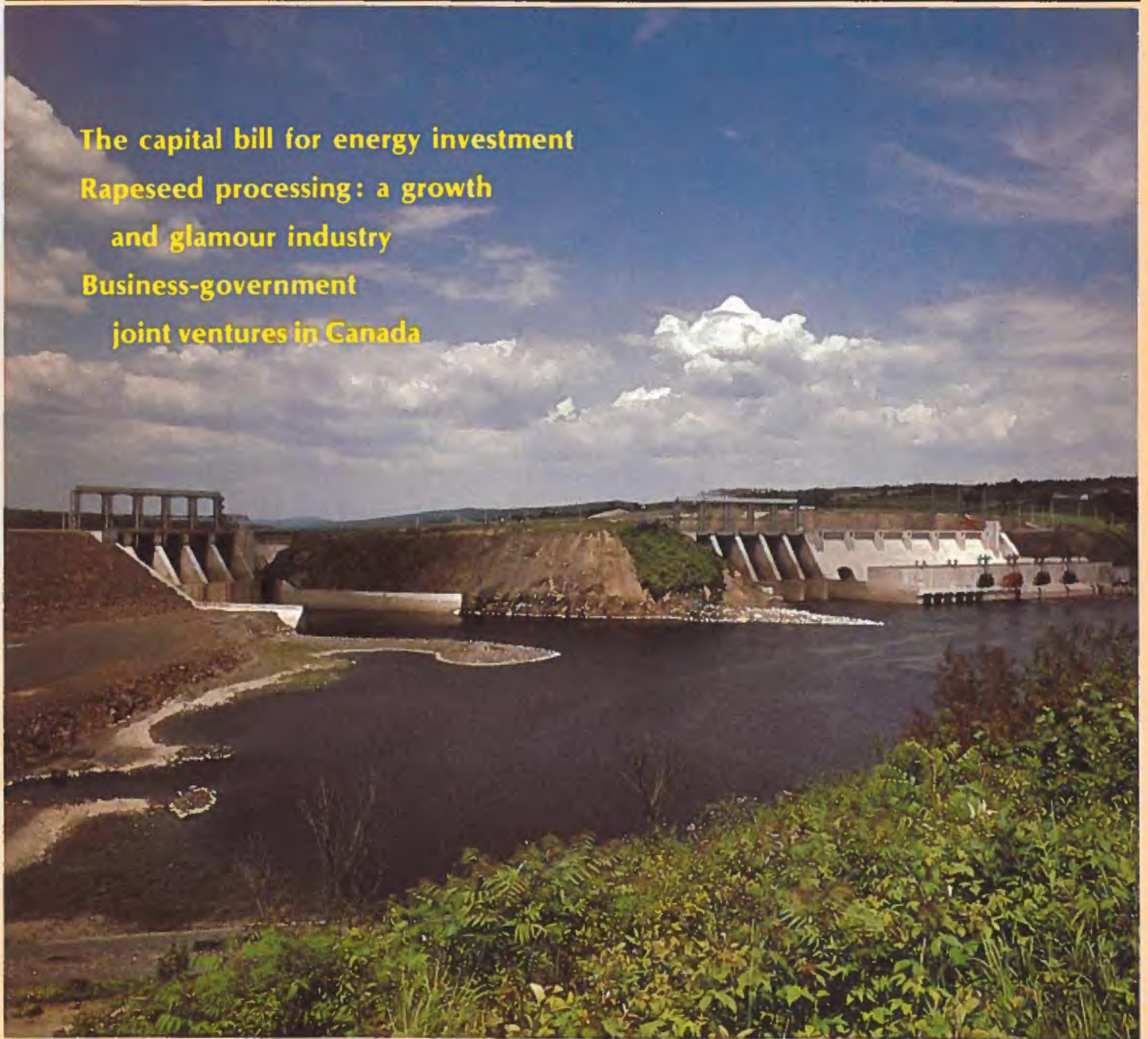


FOREIGN INVESTMENT REVIEW

A quarterly journal on
investment conditions in **CANADA**

Spring 1978 Vol. 1, No. 3

The capital bill for energy investment
Rapeseed processing: a growth
and glamour industry
Business-government
joint ventures in Canada



FOREIGN INVESTMENT REVIEW

Foreign Investment REVIEW

a quarterly journal on investment conditions in Canada

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View of Mactaquac Dam in New Brunswick

PHOTO: NFB Phototèque; photo by Ted Grant



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FOREIGN INVESTMENT REVIEW

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FOREIGN INVESTMENT

Canada welcomes foreign investment

Prime Minister Pierre Trudeau has made it "quite clear that foreign investment is welcome in Canada, that we need it, that we want it and that we hope it will come." In answer to questions on Canada's foreign investment policies following his address to some 2,000 leading businessmen and bankers at a meeting of the prestigious Economic Club of New York in March, Trudeau explained that Canada welcomed foreign investment with one proviso: "We hope it will be not only to the benefit of the foreign investors but also to the benefit of Canadians." The Prime Minister pointed out that many countries apply this concept through their policies, regulations, and behaviour. "The difference between us and most other countries is that we put the rules out there to be seen and known by all... The tests we put forward are so self-evident that it is difficult to see why anyone would quarrel with them," he added.

LEGISLATION

Revised Competition Bill

The Canadian government recently presented its revised Competition Bill to the House of Commons. If the proposed amendments are passed Canada will have a new competition-regulating mechanism that should improve industrial efficiency and open the way for structural reforms of the Canadian economy.

The proposed legislation is a clear departure from the policies which have been in effect since the beginning of the century. The Bill introduces new criteria concerned with the allocation and effective use of resources. The proposed amendments would eliminate from the existing law a number of constraints that many businessmen have described as stumbling blocks to structural reform.

The new legislation provides for a civil review process for some business practices, such as mergers, specialization agreements and monopolistic practices. The reviewing agency would be a Competition Board which, if the Bill becomes law, will have authority to issue prohibiting orders against certain types of anti-competitive business behaviour. The circumstances under which such orders could be issued are clearly spelled out in the legislation.

One of the chief differences between the new Bill and an earlier version

presented last year is that the Governor-in-Council would now be given the power to rescind a Competition Board's prohibiting order involving a merger, a specialization agreement, or monopolistic practices.

In the case of mergers the Board would be called on to review only if the combined share of the market of the merging companies exceeded 20%. A merger could be approved in advance, under certain conditions. Joint ventures could be considered as mergers when the joint venture was implemented through the incorporation of a new company.

In essence, the Board would have to issue a prohibiting order in any case where the proposed merger would cause, or might cause, a substantial reduction in competition. However, in cases where the proposed merger would bring about real cost savings or obvious gains in efficiency, the Board would not be empowered to stop it even if it involved a lessening of competition. An injunction might impose certain conditions, such as a reduction in customs duties, or the liquidation of some of the assets of the company.

Under existing legislation *specialization agreements* are prohibited under the criminal law. The new Bill proposes to make such agreements a matter for review by the Competition Board — a measure which should stimulate rationalization of many Canadian firms. At present the law stipulates that conspiracy to limit competition "unduly" is subject to criminal charges, even if the result would be of economic benefit to the country. The new Bill proposes that two or several firms might ask the Board to authorize an agreement made among themselves by which each might specialize their production. If the Board decided that the agreement was economically justified, it could exempt the firms involved from charges they might otherwise have to face.

