5). Eighty per cent of the land sold was in gas areas. Finally, geophysical activity also was down 20 per cent in 1998 from the previous year.

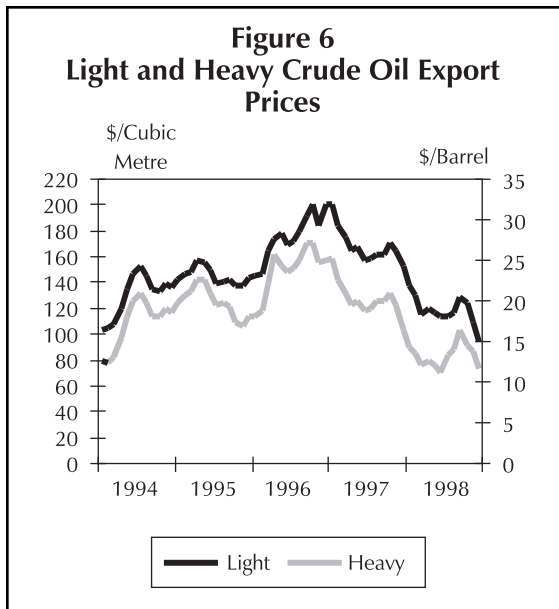
Crude Oil Exports

Total crude oil exports in 1998, including pentanes plus and synthetic, are estimated at 209 900 cubic metres (1.3 million barrels) per day, up 34 per cent from 1994. The 1998 total was composed of approximately 95 000 cubic metres (602,900 barrels) per day of light crude oil and equivalent and approximately 114 100 cubic metres (718,800 barrels) per day of blended heavy crude oil.

The estimated value of crude oil exports in 1998 was \$6.9 billion, compared with \$8.9 billion in 1997. Although export volumes increased, revenues declined as a result of lower oil prices. In 1998, the estimated average light and heavy crude oil export price was \$118.00 and \$84.00 per cubic metre (\$18.70 and \$13.30 per barrel) respectively, compared to 1997 prices of \$168.50 and \$127.50 per cubic metre (\$26.60 and \$20.20 per barrel) respectively (Figure 6).

The U.S. Midwest continued to be Canada's most important market, followed by Montana and Washington (Figure 7). Smaller volumes were shipped from the Canadian East Coast to the U.S. East Coast, Gulf Coast and Rotterdam.





The largest export buyers of light crude oil in 1998 were, by rank: Mobil Oil Corporation (Mobil); Marathon Ashland Petroleum Canada Ltd.; Shell Oil Company; Koch Refining Company (Koch); and Sun Company Inc. For heavy crude oil, the largest foreign buyers were Koch, Amoco Production Company, Canada Petroleum Company Ltd., Mobil and PDV Midwest.

Crude Oil Imports

In 1998, crude oil imports were 122 600 cubic metres (772,400 barrels) per day, up 24 per cent from 1994. These imports represented almost 47 per cent of total refinery feedstock requirements in Canada. The Atlantic region and Quebec imported almost all of their needs. Ontario refiners imported about 23 per cent of their feedstock requirements, and other regions did not import crude oil.

North Sea crude accounted for 41 per cent of total imports, compared to 47 per cent in 1997, while crude oil originating from OPEC countries was down to 39 per cent from 43 per cent. Imports from other sources accounted for 20 per cent, up from 10 per cent in 1997.

Oil Refining

In 1998, the demand for petroleum products in Canada averaged 253 800 cubic metres (1.6 million barrels) per day, an increase of three per cent over 1997. Refinery production rose to 263 000 cubic metres (1.7 million barrels) per day.

Refinery receipts of domestic crude oil averaged 139 500 cubic metres (0.9 million barrels) per day, a decrease of three per cent from 1997.

Main Petroleum Product Exports and Imports

In 1998, exports of main petroleum products and partially processed oil fell by nine per cent to 37 200 cubic metres (234,400 barrels) per day. This reflects a decrease in shipments of motor gasoline and middle distillate. The estimated revenue from these exports was \$1.6 billion in 1998, down from \$2.3 billion in 1997. This revenue excludes product exports from crude oil processing agreements for which prices are not assigned. The decrease in revenues is a result of a reduction in both volumes and prices.

Imports of main petroleum products in 1998 averaged 19 900 cubic metres (125,400 barrels) per day, an increase of 12 per cent from the previous year. Imports of motor gasoline and heavy fuel oil grew substantially.

The U.S. continued to be the largest buyer of petroleum products, accounting for almost 94 per cent of total exports. The U.S. East Coast was the largest market, followed by the Midwest. Exports were also made to the Far East and Europe. The largest exporters of main petroleum products were, by rank: Irving Oil Limited; North Atlantic Refining Ltd.; Imperial Oil Limited; Ultramar Limited; and Shell Canada Products Limited.

Oil Pipeline Capacity

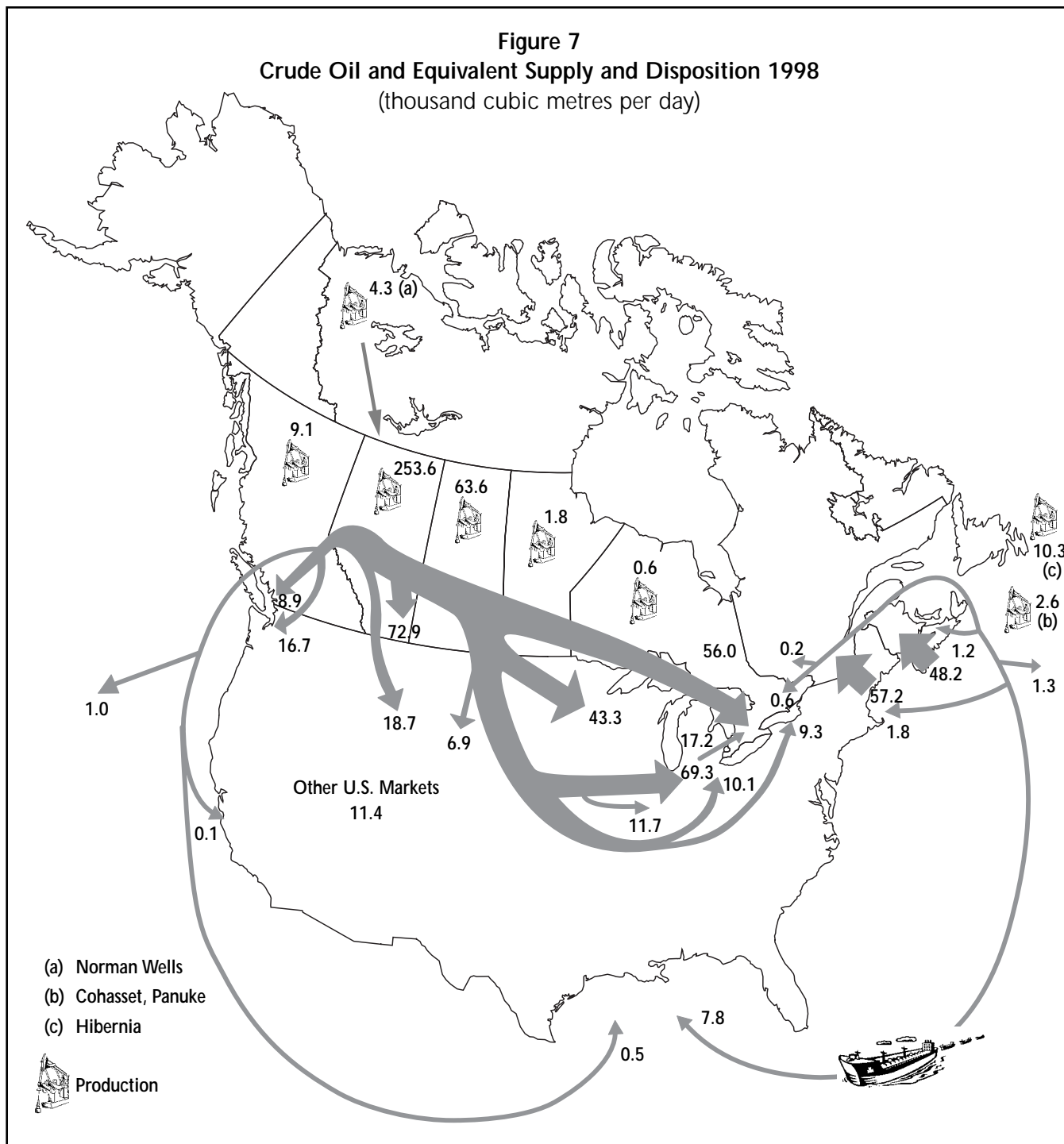
For the first half of 1998, the Edmonton-Sarnia portion of Enbridge Pipelines Ltd.'s (Enbridge) system operated at capacity. However, for the remainder of the year, Enbridge had spare

capacity on its system as shippers shut in production rather than sell at the prevailing low oil prices. Trans Mountain Pipe Line Company Ltd.'s system operated at capacity for only three months in 1998. Throughput information is not publicly available for the system owned and operated by Express Pipeline Ltd.

**Natural Gas Liquids
(excluding Pentanes Plus)**

Production of natural gas liquids (NGLs) from gas plants and refineries in 1998 is estimated at 93 400 cubic metres (588,420 barrels) per day. Ethane production was 35 100 cubic metres (221,130 barrels) per day, propane production

**Figure 7
Crude Oil and Equivalent Supply and Disposition 1998**
(thousand cubic metres per day)



was 34 300 cubic metres (216,090 barrels) per day, and the production of butanes was 24 000 cubic metres (151,200 barrels) per day. Ethane production was about the same as in 1997, while production of propane and butanes declined by about one per cent.

Exports of NGLs during 1998 were 36 500 cubic metres (229,950 barrels) per day, an 18 per cent increase from 1997. Ethane exports were 4 400 cubic metres (27,720 barrels) per day, propane exports were 24 000 cubic metres (151,200 barrels) per day and butanes exports were 8 100 cubic metres (51,030 barrels) per day. Ethane, propane and butanes exports increased from 1997 levels by seven, seven and 19 per cent, respectively. The increase is attributed to lower domestic demand and mild temperatures during the fourth quarter.

The U.S. Midwest continued to be Canada's largest market for propane and butanes, accounting for 75 per cent of the total export volume. Smaller amounts were delivered to the U.S. East Coast and West Coast. The largest exporters of propane were, by rank: Amoco Canada Petroleum Company Ltd.; Kinetic Resources (LPG); Canada Imperial Oil Ltd.; and Petro-Canada Hydrocarbons Inc., while the major exporters of butanes were Amoco, Kinetic and Petro-Canada.

The estimated value of exports of NGLs in 1998 was \$0.8 billion, compared with \$1.1 billion in 1997. Although export volumes increased in 1998, weaker prices contributed to lower revenues.

Natural Gas

Production and Reserves Replacement

Natural gas production in 1998 was 159 billion cubic metres (5.6 trillion cubic feet (Tcf)), just slightly below that of 1997. Alberta accounted for 83 per cent of production, British Columbia produced 12 per cent, Saskatchewan produced

four per cent, and the remainder was produced in Ontario and the Northwest Territories. From 1993 to 1998, production increased by 21 per cent.

Gas drilling, although still largely directed at development to maintain production levels, moved toward previously less explored areas of western Canada and slightly higher levels of exploratory drilling. During 1998, 4,585 gas wells were completed, down five per cent from 1997 (Figure 4). However, gas wells accounted for 47 per cent of the overall drilling in 1998, compared to 29 per cent in 1997. Gas wells represented 58 per cent of all development wells and 21 per cent of all exploratory wells drilled. British Columbia had a record drilling year, the majority of wells drilled being for gas development.