The revised Bill maintains the criminal sanctions against *monopolies* if they operate against the public interest, and authorizes the issuing of injunctions against certain business practices if they do not increase efficiency and productivity. The Board would have the power to order the dissolution of the company or the liquidation of some of its assets.

LABOUR RELATIONS

Labour negotiations in 1978: the outlook

The gradual removal of wage and price controls scheduled to begin in April 1978

will not set off a flurry of high wage demands by Canadian unions, according to most Canadian economists and most labour and government spokesmen.

With the rate of unemployment above 8% and extensive layoffs in some areas of business, both union and management negotiators, it is expected, will make every effort to keep 1978 wage demands moderate. On the whole it appears that increases will range from 7% to 8%, much the same as in 1977. Labour Canada reports that the average increase in wages last year moderated by about 0.5% each quarter, reaching a low of about 7% by the end of the year. These figures are based on an analysis of collective agreements affecting 500 or more workers.

Over and above this distinct moderation in wage demands by Canadian unions, Labour Canada reports a sharp drop in the amount of time lost through strikes in 1977. In the period between 1972 and 1976 the time lost broke new records each year: in 1976 work stoppages caused a loss of 11.6 million man days. Last year the statistics were more encouraging, with time lost down to just over 3 million work days for the first 10 months.

1978 will be a busy year for negotiators, since 440 major agreements affecting nearly 900,000 employees — about the same number as last year — will come up for renewal. Some 300,000 union members, at present subject to wage controls, will re-negotiate their contracts.

The sectors that will be most involved in negotiations are transportation, communications, and the public service. The pulp and paper industry and mining also face a busy year, but in these areas it seems likely that bargaining will be more concerned with job security than with wage considerations.

By far the most important labour contracts to be settled this year are those involving public servants and such government employees as hospital workers, teachers, etc. In the government sector alone about 215,000 federal and provincial public servants and about 160,000 public sector employees are affected. The provincial governments of Alberta, Manitoba, Ontario, and Quebec all have to go to the bargaining table with their employees, and the federal government will renegotiate the contracts of some 23,000 workers.

Several governments have already announced their forthcoming wage policies. Recently the finance ministers committed themselves to an anti-inflation wage policy for the public sector. The ministers are

taking the principle of "comparison with the private sector" as a standard basis for public service salaries.

A study published recently by the Economic Council of Canada confirms the influence of market conditions on the determination of wages paid in the private sector. Based on major collective agreements reached between 1967 and 1975, the study points out that "wages in the private sector of the economy have evolved in strict accordance with present market forces and with the desire of workers to protect their real income as much as possible." The study goes on to claim that wages in the private sector have not increased the rate of inflation in the country.

The authors conclude, however, that public sector wages, clearly more sensitive to inflation, have in fact increased the rate of inflation. Without going into details about what they feel would be an appropriate wage policy, they emphasize that "wage settlements in the private sector will be more easily reached if they are not regularly subjected to pressures of comparison with overly generous settlements made in an important public sector."

ENERGY

New oil discoveries in Alberta

The most important oil discoveries in Western Canada in more than 10 years — in the West Pembina area of Alberta — have recently been confirmed by Chevron Standard Ltd. of Calgary and Placer Development Ltd. of Vancouver.

Chevron Standard disclosed that one of its six discovery wells (the Nairb A-11) has, in testing, demonstrated a production capacity of at least 3,180 barrels a day of high-quality crude. The six discovery wells represent six separate fields.

Meanwhile, one of the discovery wells reported by Placer Development has been tested at 2,878 barrels a day.

All together, about two dozen oil and natural gas discoveries have been reported or rumoured in connection with this region during the past year — and increasingly indicate a major new source of petroleum in Western Canada.

ECONOMY

Consumer confidence rises

According to a survey conducted in December on behalf of the Conference Board in Canada, consumer confidence in Canada improved considerably in the fourth quarter of 1977. The seasonally adjusted index of consumer attitudes rose from 83.5 in the September survey to 93.2 — the highest level since mid-1974. This brings an end to the downtrend in confidence that occurred during the previous four quarters.

The Conference Board reports that this increase coincides with the turnaround in the Canadian economy in general, as well as in consumer spending in particular, in the second half of 1977.

The Conference Board also reports that the increase in the confidence index in the fourth quarter was accompanied by stronger consumer buying intentions than earlier in the year. Although consumers remain cautious, the Conference Board suggests that there is an increased willingness to undertake a major outlay.

The results of the survey confirm the Conference Board's forecasts concerning consumer spending. The Conference Board predicts that consumer spending will support modest recovery in 1978, aided by the \$700 million tax cut in the first quarter and a steadily declining saving rate throughout 1978.

New security issues

Although new Canadian bond issues were, on the whole, down somewhat in 1977 from the record level of 1976, issues sold in Canada rose while those sold in other countries fell. The change of pattern resulted mainly from a decline in Canadian interest rates which, coupled with an increase in U.S. and other interest rates,

greatly narrowed the spread between Canadian and foreign rates.

According to estimates recently published by the Bank of Canada, new bond issues by Canadian provinces, municipalities, and corporations declined to \$14.2 billion in 1977 from \$16 billion in 1976. Canadian-dollar issues sold in Canada rose to \$8.7 billion from \$7.3 billion, while U.S.-dollar issues sold in the United States dropped sharply to \$2 billion from \$5.4 billion.

Canadian bond issues sold outside North America were down moderately in 1977, at \$2.6 billion compared with \$3.3 billion the previous year. However, while those bonds issued in Canadian and American Euro-dollars were down sharply to \$1.5 billion from \$2.9 billion, those issued in some of the "harder" foreign currencies were actually up noticeably to over \$1 billion from \$404 million. The depreciation of the U.S. dollar, the greater depreciation of the Canadian dollar, and the uncertainties related to these developments enhanced the attractiveness of Canadian issues drawn up in Swiss francs, German marks, and Japanese yen.

An interesting feature in the issuing of new securities by Canadian corporations is that the issuing of preferred stock rose sharply in 1977. Some analysts estimate that new issues of preferred shares jumped to about \$2.4 billion in 1977 from less than \$900 million in 1976. An advantage to corporations in issuing preferred shares rather than bonds was that it enabled them to achieve lower debt-equity ratios than if they had issued bonds.

To explain the overall decline in new Canadian bond issues, then, one might point to the shift in corporate security issuing towards preferred shares, the restraints on the spending of provincial governments, and the fact that the latter did some borrowing in 1976 which anticipated their needs in 1977.

CORRECTION

Ontario's land transfer tax

The previous (Winter) issue of *Foreign Investment REVIEW* reported incorrectly on page 4 regarding an amendment to the province of Ontario's Land Transfer Tax Act 1974.

A correct report on the amendment is as follows:

The amendment permits non-resident persons to acquire, exempt from the 20% rate of tax, land that is defined as "unrestricted".

Unrestricted land will include all land zoned for commercial or industrial use and all land having a residential assessment under The Assessment Act or that is in use for commercial, industrial or residential purposes.

Unrestricted land will not include land that is assessed or used as farm land, recreational land or woodlands.

Features

The capital bill for energy development

by David W. Scrim

Since it is widely known that huge amounts of capital will be needed for future energy development in Canada, there has been some concern over whether the required funds can be successfully raised and allocated through the capital markets without imposing strains and distortions on other economic sectors in Canada. This paper examines the historical pattern of energy financing, summarizes the expenditure outlook for the 15-year period 1976-90, and offers a view on the concern about the economy's capacity to handle future energy and energy-related investments.

The energy supply picture in Canada has worsened dramatically in the last few years. Although the West Pembina discovery appears to be a major oil deposit, the oil reserve base in western Canada has been steadily declining during the past ten years. Also, frontier exploration, particularly for oil, has not been very encouraging. Meanwhile, costs for non-conventional energy development have escalated rapidly.

These deteriorating energy supply prospects in the face of continued growth of energy demand prompted the federal government, in 1975, to adopt a policy objective of energy self-reliance. In relation to that objective, this paper examines a plausible energy supply scenario and discusses the financial requirements and implications for each of the major energy sectors and for the Canadian economy. Some consideration is given to the roles that foreign capital might play.

A much more detailed study of these subjects, entitled *Financing Energy Self-Reliance*, has been published this year by the federal Department of Energy, Mines and Resources.

Energy strategy — a brief review

The federal government's 1975 policy paper *An Energy Strategy for Canada*, which established the policy objective of self-reliance — that is, of supplying Canadian energy requirements from domestic resources to the greatest possible extent — recognized that two factors would be particularly critical to the achievement of this objective: a speed-up of exploration and development and a rise in prices of domestic oil and natural gas towards international levels.

The price increase is crucial, for if the real domestic as well as the international price of oil continues to rise, the oil sands, the heavy oils, and the improvements in conventional recovery techniques

could offer a clear route to reduced dependence on foreign oil. Conservation methods and inter-fuel substitution could also help, of course, to ease the problems of future oil and natural gas supplies.

Table 1 shows the energy supply scenario that is the basis of the capital requirements outlined in the following discussion. The total energy capital bill of \$181 billion (all dollar figures in this article are constant 1975 dollars unless otherwise stated) is similar to the forecast provided in the "strategy" document. However, it deviates in several important aspects: the estimated expenditure for frontier development is much more conservative, with only one gas pipeline forecast for the period; non-conventional oil supplies are significantly increased; and demand for electricity is estimated to grow at 7% rather than 5% a year.

Petroleum (oil and natural gas) investment

During the 30-year period 1947-76, which is generally spoken of as the development period for the petroleum producing industry, about \$20 billion was spent on exploration and development in Canada. During the same period the industry generated net cash flow (after operating costs and royalties) of some \$25 billion. It is only in recent years — in about the past 10 years — that these surpluses have emerged, as shown in Chart 1.

Exploration for, and development of, crude oil and natural gas in Canada was characterized by initial equity contributions from predominantly foreign-owned petroleum companies. Additions to reserves were then financed internally through revenues generated by existing production. Chart 2 summarizes the sources and uses of funds of the petroleum industry during the 15-year period 1960-75. The refining and marketing sectors are excluded because analysis does not suggest any significant funding problems.

After the Western basin was opened for development, smaller entrants into the industry were financed through new share issues. The subsequent discoveries of these companies were often either sold off or developed jointly with major firms. These were necessary recourses for small firms because they usually found it difficult to obtain debt financing for resource investments. In any event, small firms tended to be more attracted to the higher-risk exploration ventures, where successes brought very large payoffs. Development of proven reserves was the more attractive to the large, integrated

companies, who were concerned with assured supplies. Over time, ownership of reserves was concentrated in the hands of a relatively small number of large firms. The smaller firms, however, performed an important and innovative role in providing the technical expertise.

At the end of 1975, total assets of the petroleum industry were approximately \$20 billion. Debt outstanding was \$2.5 billion, and common and preferred share subscriptions amounted to \$3.5 billion.

The pattern for future petroleum development is changing dramatically. Major resource undertakings will give rise to an unprecedented demand for funds. Heavy oil projects, tar sands, and frontier ventures will challenge the financial resources of even the most powerful multinationals. Total capital requirements for conventional and non-conventional petroleum developments during the period 1976-90 are estimated at about \$40 billion in constant 1975 dollars (see Table 1). The outlay for oil sand and heavy oil development alone could total almost \$15 billion during this period.

The potential reserves of gas and oil in Canada's north and in the Atlantic offshore, plus the billions of barrels of proven oil-sand reserves, offer a potential solution to Canada's supply problems. In many cases, technological changes, favourable prices, fiscal incentives, and new financing techniques may be necessary to make the investment commercially attractive to private investors. The federal and provincial governments seem distinctly willing to co-operate with industry to promote an

Table 1

Canadian Energy Supply Projections 1976-1990

Year	Oil		Natural gas		Coal (millions of tons per year)	Electricity (capacity in megawatts)
	Conventional (..... thousands of barrels daily.....)	Oil sands & heavy oil	Conventional (millions of cubic feet daily)	Frontier (millions of cubic feet daily)		
1975	1,737	43	6,900	—	27.7	59,540
1980	1,472	258	8,150	—	44.9	79,100
1985	1,136	432	8,565	1,350	80.5	111,100
1990	736	1,012	6,475	3,750	118.1	151,800

Capital requirements (millions of 1975 dollars)

Year	Conventional oil & gas exploration & development	Oil sands & heavy oils	Refining	Pipelines	Coal, Uranium	Electricity	TOTAL
1976-80	8,320	2,345	1,430	4,955	780	24,400	42,230
1981-85	8,700	6,775	1,035	14,545	1,485	36,190	68,730
1986-90	6,260	5,650	1,340	6,265	990	49,410	69,915
TOTAL	23,280	14,770	3,805	25,765	3,255	110,000	180,875