The Board's estimate of remaining established reserves of marketable natural gas as of year-end 1997 (most recent data) is 1 698 billion cubic metres (59.9 Tcf), and now includes 85 billion cubic metres (3.0 Tcf) near Sable Island¹ offshore the East Coast (Table 6). The volume of total remaining reserves declined by one per cent from 1996 to 1997. Without the addition of Sable reserves, the decline would have been six per cent. Although data are not yet available, the Board expects that reserves additions will replace a large portion of production in 1998.

¹Drilling on the Sable Gas project commenced in June 1998 and production is expected to begin in November 1999 at a rate of 14 million cubic metres (495 million cubic feet) per day.

Table 6
Estimates of Established Reserves
of Marketable Natural Gas at
31 December 1997
 (billion cubic metres)

	Initial	Remaining
British Columbia ^(a)	559	229
Alberta ^(b)	3 717	1 284
Saskatchewan ^(c)	180	79
Ontario ^(d)	44	13
NWT and Yukon	18	8
Nova Scotia - Sable ^(e)	85	85
Total	4 603	1 698

- a) British Columbia Ministry of Energy and Mines and NEB common database
 b) Alberta Energy and Utility Board and NEB common database
 c) Saskatchewan Energy and Mines estimate for 31 December 1996, updated by NEB to 31 December 1997
 d) Canadian Association of Petroleum Producers
 e) Canada-Nova Scotia Offshore Petroleum Board

From 1993 to 1997, cumulative additions of marketable gas reserves replaced 61 per cent of total production. The addition of 45 billion cubic metres of reserves in 1997 (1.6 Tcf), excluding Sable reserves, was the lowest in recent years (Table 7). The concentration on development drilling to increase deliverability resulted in lower reserves additions in 1997 and, consequently, total remaining reserves declined.

Table 7
Natural Gas Reserves,
Additions and Production
 (billion cubic metres)

	1993	1994	1995	1996	1997	Total
Additions	107	81	166	50	45	449
Production	131	142	150	159	160	742
Total Remaining Reserves	1 874	1 813	1 829	1 721	1 698	

Natural Gas Exports and Imports

In 1998, approximately 55 per cent of Canadian natural gas production was exported. This percentage has grown steadily from about 35 per cent 10 years ago. Canadian natural gas exports now supply approximately 14 per cent of the U.S. market for natural gas.

Natural gas exports to the U.S. increased by six per cent in 1998 to 87.4 billion cubic metres (3.1 Tcf). While pipeline capacity limitations continued to constrain further growth in exports, gas exports during the summer low season increased by 10 per cent compared to the previous year. The exchange rate and demand for storage injection volumes in the U.S. contributed to the increased sales.

Canadian gas exported under short-term orders, issued for a period of up to two years, continued to increase, and reached 61.6 billion cubic metres (2.2 Tcf) in 1998, up from 53.5 billion cubic metres (1.9 Tcf) in 1997. Sales under short-term orders represent over 70 per cent of total gas exports. The remainder is exported under long-term authorizations, the majority of which have terms of not more than 10 years.

Export sales were distributed as follows: 35 per cent to the Midwest; 23 per cent to California; 23 per cent to the Northeast; 18 per cent to the Pacific Northwest; and one per cent to the Mountain region (Figure 9). Compared with total Canadian natural gas production, imports are relatively minor, reaching about one billion cubic metres (0.04 Tcf) in 1998.

Figure 8
Natural Gas Export Prices
(at the international border)
 (\$Cdn./GJ)

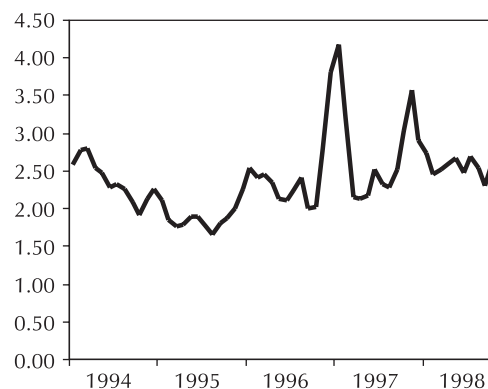
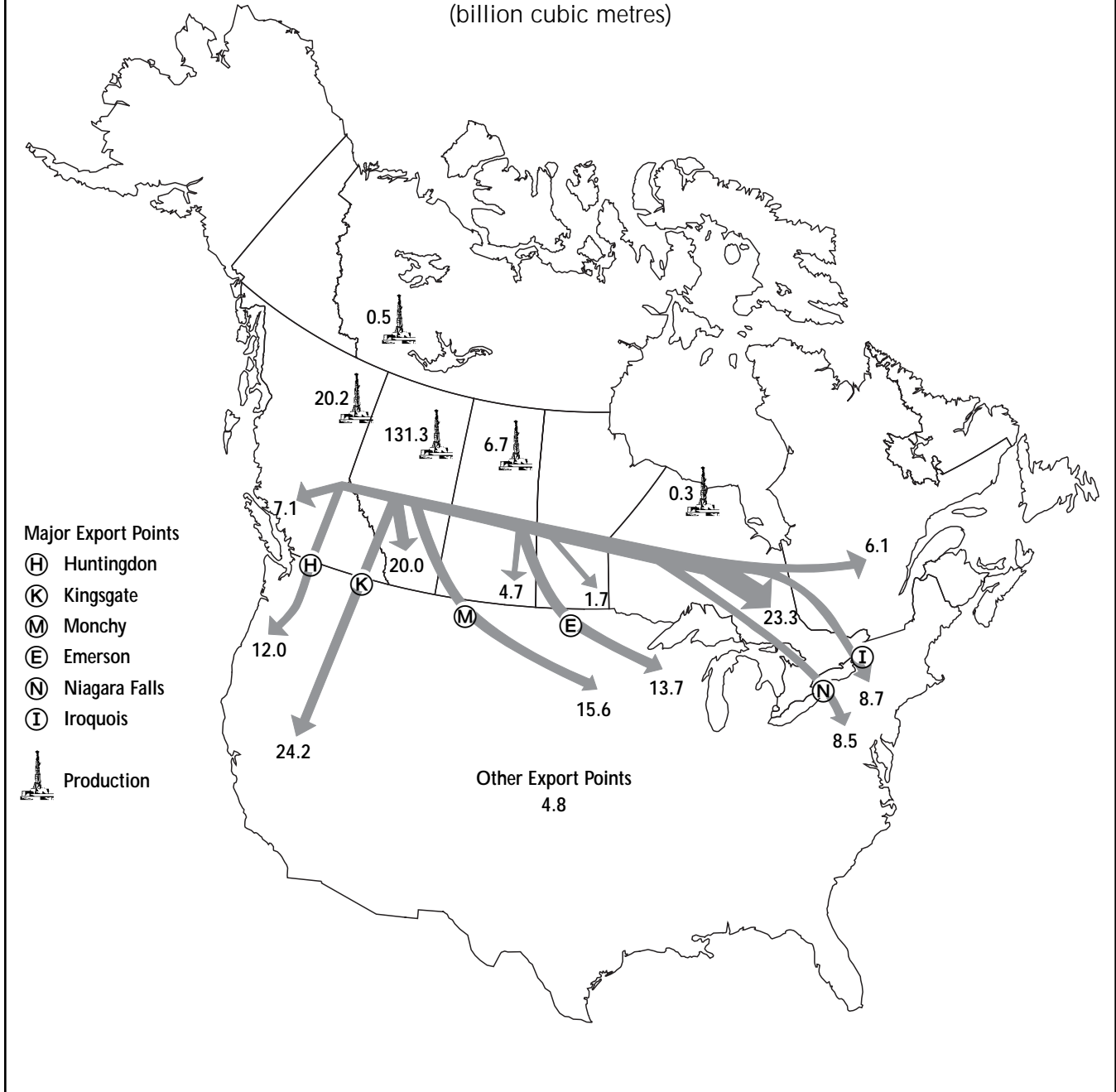


Figure 9
Natural Gas Supply and Disposition 1998
 (billion cubic metres)



Natural Gas Export Prices

In 1998, the average price of natural gas exports to the U.S. was \$2.63 per gigajoule (GJ) as measured at the export border point, down five per cent from \$2.77 per GJ in 1997 (Figure 8). The price of firm volume exports fell seven per cent from 1997 to \$2.66 per GJ in 1998, and

the price of interruptible export volumes decreased marginally to \$2.51 per GJ.

Total revenue from natural gas exports increased to \$8.8 billion from \$8.7 billion in 1997.

Natural Gas Pipeline Capacity

In 1998, the average load factor on Canadian gas export pipelines was over 95 per cent, indicating that most pipelines operated at or near capacity. In the last quarter, expansions on the TransCanada and Foothills PipeLine systems resulted in 31.2 million cubic metres (1.1 billion cubic feet) per day of additional export capacity. With a recent expansion of Trans Québec & Maritimes Pipeline Inc.'s system, a further 5.0 million cubic metres (175 million cubic feet) of export capacity is expected to be in service the first quarter of 1999.

Electricity

In recent years, there has been considerable discussion about the potential for creating competitive markets for electricity generation in Canada. Major plans for the restructuring of electricity markets, with the goal of introducing competition, have been underway in the U.S. for a number of years. Briefly, the Federal Energy Regulatory Commission (FERC) is attempting to create a competitive electricity market in the U.S. by providing multiple sources of generation with access to a regulated electric transmission grid.

Changes in Canadian electricity markets have, in part, been driven by the restructuring efforts in the U.S. However, Alberta was the first jurisdiction in North America to implement a competitive framework for its electricity market. Restructuring in some other provinces has also provided limited transmission access to non-utility generators and neighbouring utilities. For example, British Columbia has implemented an open access transmission tariff to effect wholesale transmission within British Columbia and on the inter-ties to Alberta and the U.S. Manitoba, Ontario and Quebec have or are planning to open their transmission systems to gain reciprocal wholesale access to open U.S. markets. TransAlta Energy Marketing Corp., the British Columbia Power Exchange Corporation and Hydro-Québec have obtained FERC power

marketing certificates, allowing them access to U.S. markets.

Hydro-Québec has unbundled its transmission and generation divisions but has no plans to break up the electricity generation portion of its business. There are no plans to change the existing dominance in generation by the crown-owned utilities in British Columbia, Saskatchewan and Manitoba. Ontario is expected to move to wholesale and retail competition by 2001, and Ontario Hydro's market dominance will be removed by 2010. New Brunswick is currently conducting consultations which could lead to market changes. Nova Scotia Power Inc., operating as a private entity since 1992, has been reorganized into separate divisions responsible for transmission and distribution, power production and customer services and marketing. In Newfoundland, the Public Utilities Board has undertaken a review of the future direction of regulation.

Although a number of provinces are taking action to open their markets, there is no parallel action to create a national electricity market in Canada. In part, this reflects the reality that most electrical inter-ties naturally occur in a north-south direction because of the distances between major Canadian centres, and the advantages of trade with the U.S. due to such things as the opportunity for seasonal interchanges.

Electricity production increased by one per cent from 1994 to 1998, with the share from nuclear declining while hydroelectric and thermal production have been increasing (Table 8). In 1998, approximately 61 per cent of generation was from hydroelectric sources, 27 per cent from conventional thermal and 12 per cent from nuclear generation. Total Canadian consumption is estimated to have been 518 terawatt hours.