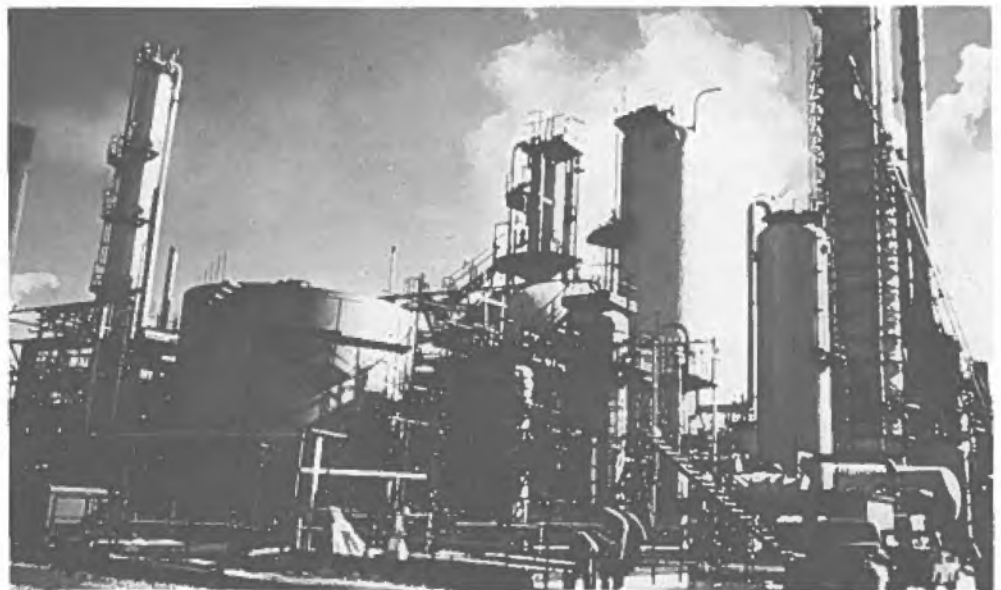
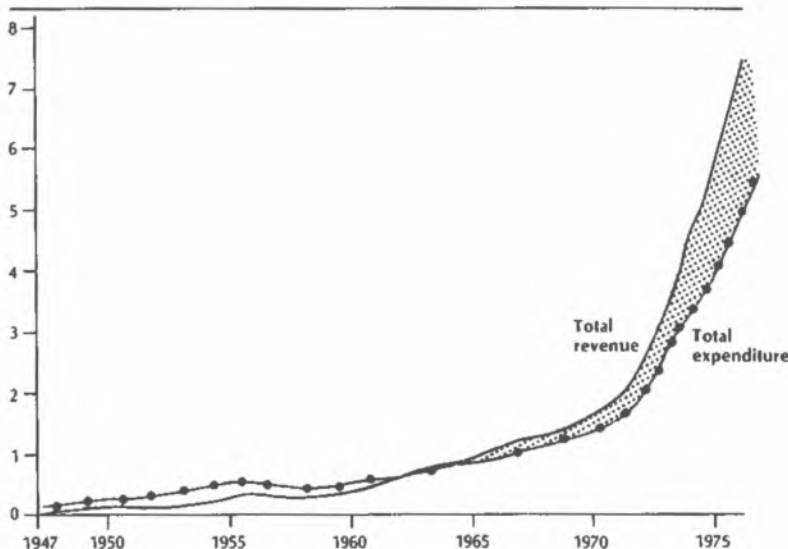


Photo: Imperial Oil Ltd.

CHART 1

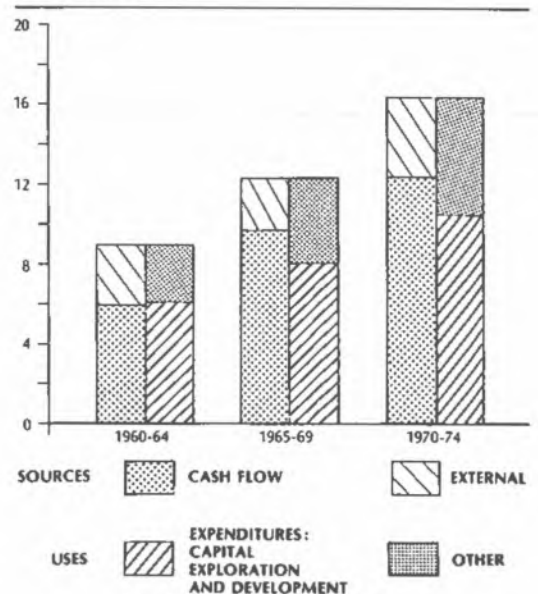
TOTAL REVENUE AND EXPENDITURE PETROLEUM PRODUCING INDUSTRY* 1947-1976
(billions of current dollars)



* Excludes refining and marketing.

CHART 2

SOURCES AND USES OF FUNDS PETROLEUM PRODUCING INDUSTRY* 1960-1974
(billions of 1975 dollars)



* Excludes refining and marketing.

atmosphere favourable to the development of these resources.

Projects such as the over-\$2 billion Syncrude oil sands mining plant require unique relationships between government and industry in a common effort to resolve the technical and economic problems of non-conventional petroleum development. Syncrude may well be a prototype of diverse future developments where governments and industry become partners, either directly or indirectly, in the financing of major resource ventures.

As this pattern of development continues to emerge and as the size and complexity of the projects increase, the capital markets will be required to respond with innovative financing techniques. The associated risks of such projects are a concern to financial intermediaries, who are generally more familiar with substantial asset-backing for the projects in which they place funds. It will probably be necessary to accommodate the criteria of such investors by reducing the risk exposure — through diversification and more rigid debt-support mechanisms — and by increasing the investment attractiveness.

Traditionally in Canada, large multinationals have combined with aggressive smaller risk-takers to form the core and provide the impetus for the petroleum industry in Canada. While this led to a high degree of foreign ownership in the industry, there is no doubt that Canada benefitted greatly from the development of these resources. Ownership of resources remains an important concern of governments in Canada, but recognition of the need for additional productive capacity in the future dictates a balanced approach designed both to attract foreign capital and to ensure a significant degree of domestic participation.

Although the petroleum industry in Canada has sufficient cash flows to finance expected investment requirements, these cash flows will not always or automatically be invested in ways that governments in Canada might wish. It is for this reason that the government has introduced the Petroleum Corporations Monitoring Bill. This legislation will allow the Department of Energy, Mines and Resources to obtain relevant financial and other statistics from any significant company active in the petroleum industry. It must be emphasized that the development of Canada's future resource base involves very high risks — geological, technical, and economic risks. The capacity to mobilize the necessary finances may well require a good deal of capital from abroad to complement the funds generated within the country.

Pipeline financing

In the past, the pipeline industry has relied heavily on bond financing. Only half the total funds needed by the industry were generated internally. Capital expenditure during the 15-year period 1960-74 was about \$8 billion, an amount which in the future would be the cost of only a single northern pipeline. The total bill for pipeline financing will depend on the amount of frontier exploration, the rate of discovery, and the development pattern under the given market conditions. The total bill could range from \$17 billion to \$28 billion. Although the current forecast assumes only one pipeline, it should be noted that the Polar Gas consortium has now applied to the National Energy Board for approval of a pipeline from the Arctic. The analysis herein assumes that regardless of which pipelines are built, only one frontier line will be constructed during the 1976-90 period.

Future financing of southern pipeline projects is expected to be done by traditional methods. Demand levels are predictable with relative certainty, supplies are proven, and so is the technology. Thus, highly leveraged investments — high debt-to-equity ratios — can be undertaken, with internal funds providing the required equity.

Frontier pipelines will undoubtedly be more difficult to finance, because of the unprecedented risks they face. First is the risk that they will have to be built before sufficient reserves are found. Secondly,

there are technological problems such as those associated with the crossing of ice-laden deep water channels between the Arctic islands. Thirdly, there is the risk of cost overrun due to inflation and project design deficiencies. Finally, there is the risk that market demand for the high-price natural gas might be undermined by future low-cost supplies. These considerations have led the proponents of frontier pipelines to suggest an "all events" system of transmission rates — which would transfer virtually all the aforementioned risks to the producers by requiring the latter to agree to pay a tariff on minimum contract delivery volumes even if they are unable to deliver these volumes. The pipeline proponents have further suggested that government assistance might be required to attract sufficient capital.

"Project financing" is likely to be the means utilized to raise the debt capital, with principal and interest payments to be met out of project revenues. Revenues would be guaranteed by an "all events" system of transmission rates as described above. It is likely that project financing of the multi-billion dollar northern pipelines will have to be handled by a consortium of both Canadian and foreign lending institutions which would syndicate the loans to domestic and international lenders. The magnitude of the debt financing required, and the limited number of institutions in Canada that would be willing and able to commit sizable funds to such an investment, will make essential a reliance on foreign financing.



Photo: Energy, Mines and Resources

Electrical utility financing

The Canadian electrical utility industry is composed of a few major provincially owned crown corporations and a larger number of smaller private utilities. Historically, the utilities benefitted from rapid growth in demand which facilitated economies of scale and permitted real costs of electricity to fall. Financing problems were minor because the availability of provincial guarantees made utility bond issues virtually risk-free investments. Bond issues were by far the most important source of funds, since the prevalence of public ownership made equity issues almost entirely unnecessary.

Utilities have, over the past 15 years, on the average operated with about 70% external financing, a substantial portion of which was raised in the U.S. capital market. If this debt-to-equity relationship is maintained, approximately \$77 billion of the total \$110 billion required for the period 1976-90 will have to be sourced externally. Operating losses and other uses of funds could increase this external requirement to \$96 billion, depending on electricity pricing policies. Recent trends in utility performance indicate that an escalation in the debt portion may be required because the pricing policies for utility output will not provide sufficient internally generated funds to cover a 30% equity level. There may well even be a shift in utility financing towards project-oriented capital funding, with either provincial, federal, or some combination of the two levels of government providing a contingency method of meeting debt-service requirements.

Energy mining financing

Although not large by comparison with capital requirements for other energy industries, requirements for coal and uranium development are projected at approximately \$3.2 billion over the next 15 years.

Uranium demand will be tied to the growth of nuclear energy, which appears to be one of the cheapest and most reliable kinds of energy. It is to be expected that the sources of financing for these investments will be a combination of government corporations and domestic and foreign equity contributors.

Coal development has been in a depressed state for the past decade, but interest in thermal coal as an alternative fuel for electrical generation is becoming quite buoyant. Canada has vast resources of thermal and metallurgical coal but, within the industry, there is a definite shortage of available capital. Initial new developments, particularly in the West, will require new front-end equity investment and additional access to capital markets. Development of coal resources may provide extensive investment opportunities.

Table 2

Energy Sector Total External Financing Requirement (millions of 1975 dollars)

	1976-80	1981-85	1986-90	TOTAL
Petroleum	2,510	4,765	625	7,900
Pipelines	2,030	12,290	640	14,960
Electricity	17,300	30,000	48,700	96,000
TOTAL	21,840	47,055	49,965	118,860

Table 3

Energy Sector Domestic External Financing Requirements (millions of 1975 dollars)

	1976-80	1981-85	1986-90	TOTAL
Petroleum	1,080	2,050	270	3,400
Pipeline	1,605	9,710	505	11,820
Electricity	9,860	17,100	27,760	54,720
TOTAL	12,545	28,860	28,535	69,940

Table 4

Energy Sector Foreign External Financing Requirements (millions of 1975 dollars)

	1976-80	1981-85	1986-90	TOTAL
Petroleum	1,430	2,715	355	4,500
Pipeline	425	2,580	135	3,140
Electricity	7,440	12,900	20,940	41,280
TOTAL	9,295	18,195	21,430	48,920

Economic framework

Several studies by private research groups have been published recently, and they all concur with the conclusion that the Canadian economy can absorb the \$181 billion of energy investment without unmanageable strains on the economy. Energy sector investment as a share of Canada's gross national product (GNP) is expected to increase from a pre-1970 percentage of 3-4% to slightly more than 6% in the mid-1980s, then settle back to approximately 5% after the pipeline and non-conventional energy development expenditures peak out.

Table 2 illustrates the level of external financing that will be required in the energy sector. Tables 3 and 4 outline the amounts of borrowing which would be required domestically and abroad if historical domestic-foreign relationships are maintained.

With respect to foreign borrowing, it is difficult to predict the exact reception that future Canadian attempts to borrow on foreign markets will meet. It will depend on, among other things, the growth of Canada's indebtedness relative to its GNP, and the growth of demand for foreign funds relative to the trends in total demand/supply in foreign capital markets. It is expected that the demand on foreign capital markets from all countries will be high, but so will be the supply, especially because of funds available from the oil producing states ("petro-dollars").

The share of domestic energy borrowings to total forecast domestic capital market borrowings would rise from 7.9% in 1971-75 to 16.1% in 1981-85.

The economic studies undertaken have assumed moderate but steady growth of real GNP in Canada and substantial improvements in unemployment and inflation throughout the 1980s. This real growth plus declining capital requirements for residential mortgage borrowing and federal government borrowing is expected to be sufficient to accommodate the increase in the ratio of energy sector capital requirements.

Conclusion

This paper is a rather condensed summary of a most complex subject. It tries to highlight the magnitude of the capital requirements for Canada's future energy developments. Consistent with other analyses based on econometric studies, it concludes that the Canadian economy can handle the \$181 billion of energy capital expenditures. Financial innovation may be required to successfully raise and allocate the capital. Co-ordination among industry and governments will be necessary. The very large financing needs combined with the risk-venture nature of many of the undertakings will require a mix of financing methods that will draw heavily on capital markets both in Canada and abroad.

Rapeseed processing: a growth and glamour industry

by Peter Perkins

Any industry that involves "further processing" in Canada of natural resource products is bound to attract the interest and support of Canadian governments, both federal and provincial. When the particular industry happens to be new, innovative, and open to wide possibilities in the future, it is bound also to attract the interest of investors.

The industry in question, the processing of farm crops to extract new oil fit for human consumption and protein for animal food, is in its infancy, but the potential for growth in an increasingly protein-hungry world is obvious. What it takes is creative scientific research — in which Canada is in the forefront — and the close co-operation of governments and investors.

An example of the growth possibilities in this new area is the burgeoning rapeseed oil industry. Research and co-operation have turned an "unattractive machine oil" into an edible product with a resultant increase in processing capacity from 1,550 tons per day in 1973 to 3,450 tons per day in 1976. By 1980, if construction proceeds on two plants presently in the planning stages, total processing capacity may reach 4,650 tons per day. This would represent a 200% increase in processing capacity in just seven years.

Rapeseed is currently the third most important crop in Western Canada, ranking behind only wheat and barley. In the last five years, annual production has averaged 57 million bushels, with each yearly crop having an average value of \$325 million.

Research has produced a valuable edible product

Rapeseed is grown for the edible oil and high protein meal it yields when crushed, processed and refined in a vegetable oilseed crushing facility. The oil

is generally used for salad or cooking oils, shortenings or margarines. In Canada in 1976, 714 million pounds of vegetable oils were used in the manufacture of these products, with rapeseed accounting for 220 million pounds — roughly one-third of the total.

Rapeseed oil is most popular for oilseed products that have to be hardened or hydrogenated — namely shortening and margarines — because these products are generally blended from different oils, and rapeseed oil is easily blended. It is also a very popular table oil, used for cooking or salads. At present, about half of all the table oil produced in Canada, 40% of margarine, and 20% of shortening, is made with rapeseed oil.

When crushed, rapeseed produces approximately 41% oil and 57% meal of about 36% protein. So, as well as trying to increase the utilization of oil, the industry has developed numerous scientific research programs to improve the quality and increase the uses of the meal as an animal feedstuff. Indeed, the recent expansion in processing capacity could not have taken place without the important advances made by plant breeding research in recent years.