Electricity Exports and Imports

Electricity exports, while down somewhat from 1997, have experienced consistent, strong

Table 8
Electricity Production^(a)
(terawatt hours)

	1994	1995	1996	1997	1998 ^(b)
Hydroelectric	329	336	353	345	331
Nuclear	131	142	150	78	66
Thermal	103	114	118	131	149
Total	540	542	559	554	546

a) Source: Statistics Canada

b) Estimate

performance since 1994. Export growth has been strong due to increased demand in U.S. markets and favourable hydraulic conditions in Canada.

The effort to provide open access to transmission in the U.S. has had little measurable effect on total Canadian exports yet. Although the quantity of just over 39 terrawatt-hours was down from the previous four years, export revenues were the largest ever, at nearly \$1.6 billion. While electricity prices have fluctuated since 1994, the average price of firm exports has risen 11 per cent, and the price of interruptible exports has risen 42 per cent (from \$25.14 to \$36.01/MW.h).

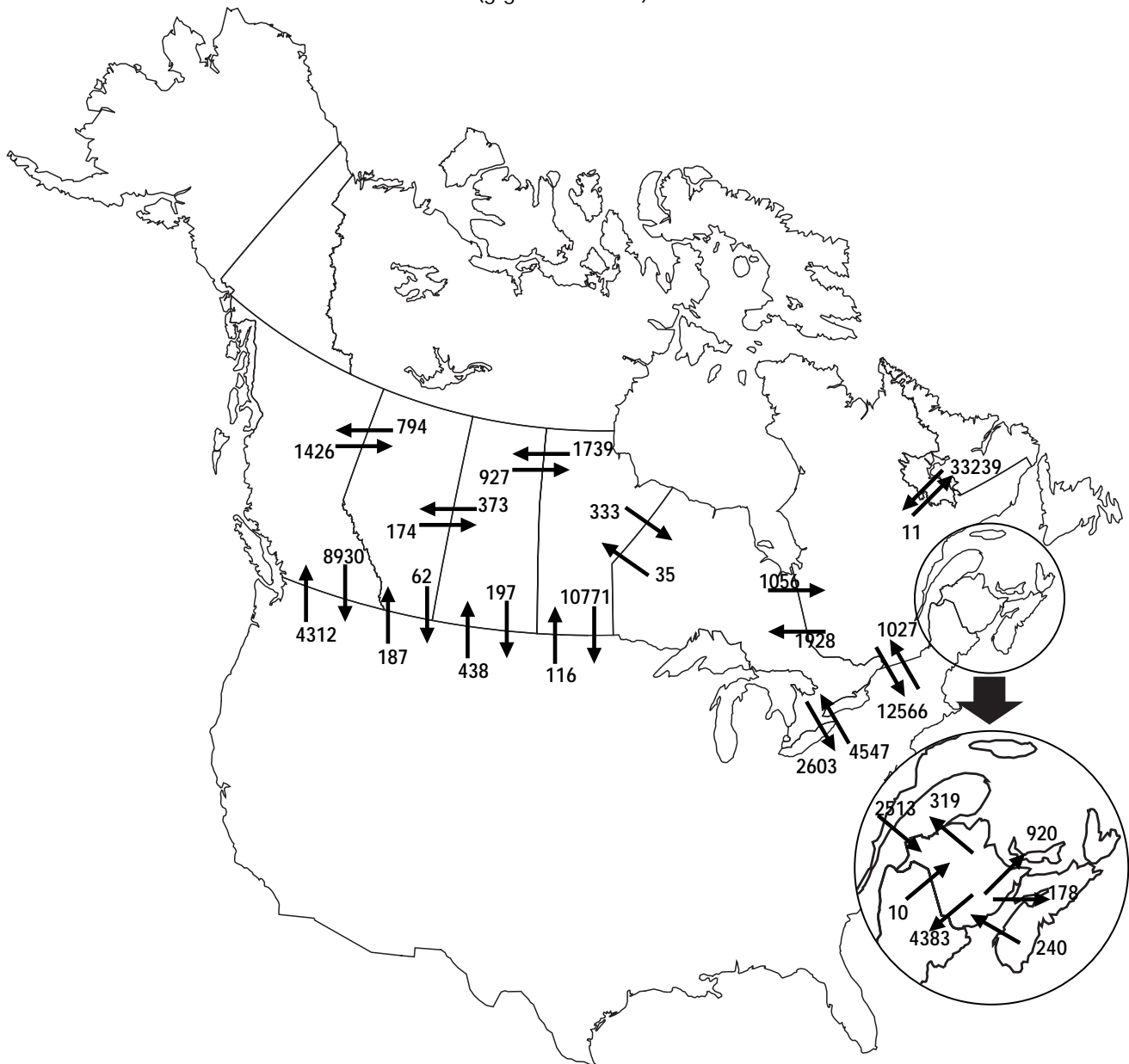
Five utilities supplied about 95 per cent of Canada's electricity exports in 1998. In order of quantities exported, these utilities are: Hydro-Québec, Manitoba Hydro, B.C. Hydro, New Brunswick Power and Ontario Hydro. Ontario Hydro's 1998 exports decreased from the previous year due to the temporary removal from service of some of its nuclear plants.

Exports of firm and interruptible electricity were about equal for 1998, partly due to transmission constraints which limited opportunities for interruptible exports. During the preceding four years, interruptible exports were about 60 per cent of total exports.

Minnesota was the biggest single U.S. importer of electricity, followed by the New England states and the state of Washington (Figure 10). These three destinations accounted for over 60 per cent of exports.

As with natural gas, Canada's electricity imports are small, approximately 12 terawatt-hours in 1998. Almost 80 per cent of the imports went to British Columbia and Ontario, with Ontario accounting for slightly more than half.

Figure 10
International and Interprovincial Transfers of Electricity 1998
 (gigawatt hours)



a) Data for interprovincial transfers of electricity are from 1 November 1997 to 31 October 1998 and are compiled from Statistics Canada's Electric Power Statistics Monthly.

Data for United States imports and exports are for 1998 (excludes exchanges) and are compiled by the NEB.

Safety and Environment



The NEB has regulatory responsibility for public and occupational health and safety, as well as protection of the environment, when facilities or operations fall under the *National Energy Board Act* (NEB Act) or the *Canadian Oil and Gas Operations Act* (COGO Act¹). Although the primary responsibility for safety and environmental matters rests with the owner of the facilities, the Board ensures that the risks associated with the construction and operation of regulated facilities are properly assessed and managed by the facility owner and operator.

In addition to the requirements of the NEB Act and the COGO Act, the Board is required to meet the requirements of the *Canadian Environmental Assessment Act* (CEA Act). The Board, as a responsible authority under the CEA Act, ensures that environmental assessments, including follow-up monitoring requirements, are properly conducted for projects under its jurisdiction.

The NEB's safety and environmental program consists of four integrated parts:

- assessing new facilities applications for associated safety and environmental issues;
- developing regulations and guidelines which reflect best practices;
- monitoring construction and operation to ensure that any issues identified at the time of the application are resolved and that facilities are built and operated in accordance with the regulations; and
- investigating any failures or incidents which occur, with the intent of preventing similar incidents from recurring.

The integration of these four areas is very important to effective risk management. The Board has taken concerted steps to enhance its ability to fulfil its environmental and safety role.

New Applications

Safety and environmental issues are first considered when an application for new facilities is submitted. In 1998, the Board considered several new projects in which safety and environmental issues were an important factor in the system design. The Sable Offshore Energy Project (SOEP) project included the construction of a major gas plant near Goldboro, Nova Scotia and the first offshore pipeline under NEB jurisdiction. The Alliance pipeline system, designed to transport gas from northeast B.C. and Alberta to the Chicago area, will use a relatively new technology to transport dense-phase natural gas under high pressure over a long distance. The Souris Valley pipeline will be the first commodity pipeline under the Board's jurisdiction to carry carbon dioxide gas.

In accordance with the CEA Act, the Board conducts environmental screenings of proposed facilities. Upon receiving an application, staff determine if a review is required under the CEA Act. If so, the review, which includes input from other Responsible Authorities and advice from expert departments, ensures that all the CEA Act requirements are examined before a decision is made on the application. Even when an application does not trigger a CEA Act review, the Board considers the environmental aspects of the project in accordance with the NEB Act. As well, for COGO Act applications, the Board is required to ensure that oil and gas activities are carried out safely, in a manner which protects the environment and involves sound reservoir conservation practices.

In 1998, the Board also assessed 114 applications under the COGO Act. This was an increase of 24 per cent over the previous year and primarily related to increased oil and gas exploration activity in the Fort Liard

¹The COGO Act sets out the Board's regulatory powers with respect to oil and gas exploration and activities on frontier lands not otherwise regulated under joint federal/provincial accords.

area. Included in the total were 15 applications for drilling new wells.

Under the COGO Act, the first development plan in the North in several years was approved at the end of 1997. The Ikhil project will move gas in a buried pipeline from wells in the Northwest Territories to the Town of Inuvik. The Ikhil gas reservoir, controlled by the Inuvialuit Petroleum Corporation (IPC), was further developed in 1998 with the repair of the IPC Ikhil K-35 well and the drilling of two new wells for further reservoir control. IPC has applied for approvals to construct a pipeline from the Ikhil field to the Town of Inuvik, along with the facilities required for the production and treatment of the gas.

During 1998, the Board participated in the development of environmental screening guidelines under the new *Mackenzie Valley Resource Management Act* (MVRM Act) which replaces the CEA Act in that region. The MVRM Act ensures a greater role for Aboriginal people in an integrated system of land and water management and regulation in the Mackenzie Valley. The MVRM Act established a new environmental assessment and impact review process and various new boards for land use planning, land and water management, and environmental impact review. Potential impacts of oil and gas activities on land and water resources and the environment are examined by the NEB, as a Designated Regulatory Agency, and the new Mackenzie Valley boards.

Regulations and Guidelines

The NEB maintains a number of regulations for the safety of the public and company employees, and for the protection of the environment and property. For pipelines under NEB jurisdiction, the *Onshore Pipeline Regulations* (OPR) sets out the technical and safety requirements for all stages of a pipeline's life cycle. These regulations rely heavily upon standards developed by the Canadian Standards Association (CSA). The Board participates with industry and other government agencies in the development and maintenance of these standards. In 1998, the CSA standards for pipeline systems were updated to address new issues and technology. Major changes are planned to the OPR in 1999 to move towards goal-oriented regulation, increase the emphasis on pipeline maintenance, and incorporate the revised CSA standards.

The Board is active in developing and maintaining safety and environmental regulations pertaining to exploration and development activities pursuant to the COGO Act. These regulations are developed jointly with Natural Resources Canada (NRCan), the Canada-Newfoundland Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB) to ensure common regulatory standards for all frontier lands.

In 1998, consultations were undertaken to amend the following COGO Act regulations and guidelines: the *Canada Oil and Gas Drilling Regulations* and the *Canada Oil And Gas Production and Conservation Regulations*, the *Newfoundland Offshore Safety Regulations* and the *Nova Scotia Offshore Safety Regulations*, *Canada Oil and Gas Offshore Diving Regulations*, the *Guidelines Respecting Physical Environmental Programs during Petroleum Drilling and Production Activities on Frontier Lands*, and the *Chemical Selection Guidelines and the Frontier Sampling Guidelines*.