A unique form of international co-operation financed expansion

The present industrial base of the rapeseed processing industry in Western Canada is a unique form of international co-operation.

Grain companies in Western Canada found a need to service their farmer clientele with new marketing opportunities. Rapeseed proved to be a natural, and expansion followed as new markets were found. Foreign companies, many of them traditional importers of oilseeds and oilseed products, found it to their advantage to form joint ventures with these domestic firms in establishing the



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industrial base necessary to encourage more farm production, and have participated directly in the financing of new processing plants.

At present there are six rapeseed crushing and processing plants, all located in Western Canada, with a combined capacity to crush about 39 million bushels annually. Three of these facilities are in Alberta, two are in Saskatchewan and one is in Manitoba.

The two newest of the processing plants have a number of common features. Both began operations in Alberta in 1976, and both have a crushing capacity of 600 tons per day. In addition, both are Canadian-controlled joint ventures.

One of them, at Lloydminster, Alberta, was constructed by United Oilseeds Ltd., a joint venture involving four partners. United Grain Growers, a farmer-owned co-operative grain company based in Winnipeg, Manitoba, holds a 33⅓% interest, as does B.C. Packers Ltd., a leading Canadian food processor. The other two participants are Japanese-controlled companies — Mitsubishi Canada Limited (23⅓% interest) and Nisshin Oil Mills (10%).

The second plant is a joint venture involving the Northern Alberta Rapeseed Processors Co-op (60% interest) and Euro Cana Trade Ltd. (40%), a company located in Hamburg.

Alberta Food Products has recently announced plans to construct a processing plant at Fort Saskatchewan, Alberta. Once again this will be a joint venture between a growers association — in this case the Alberta Wheat Pool — and a foreign investor. The foreign company, Japan Alberta Oil Mills Limited, will hold a 40% interest in the project.

In each of these three projects, a Canadian growers association has, through direct financial participation in the

processing plant, obtained a relatively assured market for the rapeseed produced by its members. For their part, the foreign participants have obtained a relatively assured source of supply of rapeseed products.

In addition to these joint ventures, both the Canadian government and various provincial governments have played active roles in providing financial assistance for the construction of rapeseed processing plants. The federal government's Department of Regional Economic Expansion (DREE) has provided roughly 15% of the total cost of each of the three processing plants operated by CSP Foods Ltd., at Altona, Manitoba, and at Saskatoon and Nipawin in Saskatchewan. For its part, the government of Saskatchewan, through the Saskatchewan Economic Development Corporation, played a major role in the mortgage financing for the processing plant built at Nipawin, Saskatchewan, in 1963.

The government of Alberta, acting through the Alberta Agricultural Development Corporation, provided a guarantee for \$6 million of term financing for the processing plant built by the Northern Alberta Rapeseed Processors Co-op at Sexsmith, Alberta. In addition, the Alberta Department of Consumer and Corporate Affairs (under the Co-operative Marketing Associations Guarantee Act) provided a \$5.1 million guarantee to the Northern Alberta Rapeseed Processors Co-op and its members to facilitate the raising of \$6 million of long term capital for investment in the processing plant at Sexsmith, Alberta.

In combination then, the participation of growers associations, foreign investors and various levels of government has helped to serve the separate goal of each group. The growers associations have obtained markets for the rapeseed grown by their members; the foreign companies have obtained a relatively

assured source of supply of rapeseed products, and the various governments have been able to assist the development of an industrial base in Western Canada.

Research was the key to expansion

To a very large degree, the development of substantial processing facilities has followed the very active research program which, as noted earlier, has concentrated on improving the quality and usability of both the oil and meal products.

Initially, rapeseed was grown in Canada as a war-time emergency measure. The crop was needed for its oil which was used to lubricate the engines of warships and merchant vessels.

After the war and the winding down of the Marshall Plan aid to Europe, the industrial need for rapeseed oil disappeared. In the early 1950s, production of rapeseed declined to a negligible level, but interest in the crop revived and in 1955 a record seeding of 138,000 acres produced a crop of 1.6 million bushels.

The problems facing this young industry after World War II have been vividly described by Dr. Barton Craig, the Director of the National Research Council's Prairie Regional Laboratory. Dr. Craig put it this way: "How do you take a green, unattractive machine lubricant and turn it into an oil fit for human consumption? That's the problem we were faced with. Even the protein meal, the part left after the oil is pressed from the seed, was not particularly good for feeding livestock."

Many of the problems with rapeseed involved the presence of undesirable substances in the seed. In the mid-1950s health authorities issued "cease and desist" orders on the grounds that human products derived from rapeseed were unfit for human consumption. But in 1958, after further research and testing, rapeseed oil was deemed fit for human consumption and products such as shortening, margarine, cooking and salad oil, and salad dressing containing rapeseed oil, began appearing.

In recent years, the research efforts have, for the most part, concentrated on developing varieties of rapeseed which contain low levels of erucic acid and glucosinolates — sulphur-containing sugars peculiar to the plant family in which rapeseed is included. (It is these substances which give the "hot" flavours to such foods as horseradish and mustard.)

In the early 1970s new problems arose that appeared likely to restrict the further development of the rapeseed industry in Canada. Suspicion developed



Photo: National Research Council

that the erucic acid content of rapeseed oil was nutritionally harmful to humans.

Early research had indicated that the level of erucic acid varied considerably depending on the variety of rapeseed, that there was a genetic basis for this variation, and that it would be possible to develop varieties very low in erucic acid. With this background knowledge the researchers were able, when the potential health problems arose in the 1970s, to respond quickly to the problem.

Plant breeding experiments were successful in breeding out erucic acid. The rapeseed now produced in Canada yields an oil low in erucic acid and significantly below the 5% level now set as the standard for low erucic acid rapeseed — "LEAR" varieties.

A second major research effort has dealt with the problems associated with the glucosinolates occurring in rapeseed. These substances were, at one time, implicated in growth disorders occurring in animals fed rapeseed meal. Initial research indicated that it was not the glucosinolates which were harmful but the by-products of the glucosinolates which were produced by the activity of enzymes during the crushing process. This problem was solved by adopting a crushing procedure in which the temperature was rapidly raised during the crushing operations. This procedure deactivated the enzymes and left the glucosinolates intact.

In recent years, the level of glucosinolates has been substantially reduced through plant breeding. The "double-zero" (low erucic acid and low glucosinolates) variety of rapeseed was introduced in Canada in 1974 and is now the most commonly grown variety.

Just as various government organizations have contributed directly to the construction of many of the rapeseed processing plants, there has also been, and continues to be, significant government support for research involving rapeseed and other oilseed crops.

The Canadian government supports research in this area through two specific programs. Under the Rapeseed Utilization Assistance Program (RUAP), grants are available for research on rapeseed and its by-products which will aid in developing new markets or investigating other concerns of the industry. Grants are made by the Grains Marketing Office of the Department of Industry, Trade and Commerce and are administered by the Rapeseed Association of Canada.

The federal government also provides the major part of the capital funds for the P.O.S. (Protein, Oil and Starch) Pilot Plant Corporation, with the balance of the capital and operating funds being

provided by provincial governments, corporations, universities and trade associations. The Corporation provides funding for pilot scale facilities engaged in the development of processing technology for cereal grains and oilseeds.

The future lies in energetic selling at home and abroad

With the rapeseed industry now firmly established in Canada, its future depends on its ability to develop more markets through research, and to continue to offer the opportunity for profit at both the farm and processing level.

An analysis of trends in Canada indicates that by 1980 there should be sufficient demand for rapeseed oil to absorb about 425 million pounds annually. That would require the crushing and processing of about 21 million bushels annually.

Clearly rapeseed oil will need to be exported into foreign markets if the existing plants are to be able to dispose of their production. And this is indeed the direction in which the industry is moving.

International oil markets are very competitive, with numerous products from various countries competing for a share of the potential markets. Nonetheless, with strong promotion and a good product, Canadian rapeseed crushers have been able to move an increasing proportion of their oil output into foreign markets. In 1976 approximately 30% of the rapeseed oil produced in Canada was sold overseas. Much of this export performance was accounted for by food aid assistance, but increasing amounts are being marketed to Pacific rim countries and the Middle East. In the future these markets are expected to expand, and Canadian rapeseed oil is projected to capture an increased share of the business.

The meal side of this industry is generally more encouraging for future expansion without the necessity for rapid export market development. The Canadian domestic animal feed market can absorb a significant increase in rapeseed meal production.

In 1976 a little over one million tons of high protein feedstuffs were used by Canada's livestock feeding industries. On a protein equivalent basis however, rapeseed meal supplied less than one-fifth of the market's needs: the rest came mainly from imported soybean meal or the meal derived from Canadian and imported soybeans in eastern Canada.

Export potential is limited at present, although about a quarter of last year's output was marketed overseas.

As the new and better quality characteristics become more readily available in commercial rapeseed meal, it is expected

to expand its share of the domestic market, and there is every likelihood that new markets will be found overseas.

New uses will have to be found

Additional potential for market expansion of the output from rapeseed crushing exists in non-traditional uses. Rapeseed oil, like most other vegetable oils, can have industrial uses — although for Canada's rapeseed industry this is not so relevant since the low erucic acid varieties were developed specifically for the edible foods industry. On a limited scale however, high erucic acid varieties are still being produced to service a small developmental industry that is trying to expand the application of rapeseed oil in the production of plastics, lubricants, lacquers and detergents.

For rapeseed meal the converse is the case. Any vegetable meal extraction with a high protein content has the potential for use as a highly nutritious substitute in human food diets and research is being pursued at present to develop products suitable for human nutrition from rapeseed meal. The protein is isolated and respun into fibres and fashioned to resemble whatever kind of meal it is intended to resemble, and flavoured accordingly. These protein meal extracts, although still in the development stage, have been demonstrated to be both nutritionally and economically sound. In the future there will undoubtedly be more use for rapeseed meal as a human food in such products as meat analogies, flour, and milk substitutes.

For the time being these new uses for rapeseed products will not create a significant increase in market demand, but with further research advances it is likely that the versatility of uses of rapeseed products will become a greater stimulus for expansion.

At the same time, both provincial and federal governments continue to search for and expand opportunities that widen the industrial base of the Western Canadian economy. It is only natural that agriculture will continue to be the focus of such attention. The bright long-run future for oilseeds in general, and rapeseed in particular, will undoubtedly ensure continued interest in the rapeseed processing business as a means of securing a more diversified economy for the prairie provinces.

From rapeseed, attention will surely turn to other agricultural crops with similar opportunities for innovation, the extraction of protein from alfalfa for instance, or the processing of agricultural waste — such as wheat straw — to create new animal feed products. It all depends on research — and on investors and governments.

The Haley-Bendix joint venture in Quebec

by Joan Gherson

An enterprising firm, an industrial need, and the opportunity to fit in with several government policy objectives have resulted in a large new enterprise — a Canadian-American joint venture to produce ductile iron castings — which can be expected to benefit the Canadian economy as well as the investors.

The enterprising firm is Canadian-controlled Haley Industries of Orillia, Ontario; the American partner is the Bendix Corporation of Southfield, Michigan.

Haley produces high quality magnesium and aluminum alloy castings for the aircraft industry in its light alloy foundry at Haley, Ontario. That foundry was bought from the Canadian government at the end of 1967, just as it was about to be closed down after years of operating at loss. Today, reorganized and profitable, the foundry is one of the most modern in the world, and has a considerable export record.

Haley management is also experienced in iron foundries, its owners having formerly owned and operated Otaco Foundry, a division of Bartaco Industries in Orillia. "Our experience there, combined with extensive industry and market surveys, convinced us that this was an opportune time to expand operations in the ferrous foundry field," said Mr. R. H. McRae, Executive Vice-President of Haley and of the new company.

The problem of the industry

At first glance the ferrous foundry industry in Canada does not seem a promising sector for a new firm. Total Canadian capacity in 1975 was almost 1.8 million tons, whereas shipments in that year amounted to only 1.2 million tons. The industry in Canada is traditionally subject to severe swings in production and capacity utilization and is still in the low phase of such a cycle. Like all suppliers of parts, the ferrous foundry industry must await a turnaround in its customers' output before its own market can significantly improve. In the sector of the industry that supplies castings to the automotive and farm machinery industries, the problem is compounded by the fact that many of the largest customers — usually U.S. firms — have their own "captive" foundries which supply most of their normal requirements. Canadian jobbing foundries, which are generally independent, serve a segment of the market that is not in the interest of the captive shops to serve themselves; this frequently represents a significant part of the total business.

The solution is co-operation

To Haley Industries, the situation suggested the need for a partner-customer to generate a certain sales volume and

to provide the focus for product specialization. Extensive engineering studies were undertaken to prove the viability of the project to a prospective customer. In addition to being in a position to finance part of the venture, the customer would have to be a large user of foundry products who did not already have a "captive" foundry and could therefore provide a certain and reliable market for a large proportion of the foundry output. The advantage to the user firm would be in gaining a captive supplier of high quality castings for part of its requirements. From this mutual interest in stabilizing market conditions emerged the joint venture between Haley and The Bendix Corporation, to be known as Métallurgie Farnham Inc.

The operations of the customer, Bendix, determined the new foundry's specialization, which will be in caliper brake castings. As one of the world's largest independent suppliers of automotive systems and components, The Bendix Corporation will be able to use a large part of Métallurgie Farnham's output. Other likely buyers were then found in the automotive, construction equipment and farm machinery industries for substantial additional volumes of similar kinds of castings. As a result, most of the firm's output, which is expected to be in the order of 20,000 tons of castings when operations reach full capacity in 1983, already has a potential market. A high proportion of this output (even apart from sales to Bendix) will be exported, mainly to the United States, which should improve the Canadian balance of trade under the Canadian-American automotive pact.

Benefits and incentives

For both the company and the province of Quebec the decision to locate the new plant in Farnham, Quebec, was a happy one. From the firm's point of view the location, only about 30 miles from Montreal, offers good access to its major market and is close to suppliers of its principal foundry outputs, pig iron and scrap. The only input that cannot be obtained locally (or, indeed anywhere in Canada) is sand of the right quality and this will have to be trucked in from the United States. Most of the work force is expected to come from the immediate area and payroll costs are judged to be competitive with other parts of North America. Moreover, as Mr. Brian Barr, President of Métallurgie Farnham Inc. points out, "For an industry requiring substantial amounts of power, the fact that Quebec Hydro rates are among the lowest in North America was an important factor in choosing a Quebec site. And with the energy crisis we think energy costs for our U.S. competitors will rise faster than ours." Finally, the fact that any manufacturing or processing industry

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locating in this area may qualify for grants under the federal government's Regional Development Incentives Act (RDIA) made the location particularly attractive.