The Board participated with industry, other levels of government and other stakeholder

groups in a number of initiatives to develop common national regulatory approaches to safety and environmental issues. For example, in November 1998, the Canadian Pipeline Water Crossing Committee (CPWCC), an ad hoc group of federal and provincial agencies, as well as industry and environmental associations, hosted the Watercourse Crossing Guidelines Workshop. More than 120 people representing industry, government and public organizations discussed the draft guidelines for pipeline stream crossings that had been developed by the Committee. Based upon the comments received, the CPWCC will finalize these guidelines in 1999.

Construction Monitoring

When approving a facilities application, the Board often attaches conditions which must be satisfied prior to or during the construction or operation of a project. In 1998, a total of 539 conditions were placed on the 152 facilities approvals issued by the Board, of which a significant number related to environmental matters. Companies must also construct and operate facilities in accordance with the Board's regulations. The Board monitors the construction of pipeline facilities to ensure these requirements are met, as well as any commitments made by a company during the assessment of a project. An environmental compliance program is conducted to ensure that regulated companies protect the environment during the construction of facilities and restore any lands which are disturbed.

In 1998, a number of large pipeline projects were constructed. These projects included TransCanada PipeLine Limited's 1998 expansion involving 298 kilometres of looping, Trans Québec & Maritime's PNGTS project involving 214 kilometres of pipeline, 619 kilometres of pipeline looping by Enbridge Pipelines Ltd., and 106 kilometres of new pipeline by AEC Suffield Gas Pipeline Inc. in southern Alberta and Saskatchewan. Construction also started on the SOEP gas plant and Maritimes and Northeast

Pipeline Management Ltd.'s 568 kilometre pipeline. In addition, nine new companies came under the Board's jurisdiction with facilities approved in 1998. A number of these projects required a new right of way, which raised additional environmental issues.

During 1998, the Board conducted 51 site inspections on construction projects. During inspections, Board inspection officers verify plans and construction techniques and evaluate the effectiveness of the company's technical inspection program that oversees construction activities.

Given its shared jurisdiction with the C-NSOPB for the offshore portion of the SOEP pipeline, the Board appointed a C-NSOPB employee as an inspection officer pursuant to the NEB Act. This designation invests the inspection officer with authority to ensure safety matters are handled according to NEB requirements. The Board intends to train and appoint additional C-NSOPB employees in 1999 to ensure environmental and engineering matters can also be undertaken in keeping with NEB requirements.

In 1998, Board inspectors monitored the construction of 115 kilometres of large-diameter pipeline looping in southern Saskatchewan by Foothills Pipe Lines Ltd. The expansion had been approved by the Northern Pipeline Agency.

The Board requires that companies use qualified environmental inspectors to oversee construction activities. Typically, these individuals have the authority to select appropriate mitigative measures and to stop activities that may cause unnecessary impacts.

When construction is complete, companies are normally required to submit post-construction environmental reports to the Board. These reports identify environmental issues that arise during the construction period and the actions undertaken by the company to protect the environment. Following the next two growing seasons, additional reports are filed by the company to address outstanding environmental issues and to provide an evaluation of the recovery of the affected area.

When construction is complete, but before the facilities are put into operation, companies are required to apply for leave to open. Only when the Board is satisfied that the facilities are safe for operation will the Board grant leave to open the pipeline. The Board issued 148 orders granting leave to open in 1998.

Operations Monitoring of Existing Facilities

The Board has programs in place to assess and monitor the safety and environmental practices of over 40,000 kilometres of existing pipeline systems, operated by over 60 companies. Safety and environmental management audits are conducted at both company head offices and on-site.

In 1998, the Board conducted 14 safety management audits of 11 companies. During these audits, the Board examines operations and maintenance manuals, emergency response manuals, safety training programs, operations and maintenance records, and assesses safety-related operations issues with company personnel. Auditors visit selected facilities to confirm operating procedures are in compliance with those set out in company manuals. Audit findings indicate that companies are generally in compliance with the Board's requirements, although instances of non-compliance on minor matters are often found.

Board staff conducted 86 inspections of operating facilities in 1998. Facility inspectors check for compliance with NEB Act regulations

and with the *Canada Labour Code* and its regulations. Only minor issues were identified, which typically were remedied quickly by the company involved.

The Board also conducts audits of third party damage prevention programs which are required by the *Pipeline Crossing Regulations*. These programs are focussed on improving the awareness of third parties and preventing damage to buried pipelines. Two audits were carried out in 1998.

In 1998, the Board hosted the second Public Awareness Workshop for pipeline companies. Over 100 pipeline company representatives gathered in Vancouver to hear presentations from industry leaders and share experiences. A record of the proceedings is available from the Board's publication office or web site.

The Board continued to monitor the implementation of the recommendations in the November 1996 report *Stress Corrosion Cracking (SCC): Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines*. The inquiry report contains 27 recommendations pertaining to the development of company-specific SCC management programs, changes to the design of pipelines, continued research into SCC, the development of an industry-wide SCC database, improved emergency response practices and information sharing. Board-regulated companies did not record any SCC-related failures in 1998.

Pipeline rights of way under Board jurisdiction are checked periodically to confirm the effectiveness of ongoing environmental protection measures.

Noise emissions from compression and pumping stations are also checked on a regular basis. In 1998, the Board received

numerous monitoring reports from companies providing noise emission surveillance information regarding recent installations. The results of these reports will be incorporated into future Board inspections.

In the frontier lands, Board staff conducted a total of 53 inspections of exploration and production sites to ensure that operations were in compliance with approved program and regulatory requirements pursuant to the COGO Act.

Landowner Complaints

The Board responds to landowner complaints concerning impacts caused by the construction and operation of pipeline facilities. In most cases, the Board ensures that the company is made aware of the complaint and encourages the company to remedy the situation. The Board inspects some of these properties to verify that protection of the environment is achieved.

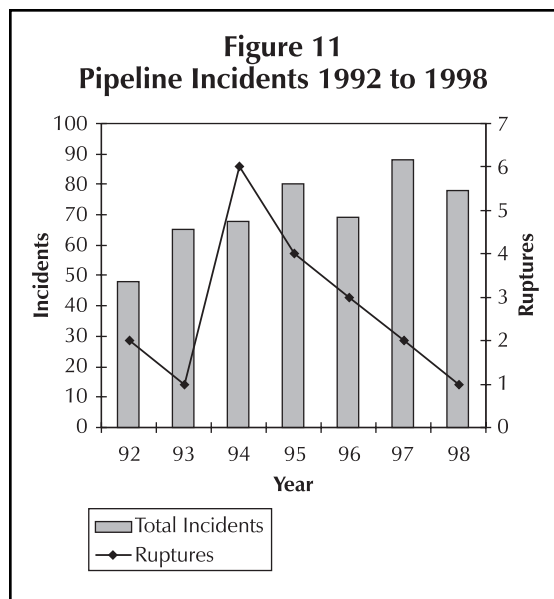
During 1998, the Board noticed an increase in the number of complaints made by landowners during construction. This is likely due to increased public awareness, particularly among landowners, regarding the Board's strict requirements for protection of the environment.

Incident Investigation

Under the *Onshore Pipeline Regulations*, companies must immediately report incidents to the Board. The definition of an incident includes any failure or malfunction of a pipeline, a fire or explosion, a liquids spill, a pipeline rupture, a fatality or an injury requiring hospitalization. The Board investigates incidents to determine if any trends are evident and to make recommendations to prevent similar occurrences in future. Even minor incidents can provide indications of the condition of a pipeline or of required improvement to safety programs. Although the Board investigates all incidents, detailed on-site investigations are usually conducted only for accidents that result in

serious injuries or significant releases of hydrocarbons.

In 1998, a total of 78 incidents were reported. This compares to 88 incidents the previous year



and an average of 71 incidents for the years 1992-1998. Fifteen of these incidents resulted in 19 injuries to construction and maintenance personnel. Thirty-one incidents resulted in product being released.

Of the 78 incidents, the majority occurred at controlled areas such as compressor stations or gas plants. Thirty-six incidents occurred at compressor or pump stations, eight at gas plants, and the remainder occurred along pipeline rights of way.

Continuing a five-year trend of declining pipeline ruptures, only one pipeline rupture occurred in 1998. This involved Westcoast Energy Inc.'s Kobe Creek pipeline which failed in December. No injuries to either the public or company employees resulted. The Transportation Safety Board (TSB) is conducting an investigation into the rupture and a report is expected in 1999.

In 1998, the Board began revising its database system for collecting information about incidents. The Board plans to integrate this

database with those of industry and other government agencies.

The Board ensures that all companies under its jurisdiction have adequate emergency response plans to deal with and reduce or mitigate any negative effects on personnel safety, public health or the environment resulting from oil spills or natural gas leaks. Response plans are examined to ensure adequate procedures are in place. In addition, the Board encourages and participates in company-sponsored emergency response exercises.

The Board's primary role during an emergency is to monitor the company's response, ensuring that all reasonable actions are being taken to protect public safety and the environment. In 1998, a total of 35 minor spills and releases occurred. Two of these events were inspected by the Board because the potential for environmental impact was present. In both cases, the company employed adequate measures to minimize impacts.

The Board monitors sites that have been affected by spills and releases until the sites have been adequately restored. An information tracking system has been created to ensure appropriate follow-up is conducted and that the company involved fulfills its responsibilities.

Under COGO Act provisions, a total of 11 hazardous occurrences were reported in 1998,

down slightly from 1997. Given the overall increase in activity levels north of the 60th parallel, the reduced number of injuries is a strong sign that companies are observing safe work practices.

In 1998, a total of 28 spills occurred in frontier areas. All of these sites have either been cleaned up by the company or are being appropriately managed through remediation plans which have been developed.

Transportation Safety Board (TSB)

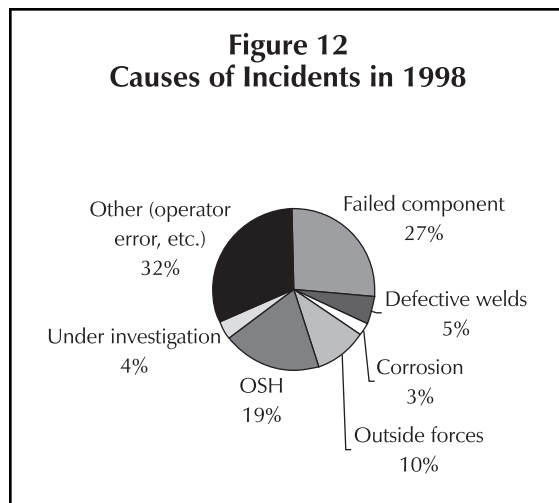
The NEB shares responsibility for the investigation of pipeline incidents with the TSB, a federal independent federal investigation agency. In accordance with an agreement between the two agencies, all incidents are initially reported to the TSB. If the TSB decides to conduct an investigation, the NEB may participate, but is prohibited from making public findings as to the cause and contributing factors of the incident. The TSB has the authority to issue recommendations and the NEB may be required to respond. The NEB can investigate to ensure that its regulations were not violated and/or to determine the need for remedial action. In order to avoid duplication of work, the two agencies coordinate their investigations.

In 1998, the TSB released two reports arising from major investigations involving Board-regulated facilities. Neither of these reports made recommendations directly relating to the NEB.

Year 2000 Preparedness

The Board is concerned about the possible effects that the Year 2000 may have on the integrity of facilities under its jurisdiction, particularly with respect to safety, continuity of service and protection of the environment. The Board undertook a number of actions in 1998 to address this issue.

The Board is monitoring the preparedness of regulated companies for the Year 2000. To facilitate this task, the NEB has divided



regulated companies into two tiers. Tier 1 companies are considered to have the largest potential impact on the environment and welfare of the Canadian public. They are, for the most part, companies that deliver the highest volumes of oil and natural gas. All other regulated companies are included in the Tier 2 category.

The Board has directed Tier 1 companies to submit a summary report from a third party assessment on the Year 2000 problem regarding systems which have the potential to affect health, safety, the environment and continuity of service. In July, the Board requested that all Board-regulated companies provide information on their Year 2000 preparedness plan. This request included a requirement for progress reports to be submitted on a quarterly basis in 1998 and 1999.

Initial responses from the companies varied considerably in detail. All parties indicated that they were aware of the problem. Pipeline companies stated that they do not foresee any significant problems with their computer systems and expect to be prepared if any problems arise.

Enforcement

The Board uses a graduated approach to resolving minor instances of any non-compliance with terms, conditions or regulations. When a violation cannot be rectified immediately, but does not represent an immediate or serious hazard, the company is requested to provide the Board with an Assurance of Voluntary Compliance (AVC) detailing the deficiency and the steps planned to address it. If an AVC is not received by Board staff, a letter from the Board is sent to the company. Hazardous situations which pose an immediate danger to property or the environment and necessitate immediate and direct action, are addressed through the issuance of an Order by an NEB inspection officer. Upon receipt of the Order, the company is compelled to rectify the situation. If a problem is not

rectified, the Board can impose a penalty on the company.

As a result of this graduated approach, in 1998 no penalties were imposed and only one order was issued to address a potentially unsafe practice. In that instance, the company responded the same day and continued to address the issue for the remainder of the project.

The Board's experience is that the level of compliance of companies under its jurisdiction with regulations and approvals is high. To ensure the effective and efficient use of inspection resources, the Board is moving towards a risk-based methodology for determining the appropriate level of inspections and audits.

Research and Development

The Board acts as secretariat for the Environmental Studies Research Fund (ESRF), which finances environmental and social research projects pertaining to petroleum exploration, development, and production activities on frontier lands. Three new research projects are planned for 1999 due to increased activity on the East Coast. These projects are *Effects of Seismic Exploration on the East Coast Fishery*, *Practical Considerations for Cumulative Monitoring and Assessment in Eastern Canadian Offshore Areas*, and *Coastal Resource Inventory - Great Northern Peninsula (North Head, Bay of Islands to Cap Bauld)*.



Public Information Services

Whether explaining how to participate in a public hearing, sharing results of a pipeline safety audit or issuing a decision, the Board aims to provide information that is reliable and accessible. A wide variety of processes and tools are used to deliver information to Board Members, employees and the public. The Board's information management strategy is to continually move toward electronic document production and distribution, while accommodating paper documents for those who need them.

Electronic Regulatory Filing (ERF)

The NEB is proceeding with implementation of Electronic Regulatory Filing in concert with the Ontario Energy Board (OEB) and the regulated energy industry. The ERF initiative is aimed at creating a non-proprietary system for the creation, exchange, use and re-use of regulatory information in electronic formats. It will greatly enhance the ability of clients to participate in the regulatory process, regardless of their proximity to the Board's offices in Calgary.

In 1998, the NEB, in cooperation with the OEB and various external clients, successfully tested the electronic filing concept by creating documents in standard format and exchanging them over a central repository. Following this phase, a standard document structure was further defined and approved with broad input from external parties. Internally, a project team and implementation schedule was developed, while software and hardware were upgraded to be compliant with the ERF initiative.

The Board is currently accepting voluntary filings from industry, as well as requests to conduct "pilot" ERF proceedings of various types. Involvement in pilot projects, either as an applicant or intervenor, will familiarize participants with ERF technology and modified regulatory processes before electronic filing becomes mandatory.

Preparing for Year 2000

The NEB views the Year 2000 and its consequences as a very serious matter which can potentially affect not only its own operations, but those of regulated companies. With this in mind, the Board has devised a strategy to address the Year 2000 issue. This strategy includes the creation of a project office which is responsible for internal activities and a team which communicates with industry and regulated companies.

The internal project office is managing processes for:

- identifying and analyzing the NEB's information technology systems;
- preparing contingency plans with components such as crisis scenarios, crisis response plans and business resumption plans;
- preparing a risk assessment for the NEB and work plans to address the concerns; and
- monitoring the Board's progress against the plans.

Communication Instruments

Internet Web Site

The Board's web site (www.neb.gc.ca) has been operating since 1996. With an average of 25,000 hits per month in 1998, the web site has become a key tool for accessing information about our organization. The site includes information about the Board's regulatory role, current regulatory proceedings and monthly energy statistics. In 1998, documents such as the Board's Annual Report, additional energy statistics and information about electricity applications were added to the site. Development of the site and the addition of new information documents is ongoing.

Board Document System

The Board Document System (BDS) was created in 1995 to provide direct access to an electronic library of regulatory documents. This system contains Reasons for Decisions on public hearings dating from 1985 and hearing transcripts from 1991. The BDS will be integrated into the ERF document repository in 1999.

News Releases

Information about public hearings, Board decisions, public consultations and major changes to regulations and procedures were made available to the media and Canadians through 47 news releases in 1998. At the beginning of the year, the Board began encouraging clients to access news releases via the Board's web site rather than relying on copies sent by mail. News releases will continue to be available through the library and the mail list, but quicker access will normally be available through the web site.

Regulatory Agenda

For several years, the Board has published a quarterly *Regulatory Agenda* which provides information regarding regulatory applications and other Board matters. In 1998, the Board began providing monthly updates of this document on the web site. The quarterly Regulatory Agenda was mailed to those people who required a paper document.

Bulletins

The Board has published 13 information bulletins about popular topics. The bulletins are available through the NEB library or the Board's web site (see Supplement II for a list).

Other Information Services

Dial-In Sound Access

As a service to regulatory participants who are unable to attend proceedings, the Board has been offering dial-in sound access to most of its

hearings. In 1998, the Board provided this service for 11 of its 12 hearings.

Library

The NEB has a specialized library consisting of reference materials, books and periodicals, as well as hearing applications and submissions, energy studies and speeches by Board Members. The library is open from 9:00 a.m. to 4:00 p.m. daily.

For More Information

For more information on any of the Board's services or activities, call (403) 292-4800 or send a facsimile to (403) 292-5503.

To order publications, contact:

Publications Coordinator
National Energy Board
444 Seventh Avenue S.W.
Calgary, Alberta
Canada T2P 0X8
Email: orders@neb.gc.ca
Phone: (403) 299-3562



Corporate Activities

The NEB as an Employer

The NEB is a federal public service organization located in Calgary. As a separate employer under the *Public Service Employment Act*, the Board has the flexibility to take advantage of opportunities inherent to a large organization while adapting many policies and procedures to reflect its unique requirements. For example, the Board has developed its own classification system which reflects the spectrum of NEB positions. In addition, terms and conditions of employment are negotiated directly with two unions that represent employees. At the same time, the Board is closely connected to the public service staffing process which provides access to job opportunities in other public service organizations across Canada.

As an employer, the Board's strategy is to provide reasonable remuneration and a positive and fulfilling working environment. It recognizes the importance of achieving a balance between work and home life and supports individual efforts to achieve that balance by offering flexible work arrangements. Opportunities for training, development and career growth are encouraged.

Strategic Management

Over the past few years, the NEB has positioned itself for success by adopting a multi-disciplinary, team-based structure to focus on strategic results. In 1998, the Board's strategic direction was further clarified by developing a multi-year plan. This plan allows for priorities to be identified, planning processes to be effective and results to be evaluated, as well as forging an essential link between the Board's strategic direction and the accountabilities of individual employees. In addition, it responds to recommendations of the Auditor General around performance reporting and the development of a human resource strategic plan.

The NEB also introduced a new performance management process last year. This process is designed to clarify the link between individual contributions and the desired outcomes of the organization. It encourages discussion and planning for professional development, while providing feedback on achievements.

Relocation to New Office Space

The NEB was housed at its 311 Sixth Ave S.W. location since moving to Calgary in 1991. When this lease expired, a public bidding process was held and new office space was procured at 444 Seventh Ave. S.W.

Moving the entire organization to a new location was accomplished over one weekend in August 1998. The relocation was on budget and completed with minimal disruption to the public the Board serves. The Board and Public Works and Government Services Canada staff were successful in reducing office space while providing employees with efficient and ergonomic accommodation.

Financial Spending

Since 1991, up to 90 per cent of the Board's operating costs have been recovered from the regulated community, rather than the taxpayer. In keeping with the Auditor General's recommendation, cost recovery negotiations between the Board and regulated industry were initiated in 1998. Their purpose is to review all aspects of the cost recovery regulations.

Table 9 shows the Board's expenditures and staff levels for the last five fiscal years. Additional information on budgets and plans may be found in the *NEB 1998-99 Estimates* and the *1999 Report on Plans and Priorities*. Both documents are available upon request.

Table 9
Historical Expenditures and Staffing

Fiscal Year (April 1 to March 31)	Expenditures \$000	Full-time Staff (or equivalent)
1994 - 1995	27 377	298
1995 - 1996	25 911	279
1996 - 1997	26 855	272
1997 - 1998	28 048	264
1998 - 1999 ^{a)}	27 707	277

a) Estimate

Supplement I

The Board's Mandate

The National Energy Board is an independent regulatory tribunal established in 1959. It reports to Parliament through the Minister of Natural Resources Canada (the Minister). The Board is a court of record. With regard to attendance at hearings, the swearing and examining of witnesses, production and inspection of documents and the enforcement of its orders, it has the powers of a superior court.

At the end of 1998, the NEB had six permanent board members, out of a possible total of nine. Permanent board members are appointed for a term of seven years. Two temporary members were also appointed during the course of the year.

The Board's regulatory powers under the *National Energy Board Act* include granting authorizations for: the construction and operation of international oil, gas and commodity pipelines; construction and operation of international and designated interprovincial power lines; the setting of tolls and tariffs for oil and gas pipelines under its jurisdiction; the export of oil, natural gas and electricity, and the import of natural gas.

The Board also has regulatory powers under the *Canada Oil and Gas Operations Act* (COGO Act) and certain provisions of the *Canada Petroleum Resources Act* for oil and gas exploration and activities on frontier lands not otherwise regulated under joint federal/provincial accords.

The Board's mandate includes providing expert technical advice to the Canada-Newfoundland and the Canada-Nova Scotia Offshore Petroleum Boards, Natural Resources Canada and Indian and Northern Affairs Canada.

Under the *Canadian Environmental Assessment Act*, the Board is responsible for conducting environmental assessments of the planning, construction, operation, maintenance and abandonment of energy projects within its jurisdiction. Under the *National Energy Board Act* and the COGO Act, the Board's environmental activities have evolved into three distinct phases: evaluating the potential environmental effects of proposed projects; monitoring and enforcement of terms and conditions attached to project approval; and the ongoing monitoring of operations.

The Board is responsible for ensuring the safe operations of the pipelines under its jurisdiction and the Board's inspectors are appointed Safety Officers for the administration of Part II of the *Canada Labour Code*.

The Board provides advice to the Minister on matters relating to its regulatory expertise upon the Minister's request. The Board also has specific responsibilities under the *Northern Pipeline Act* and the *Energy Administration Act*.

Below is a listing of Acts, Regulations, Rules and Guidelines under which the Board operates or has responsibilities.

Acts, Regulations, Rules and Guidelines

Acts

National Energy Board Act
Canada Oil and Gas Operations Act
Canada Petroleum Resources Act
Canadian Environmental Assessment Act
Canada Labour Code Part II
Energy Administration Act
Northern Pipeline Act

Regulations Pursuant to the National Energy Board Act

Cost Recovery Regulations
Export and Import Reporting Regulations
Gas Pipelines Uniform Accounting Regulations
Oil Product Designation Regulations
Oil Pipeline Uniform Accounting Regulations
Onshore Pipeline Regulations
Part VI (Oil and Gas) Regulations
Part VI Regulations, Electricity
Pipeline Crossing Regulations, Part I
Pipeline Crossing Regulations, Part II
Power Line Crossing Regulations
Substituted Service Regulations
Toll Information Regulations

Regulations Pursuant to the Canada Oil and Gas Operations Act

Canada Oil and Gas Certificate of Fitness Regulations
Canada Oil and Gas Diving Regulations
Canada Oil and Gas Installations Regulations
Canada Oil and Gas Geophysical Regulations
Canada Oil and Gas Production and Conservation Regulations
Canada Oil and Gas Operation Regulations
Oil and Gas Spills and Debris Liability Regulations

Regulations Pursuant to the Canadian Environmental Assessment Act

Law List Regulations
Inclusion List Regulations
Comprehensive Study List Regulations
Exclusion List Regulations
Federal Authorities Regulations
Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements

Rules

Rules of Practice and Procedure

Guidelines

Guidelines for Filing Requirements (22 February 1995). The Guidelines set out the information to be provided by applicants for:

- Early public notification of projects
- Certificates for gas pipelines exceeding 40 kilometres
- Certificates for oil pipelines exceeding 40 kilometres
- Section 58 orders for gas pipelines under 40 kilometres or additions and upgrades to existing facilities
- Section 58 orders for oil pipelines under 40 kilometres or additions and upgrades to existing facilities.
- Environmental, socio-economic and lands information for authorization to construct, operate and abandon pipelines
- Notices required when dealing with determination of detailed routes and approval
- Leave to open orders for pipelines
- Orders fixing tolls and tariffs
- Quarterly surveillance reports to be filed by Group 1 companies
- Orders for export and import of gas.

Memorandum of Guidance - Concerning Full Implementation of the September 1988 Canadian Electricity Policy (Revised 26 August 1998)

Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs (23 August 1994)

Guidelines Respecting Physical Environmental Programs during Petroleum Drilling and Production Activities on Frontier Lands (April 1994)

Financial Regulatory Audit Policy of the
National Energy Board (1 December 1994)

Memorandum of Guidance - Regulation of
Group 2 Companies (6 December 1995)

Memorandum of Guidance - Retention of
Accounting Records by Group 1 Companies
Pursuant to Gas/Oil Uniform Accounting
Regulations (30 November 1994)

Memorandum of Guidance to Interested Parties
Concerning Full Implementation of the
September 1988 Canadian Electricity Policy (2
April 1997)

Offshore Waste Treatment Guidelines
(September 1996)

Oil and Gas Occupational Safety and Health
Guidance Notes (April 1992)

Section 58 Streamlining Initiative - Order
XG/XO-100-94

Memorandum of Guidance - Fair Market Access
Procedure for the Licensing of Long-term
Exports of Crude Oil and Equivalent (17
December 1997)

Supplement II

Documents

Information Bulletins

The Board publishes information bulletins on the subjects listed below:

- *Pipeline Route Approval Procedures*
- *The Public Hearing Process*
- *Non-Hearing Procedures*
- *How to Participate in a Public Hearing*
- *The Board's Publications*
- *The Regulation of Tolls and Tariffs*
- *The National Energy Board Library*
- *Electricity*
- *Protection of the Environment*
- *Pipeline Tolls and Tariffs: A Compendium of Terms*
- *The Frontier Information Office*
- *Pipeline Safety*
- *Pipeline Regulation: An Overview for Landowners and Tenants*

Major Documents Published in 1998

Pipeline Facilities

Trans Québec & Maritimes Pipeline Inc.
PNGTS Extension - GH-1-97
Reasons for Decision, April 1998

Northstar Energy Corporation
Natural Gas Pipeline - GH-1-98
Reasons for Decision, May 1998

Interprovincial Pipe Line Inc.
Oil Pipeline - OH-1-98
Reasons for Decision, June 1998

AEC Suffield Gas Pipeline Inc.
Natural Gas Pipeline - GH-2-98
Reasons for Decision, June 1998

Trans Québec & Maritimes Pipeline Inc.
Detailed Route - Portland Natural Gas
Transmission System
Extension - MH-2-98
Reasons for Decision, August 1998

Souris Valley Pipeline Limited
Carbon Dioxide Pipeline - MH-1-98
Reasons for Decision, October 1998

Maritimes & Northeast Pipeline Management
Ltd. - Sable Offshore Energy Inc.
Detailed Route Hearings - Pipeline Projects in
the Maritimes - MH-3-98 and MH-4-98
Reasons for Decision, October 1998

Alliance Pipeline Ltd.
Natural Gas Pipeline - GH-3-97
Reasons for Decision, November 1998

TransCanada PipeLines Limited
1999 Facilities - GH-3-98
Reasons for Decision, December 1998

Gas Exports

Various Gas Exports - GHW-2-97
Reasons for Decision, March 1998

Renaissance Energy Ltd. and
TransCanada Gas Services
Natural Gas Export - GHW-1-98
Letters of Decision - 10 July 1998

Electricity Exports

Citizens Power Sales
Electricity Export Permits - 25 June 1998

Nova Scotia Power Inc.
Electricity Export Permits - 10 July 1998

British Columbia Power Exchange Corporation
Electricity Export Permits - 1 October 1998

Manitoba Hydro-Electric Board
Electricity Export Permit - 13 November 1998

B.C. Hydro and Power Authority
Electricity Export Permits - 17 December 1998

Reports

Trans Québec & Maritimes Pipeline Inc. -
PNGTS Extension
Comprehensive Study Report, February 1998

Non-Associated Natural Gas Resource
Assessment of Saskatchewan, October 1998

Estimate of Hydrocarbon Volumes in the
Mackenzie Delta and Beaufort Sea,
December 1998

Information

Regulatory Agenda - January, April, July and
October

National Energy Board, 1997 Annual Report,
April 1998

National Energy Board - Annual Report
Pursuant to the Access to Information Act and
Privacy Act, 1 April 1997 - 31 March 1998

Supplement III

Legal Proceedings

Applicants	Applications	Decisions
<p><i>Richard Leroux and 417 Auto Wreckers Limited v TransCanada PipeLines Limited</i> (Application dated 22 January 1996)</p>	<p>An Application for Leave to Appeal and for judicial review of a decision of the NEB dated 22 December 1995 was filed in early 1996. The NEB Decision decided that the applicant had not sufficiently demonstrated that its quarrying operations and the aggregate which it extracted fell within the definition of mines and minerals contained in section 81 of the <i>National Energy Board Act</i>.</p> <p><u>Federal Court of Appeal</u> On 6 May 1996, the Court granted the leave to appeal but only on a question of law concerning the Board's interpretation of section 81 of the NEB Act. The judicial review application was ordered struck out.</p> <p><u>Supreme Court of Canada</u> The Appellant subsequently applied for an extension of time in which to file an Application for Leave to Appeal to the Supreme Court of Canada. The application was granted but no Application for Leave to Appeal was filed.</p>	<p>On 27 May 1998, the Federal Court of Appeal dismissed the Appeal, thus sustaining the Decision of the NEB.</p>
<p><i>Rocky Mountain Ecosystem Coalition</i> (RMEC) (Application dated 17 September 1998)</p>	<p><u>National Energy Board</u> An application for review by the Board was filed by RMEC. The Applicant sought review of all of the NEB's decisions as a responsible authority under the <i>Canada Environmental Assessment Act</i> in respect to the environmental scoping of the Alliance Pipeline Project.</p>	<p>On 1 October 1998, the Board dismissed the application for review.</p>
<p><i>Union Gas Limited (Union)</i> (Application dated 4 May 1998)</p> <p><i>Union Gas Limited v National Energy Board</i> - (Application dated 5 May 1998)</p>	<p><u>National Energy Board</u> An application for review was filed with the Board by Union requesting that Decision GH-1-97, concerning tolling methodology for the Trans Québec & Maritimes Pipeline Inc. (TQM) - PNGTS Extension, be declared reviewable and the Board provide additional reasons for its Final Decision.</p> <p><u>Federal Court of Appeal</u> An application for judicial review was filed in the Federal Court of Appeal in which an order of mandamus was sought from the Court to compel the Board to provide additional reasons for its GH-1-97 Decision concerning tolling methodology for the Trans Québec & Maritimes Pipeline Inc. (TQM) - PNGTS Extension.</p>	<p>On 19 June 1998, the Board denied the application by Union for review of the Board's Decision GH-1-97.</p> <p>At the end of 1998 this case had not been heard by the Court. On January 25, 1999 the application for judicial review was wholly discontinued without costs by Union Gas Limited.</p>

Applicants	Applications	Decisions
<p><i>The Industrial Cape Breton Community Alliance Group on the Sable Gas Project v Sable Offshore Energy Project et al</i> (Application dated 25 November 1997)</p> <p><i>The Industrial Cape Breton Community Alliance Group on the Sable Gas Project v Sable Offshore Energy Project et al</i> (Application dated 11 February 1998)</p>	<p>An application for judicial review was lodged in the Federal Court (Trial Division and Court of Appeal) in respect of the Sable Pipeline Project and the Report of the Commissioner of the Canada-Nova Scotia Offshore Petroleum Board.</p> <p>On February 12, 1998 an Order was made by the Court of Appeal transferring the entire matter to the Trial Division.</p> <p><u>Federal Court of Canada Trial Division</u></p> <p>On 13 January 1998, the Federal Court Trial Division heard a motion from the Cape Breton Alliance to add the Governor in Council, the Federal and Nova Scotia Environment Ministers, the NEB and the Canada-Nova Scotia Offshore Petroleum Board as Respondents to the judicial review. On 21 September 1998 that motion was denied.</p> <p>On 3 July 1998, the Trial Division fixed 3 May 1999 as the hearing date for the judicial review application.</p> <p><u>Supreme Court of Nova Scotia</u></p> <p>An application for judicial review of the Report of the Sable Joint Review Panel was filed on 11 February 1998.</p> <p>On 6 July 1998 an Order was issued by the Court adjourning this matter sine die on consent of the parties.</p>	<p>At the end of 1998 this case had not yet been heard by the Court.</p> <p>At the end of 1998 this case had not been heard by the Court.</p>
<p><i>Alberta Department of Energy v Northstar Energy Corporation Ltd.</i> (Application dated 25 May 1998)</p>	<p><u>Federal Court of Appeal</u></p> <p>An Application for Leave to Appeal a Board ruling on jurisdiction and a subsequent final decision of the Board which authorized Northstar Energy Corporation to construct and operate an extra-provincial pipeline was filed in 1998. The grounds for the application were that the Board had no jurisdiction to authorize a pipeline which extended slightly beyond the boundaries of the Province of Alberta.</p>	<p>The Federal Court granted the leave to appeal and stayed the Board's GH-1-98 Decision. An appeal was subsequently filed by the Province of Alberta. At the end of 1998 this appeal had not been heard.</p>
<p><i>Tatham Offshore Inc.</i> (Application dated 9 January 1998)</p>	<p><u>National Energy Board</u></p> <p>An application for review and variation was filed in 1998 respecting the Board's decision GH-6-96 and Certificate GC-94 issued to Sable Offshore Energy Project (SOEP) and GC-95 issued to Maritimes & Northeast Pipeline Project (M&NPP).</p>	<p>On 27 January 1998, the Board dismissed the application for review.</p>
<p><i>Express Pipeline Ltd. (Express)</i> (Application dated 19 January 1998)</p>	<p><u>National Energy Board</u></p> <p>An application was filed for a review and/or consideration of a complaint for resolution of a dispute under the Treasury Board policy entitled "Cost Recovery and Charging Policy" of the Board's decision of 6 February 1997 to include Express under Schedule 1, Part 1 of <i>National Energy Board Cost Recovery Regulations</i> (CRR).</p>	<p>On 17 February 1998, the Board determined that Express had raised a reasonable doubt as to the correctness of the Board's decision of 6 February 1997 to amend the CRR. The Board declared its decision to be reviewable and directed that a review be conducted to determine whether the Board's decision should be rescinded or varied and the method or methods necessary to implement that decision.</p> <p>After conducting the subsequent review, the Board determined that its original decision was correct and issued a decision which confirmed the original decision.</p>

Applicants	Applications	Decisions
<i>BC Gas Utility Ltd. v National Energy Board et al</i>	<u>Supreme Court of Canada</u> BC Gas Utility Ltd. appealed a judgement of the Federal Court of Appeal which had previously reversed a decision of an NEB panel (Mr. R. Illing dissenting) that dismissed a facilities application by Westcoast Energy Inc. The Board had ruled that the facilities in question were subject to provincial jurisdiction.	The Supreme Court of Canada dismissed the appeal of BC Gas Utility Ltd. in March of 1998, thus sustaining the Federal Court of Appeal's reversal of the earlier NEB decision.
<i>Canadian Hunter Exploration Ltd. v National Energy Board et al</i> (Application dated August 22, 1996)	<u>Federal Court of Appeal</u> An Application for Leave to Appeal dated 22 August 1996 was lodged by Canadian Hunter Exploration Ltd. The application challenged a decision of the Board which granted a section 58 exemption order for the construction and operation of an extra-provincial pipeline but which also directed that upstream facilities that were formerly under the jurisdiction of the Province be brought under the jurisdiction of the Board.	Leave to Appeal was granted 6 November 1996 and an appeal was subsequently filed. Interventions were filed by the Provinces of Alberta and British Columbia. At the end of 1998 this case had not yet been heard by the Court.
<i>Union of Nova Scotia Indians et al v Maritimes and Northeast Pipeline Management Ltd. et al</i> (Application dated November 16, 1998)	<u>Federal Court of Appeal</u> The Applicants filed an application for judicial review in respect of a decision of the NEB which declared that Maritimes & Northeast Pipeline had satisfied a condition pertaining to aboriginal roles and responsibilities contained in a Certificate of Public Convenience and Necessity issued to the company. On 19 November 1998, the Applicants filed a motion for an Order deeming the judicial review application to be an Application for Leave to Appeal.	At the end of 1998 this case had not yet been heard by the Court.

Supplement IV

Companies Regulated by the NEB

The following is a list of the pipeline companies and electric power entities which own and/or operate interprovincial or international pipelines or power lines under the Board's jurisdiction. The pipeline companies have been divided into two groups. Group 1 consists of the major pipeline companies which are subject to active regulatory oversight by the National Energy Board. The other pipeline companies under the Board's jurisdiction have been classified as Group 2 companies.

For purposes of cost recovery, there are three classifications: large, intermediate and small. The criteria for determining a company's classification is based on its size, throughput and cost of service.

Group 1 Gas

ANG Pipeline
Alliance Pipeline Ltd.
Foothills Pipe Lines Ltd.
Maritimes and Northeast Pipeline Management Ltd.
TransCanada PipeLines Limited
Trans Québec & Maritimes Pipeline Inc.
Westcoast Energy Inc.

Group 1 Oil and Products

Cochin Pipe Lines Ltd.
Enbridge Pipelines Inc.
(formerly Interprovincial Pipe Line Ltd.)
Enbridge Pipelines (NW) Inc.
(formerly Interprovincial Pipe Line (NW) Ltd.)
Express Pipeline Ltd.
Trans Mountain Pipe Line Company Ltd.
Trans-Northern Pipelines Inc.

Group 2 Gas

AEC Suffield Gas Pipeline Inc.
Bellator Exploration Inc.
Blue Range Resource Corporation
Canadian Hunter Exploration Ltd.
Canadian-Montana Pipe Line Company
Canadian Natural Resources Ltd.
Canor Energy Ltd.
Centra Transmission Holdings Inc.
Champion Pipe Line Corporation Limited
Chauvco Resources Ltd
Chief Mountain Gas Co-op Ltd.
Consumers' Gas (Canada) Limited
Cube Energy Corp.
ELAN Energy Inc.
Fletcher Challenge Energy Canada Inc.
Forty Mile Gas Co-op Ltd.
Huntingdon International Pipeline Corporation
Husky Oil Operations Ltd.
Interenergy Sheffield Processing Company (Canada) Ltd.
Many Islands Pipe Lines (Canada) Limited
Mid-Continent Pipelines Limited
Minell Pipeline Ltd.
Mobil Oil Canada Ltd.
Murphy Oil Company Ltd.
(gas and oil pipelines)
Niagara Gas Transmission Limited
Northstar Energy Corporation
Novacorp International Pipelines
Novagas Canada Pipelines Ltd.
(formerly Novagas Clearinghouse Pipelines Ltd.)
Olympia Energy Inc.
Peace River Transmission Company Limited
Penn West Petroleum Ltd.
Petrorep Resources Ltd.
Poco Petroleums Ltd.
Portal Municipal Gas Company Canada Inc.
Quest Oil and Gas Ltd.

Remington Energy Ltd.
Renaissance Energy Ltd. (gas and oil pipelines)
Revenue Canada Customs and Excise
Rigel Oil and Gas Ltd.
SCL Québec Pipeline Inc.
St. Clair Pipelines Ltd.
Stampeder Exploration Ltd.
Talisman Energy Inc
Tidal Resources Inc.
Union Gas Limited
Wascana Energy Inc.
167496 Canada Ltd.
177293 Canada Ltd.
661151 Alberta Ltd.

Group 2 Oil and Products

Amoco Canada Petroleum Company Ltd.
Aurora Pipe Line Company
Dome Kerrobert Pipeline Ltd. and
Pan Canadian Kerrobert Pipeline Ltd.
Dome NGL Pipeline Ltd.
Dome NGL Pipeline Ltd. and
Amoco Canada Petroleum Company Ltd.
Enbridge Pipelines (Westpur) Inc.
(formerly Westspur Pipe Line Company Inc.)
Ethane Shippers Joint Venture
Federated Pipe Lines (Northern) Ltd.
Genesis Pipeline Canada Ltd.
Husky Oil Operations Ltd.
Imperial Oil Resources Limited
ISH Energy Ltd.
Joint Ventures of the Bi-Provincial Upgrader
Manito Pipelines Ltd.
Montreal Pipe Line Limited
Nevis Ltd.
Northwest Transmission Company Limited
Novacor Chemicals (Canada) Ltd.
Petroleum Transmission Company
Pioneer Natural Resources Canada Inc.
Pouce Coupé, Pipe Line Ltd.
PrimeWest Energy Inc.
Rigel Oil and Gas Ltd.
SCL Pipeline Inc.
Sun-Canadian Pipe Line Company Limited
Wascana Pipe Line Ltd.

Commodity Pipelines

E. B. Eddy Forest Products Ltd.
Fraser Inc.
Genesis Pipeline Canada Ltd.
Penn West Petroleum Ltd.
Souris Valley Pipeline Limited
Stone Consolidated Corporation

Electric Power Utilities and Others

Alberta Power Limited and
CU International Limited
Aquila Canada Corp.
British Columbia Hydro and Power Authority
and British Columbia Power Exchange
Canadian Niagara Power Company
The Canadian Transit Company
Chandler Energy Inc.
Citizens Power Sales
Cominco Ltd.
Destec Power Services Inc.
Detroit and Canada Tunnel Corporation
Edmonton Power Authority
Engage Energy Canada, L.P.
Enron Capital and Trade Resources
Canada Corporation
Farms (including cottages and isolated loads)
Fraser Inc.
Hydro-Québec
Inland Pacific Energy Services Ltd.
Lac La Croix Power Authority
James Maclaren Inc.
Maine and New Brunswick Power
Manitoba Hydro-Electric Board
Montwegan International Resource Inc.
New Brunswick Power
Nova Scotia Power Inc.
Ontario Hydro
Saskatchewan Power Corporation
Sonat Power Marketing Inc. and
Sonat Power Marketing L.P.
St. Clair Tunnel Corp.
Stone-Consolidated Corporation
Tractebel Energy Marketing Inc.
TransAlta Utilities Corporation
TransCanada Northridge Power Ltd.
Utility-Trade Corp.
West Kootenay Power Ltd.

Supplement V

Cooperation with Other Agencies

The Board cooperates with other agencies, wherever practical, to reduce regulatory overlap and provide more efficient regulatory services. In addition, the Board provides assistance to other countries who seek to benefit from the Board's long experience and success as a leading regulatory agency.

Natural Resources Canada (NRCan)

The Board has a Memorandum of Understanding (MOU) with NRCan to reduce duplication and increase cooperation between the agencies. This MOU covers items such as data collection, the enhancement of energy models and special studies.

Canadian Environmental Assessment Agency

The Board has been working with the Canadian Environmental Assessment Agency over the past year to develop a new process to reduce regulatory uncertainty for projects requiring a Comprehensive Study Report. Two pilot projects were undertaken using the new process, and further public consultation is expected in the coming year.

Northern Pipeline Agency (NPA)

The Board provides technical and administrative assistance to the NPA, which, pursuant to the *Northern Pipeline Act*, has primary responsibility for overseeing the planning and construction of the Canadian portion of the proposed Alaska Natural Gas Transportation System by Foothills Pipe Lines Ltd. Mr. Kenneth Vollman, Chairman, serves as Administrator and Designated Officer of the Agency.

Transportation Safety Board of Canada (TSB)

While the National Energy Board has exclusive responsibility for regulating the safety of oil and gas pipelines under federal jurisdiction, it shares the responsibility for investigating pipeline incidents with the TSB. The roles and responsibilities of each body with regard to pipeline accident investigations are outlined in a Memorandum of Understanding (MOU) between the two boards.

Yukon Territory Department of Economic Development (DED)

The Board continues to work with Yukon officials to facilitate the transfer of oil and gas regulatory responsibilities in accordance with the *Yukon Accord Implementation Agreement*. The Board provides expert technical advice to the DED.

Alberta Energy and Utilities Board (EUB)

The Board has an MOU with the EUB on Pipeline Incident Response. The agreement provides for mutual assistance and a faster and more effective response by both boards to pipeline incidents in Alberta.

During 1998, the Board continued its involvement in a Pipeline Task Force with the EUB. The purpose of this task force is to develop consistent and compatible regulatory requirements. It is expected that this process will result in more efficient use of organizational resources, leading to a reduced regulatory burden on both the pipeline industry and the public.

The Board and the EUB have developed a common reserves database for oil and gas reserves in Alberta. Both boards are committed to developing more efficient methods for

maintaining estimates of reserves and to exploring other opportunities for cooperation.

Human Resources Development Canada (HRDC)

The Board has an MOU with HRDC to administer the Canada Labour Code for NEB-regulated facilities and activities and to coordinate these safety responsibilities under the COGO Act and the NEB Act.

Ontario Energy Board (OEB)

The Board is pursuing its Electronic Regulatory Filing (ERF) initiative as a joint venture with the OEB and twenty other key participants in the regulatory community. The ERF project will result in a fully functional electronic system for the creation, exchange, use and re-use of regulatory information. Cooperation with the OEB will ensure its applicability in both jurisdictions.

Saskatchewan Department of Energy and Mines (SEM)

The Board and the SEM have worked together on some resource issues, but a formal agreement has not been signed.

Nova Scotia and Newfoundland

The Board has an MOU with Natural Resources Canada by which the Board provides advice and assistance to NRCan and the provinces of Newfoundland and Nova Scotia in drafting federal and provincial version of regulations which pertain to the offshore areas under joint resource management accords.

British Columbia Ministry of Energy and Mines (MEM)

The Board and MEM have developed a common reserves database for oil and gas reserves in British Columbia. Both boards are committed to developing more efficient methods for maintaining estimates of reserves and to exploring other opportunities for cooperation.

Cooperation with Other Countries

During 1998, the Board cooperated with several foreign countries by providing information on the Board's regulatory role and other energy-related matters. Consultations were held with the U.S. Federal Energy Regulatory Commission and the Comisión Reguladora de Energía of Mexico, as well as with visiting officials from Australia, China, Columbia, England, Japan, Peru and Russia.

The Board also participated in a World Bank seminar on regulation and on the Energy Regulators Forum within the Asia Pacific Economic Cooperation initiative, comprised of 18 member countries on the Pacific Rim dedicated to improving economic ties.

Supplement VI

List of Appendices

The following Statistical Reports are published separately as Appendices to the Annual Report. Electronic copies can be found on the Board's web site and print versions are available from our Publications Office.

Appendix A

- A1 Crude Oil and Equivalent Supply and Disposition
- A2 Estimated Established Reserves of Crude Oil and Bitumen - December 1997
- A3 Natural Gas Supply and Disposition
- A4 Estimated Established Reserves of Marketable Natural Gas - December 1997
- A5 Natural Gas Liquids Supply and Disposition
- A6 Geophysical Activity
- A7 Exploration and Development Expenditures
- A8 Sales of Exploration Rights in Western Canada
- A9 Sales of Exploration Rights in Frontier Regions
- A10 Electricity Generation and Disposition

Appendix B

- B1 Certificates Issued During 1998 Approving the Construction of New Oil Pipeline Facilities Exceeding 40 Kilometres in Length
- B2 Orders Issued During 1998 Approving Oil Pipeline Facilities Including Pipeline Construction Not Exceeding 40 Kilometres in Length
- B3 Exports of Canadian Crude Oil and Equivalent - 1997 and 1998
- B4 Exports of Canadian Crude Oil and Equivalent - 1994-98
- B5 Exports of Petroleum Products by Month - 1998
- B6 Exports of Petroleum Products by Company - 1997 and 1998

Appendix C

- C1 Certificates Issued During 1998 Approving the Construction of New Gas Pipelines Exceeding 40 Kilometres in Length

- C2 Orders Issued During 1998 Approving Gas Pipeline Construction not Exceeding 40 Kilometres in Length
- C3 Licences and Long-Term Orders to Export Natural Gas as at 31 December 1998
- C4 Licences and Long-Term Orders to Import Natural Gas as at 31 December 1998
- C5 Natural Gas Exports by Export Point, 1994-98
- C6 Total Net Exports of Propanes and Butanes 1997-98

Appendix D

- D1 Certificates Issued During 1998 Approving New Commodity Pipeline Facilities Exceeding 40 Kilometres in Length.

Appendix E

- E1 Financial Information - Group 1 Oil Pipeline Companies with Multi-year Incentive Toll Agreements
- E2 Financial Information - Group 1 Oil Pipelines with Tolls based on Cost of Service
- E3 Financial Information - Group 1 Gas Pipeline Companies

Appendix F

- F1 Certificates and Permits Issued During 1998 for International Power Lines
- F2 Amending Orders Issued During 1998 for International Power Lines
- F3 Licences Issued During 1998 for the Export of Electricity
- F4 Permits and Orders Issued During 1998 for the Export of Electricity
- F5 Electricity Exports 1998
- F6 Electricity Trade Between Canada and the United States (by Province)
- F7 Electricity Trade between Canada and the United State (by American Region/State)

Supplement VII

Metric Conversion Table

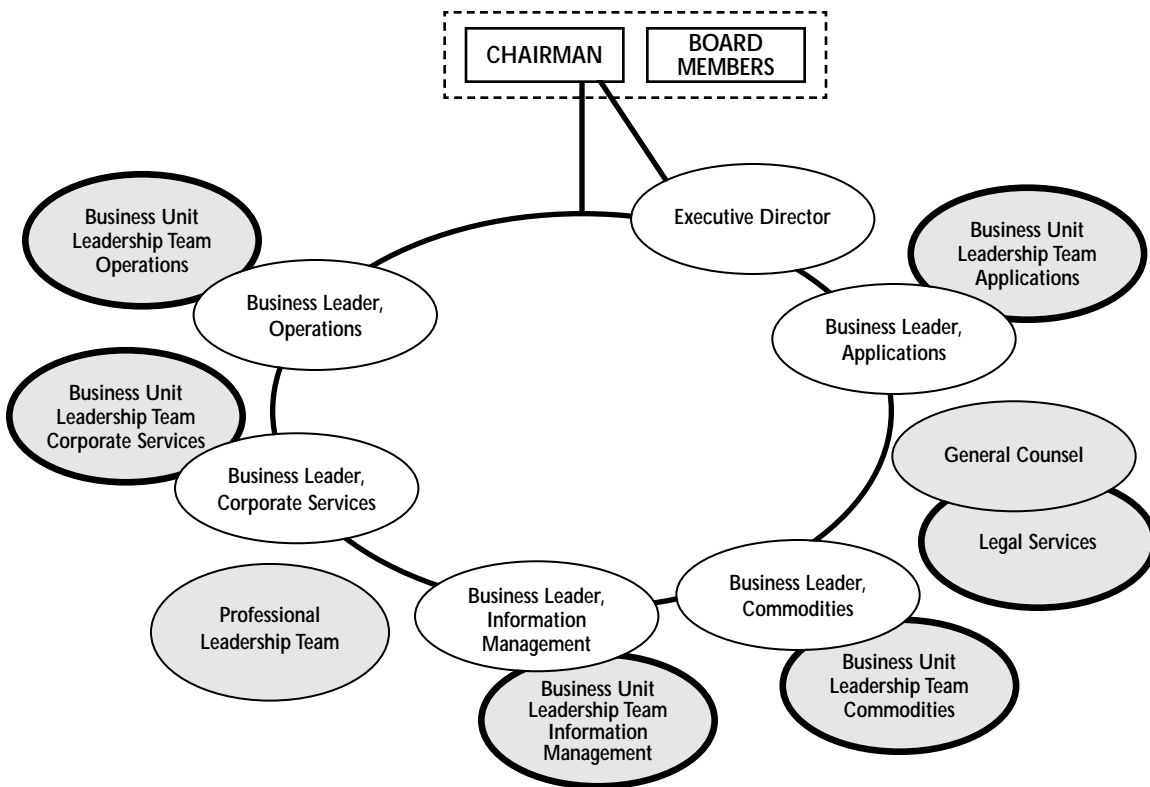
The National Energy Board uses the International System of Units. The energy units most commonly referred to in this report are the gigajoule and the petajoule. Combustion of a 30-litre gasoline tank expends approximately one gigajoule of energy. A petajoule is one million gigajoules. On average, Canada consumes about one petajoule of energy for all uses (heat, light and transportation) every 50 minutes.

The following conversion table is provided for the convenience of readers who may be more familiar with the Imperial System.

Approximate Conversion Factor

metre	=	3.28 feet
kilometre	=	0.62 mile
hectare	=	2.47 acres
cubic metre of oil	=	6.3 barrels
cubic metre of natural gas	=	35.3 cubic feet
gigajoule	=	0.95 thousand cubic feet of natural gas at 1000 Btu per cubic foot or 0.165 barrels of oil, or 0.28 megawatt hours of electricity
gigajoule	=	10^9 joules
petajoule	=	10^{15} joules
gigawatt hour	=	10^6 kilowatt hour
terawatt hour	=	10^9 kilowatt hour

NEB Organization



Senior Board Staff

Gaétan Caron	Executive Director	Sylvia Farrant	Business Leader, Corporate Services
Judith Hanebury	General Counsel	Michel Mantha	Secretary of the Board
Brenda Kenny	Business Leader, Applications	Glenn Booth	Professional Leader, Economics
Terrance Rochefort	Business Leader, Commodities	Bonnie Gray	Professional Leader, Environment
John McCarthy	Business Leader, Operations	Frank Gareau	Professional Leader, Engineering
Scott Richardson	Business Leader, Information Management		

Business Unit Responsibilities

Applications

The Applications Business Unit is responsible for the processing and assessment of regulatory applications submitted under the NEB Act. These fall primarily under Parts III, IV and VI of the Act, corresponding to facilities, tolls and export applications. The Applications Unit is also responsible for the financial surveillance and financial audits of NEB-regulated pipelines.

Commodities

The Commodities Business Unit is responsible for assisting the Board in fulfilling its mandate through energy industry and marketplace surveillance, and the updating of guidelines and regulations relating to energy exports as prescribed by Part VI of the NEB Act. It is also responsible for the disposition of applications for short-term exports of gas, oil and NGLs, imports of natural gas, and the disposition of applications concerning electrical exports and international power lines.

Operations

The Operations Business Unit is accountable for safety and environmental matters pertaining to facilities under the NEB Act, the COGO Act and the CPR Act. It conducts safety and environmental inspections, audits, and accident investigations; monitors emergency response procedures; regulates the development of hydrocarbon resources in non-accord Frontier Lands; and develops regulations and guidelines with respect to the same.

Information Management

The Information Management Business Unit is responsible for developing and implementing an information management strategy for the Board that enhances its ability to provide information required by external stakeholders.

Corporate Services

The Corporate Services Business Unit is responsible for providing those services necessary to assist the Board in its management of human, material and financial resources.

Board Members

1. Kenneth W. Vollman ^(a)	Chairman
2. Anita Côté-Verhaaf	Member
3. Judith Snider	Member
4. Rowland J. Harrison	Member
5. Diana Valiela	Member
6. John S. Bulger ^(b)	Member
7. Robert Fournier	Temporary Member
8. Cecil Mervin Ozirny	Temporary Member
9. Gaéтан Caron	Temporary Member
10. Guy Delisle ^(c)	Temporary Member
11. Paul Trudel ^(c)	Temporary Member

a) On 15 July, Kenneth Vollman was appointed Chairman.

b) On 8 October, John S. Bulger was appointed Member for a term of seven years.

c) On 15 July Guy Delisle and Paul Trudel were appointed temporary Board Members for a term of 60 days.