RDIA grants, administered by the Department of Regional Expansion (DREE), are intended to provide incentive for industry to locate or expand in areas of slow growth. For large projects (over \$1.5 million in capital costs), the amount of the incentive grant is not fixed but depends on the economic benefits expected from the enterprise and the amount needed to make the project attractive to the entrepreneur. Consideration may be given to the probable rate of profit on that project in another location as well as to the rate of return on alternative projects to the investor.

For this project, there were substantial economic benefits on which to base the incentive grant. Although incentive grants are not available until commercial processing operations have actually started (normally, 80% can be paid when

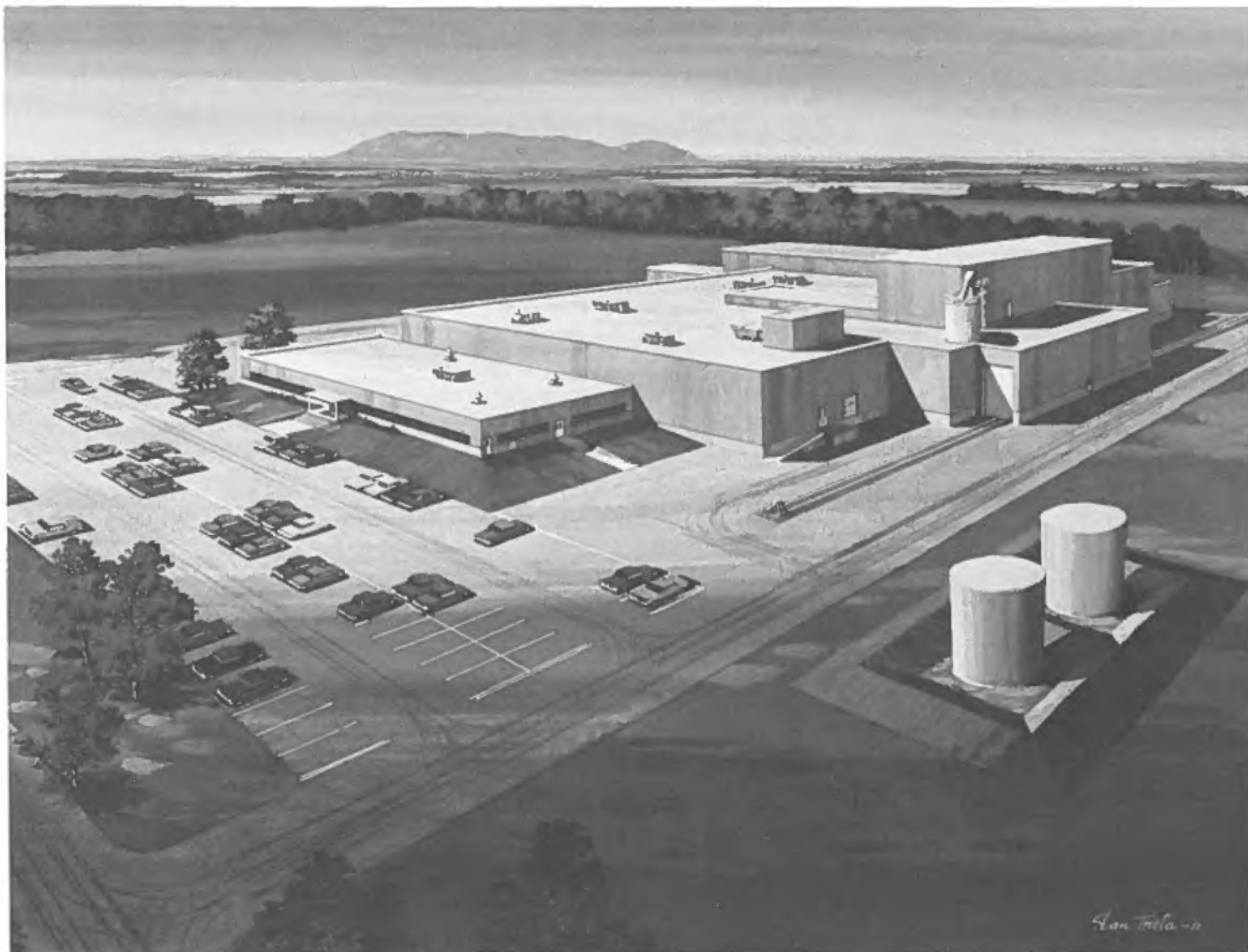
the plant is in commercial operation and the remainder after a control period) the authorization of a grant helps in securing bridge financing, frequently at better rates.

In the case of Métallurgie Farnham Inc., the obvious benefits to the Province of Quebec — a type of foundry that is new to the province, an immediate improvement in construction and related activities in an area where unemployment is of the order of 12-15 percent, eventual employment for about 300 foundry personnel, the upgrading of Quebec raw materials and the benefits to other local activities resulting from such a large investment — led to the granting of provincial incentives as well, in the form of interest rebates from the Quebec Industrial Development Corporation.

Since the new business venture was subject to joint control by the two corporations, one of whom (Bendix) was not Canadian, it required approval under the Foreign Investment Review Act in order to proceed.

The Agency's Assessment Branch found that this investment satisfied an unusually large proportion of the Act's criteria of significant benefit to Canada. As one of the Assessment Branch officers remarked: "It creates new employment and this is particularly important in an area of high unemployment; it involves the further processing of Canadian resources; it will introduce a modern, efficient plant; it will produce what, for this industry, is a sophisticated product not otherwise produced in Canada; by 1980 it is expected to generate a high level of export sales and there is to be substantial participation by Canadians as directors and managers of the new firm." In view of such benefits, it is not surprising that the application was processed quickly and the investment was allowed.

Construction at the 80-acre foundry site in Farnham was well underway before the onset of winter and there is every reason to expect that the plant will be in operation by its target date.



Business-government joint ventures in Canada

by Frank Swedlove

In the preceding issue of *Foreign Investment REVIEW*, Frank Swedlove authored another article on joint ventures, dealing with those between one private business firm and another and, for each of several important economic sectors, the considerations in entering joint ventures, particularly for a foreign investor contemplating an arrangement with a company already located in Canada. In the present issue he writes about the factors in the rapid growth of joint ventures between foreign investors and Canadian governments or government corporations — and the benefits that both sides feel they gain from such partnerships.

The growing number of cases in which business firms and governments in Canada are getting along well together in joint ventures is breaking down old myths. Some of these myths are that businessmen are invariably opposed to government participation in economic areas that have traditionally been the domain of private enterprise; that government agencies or companies are apt to compete unfairly with private companies; and that in joint enterprises between governments and private businesses, governments may want to impose goals and practices that are contrary to sound business principles.

From widening experience, businessmen are increasingly finding that government companies and agencies operate fairly and in a business-like manner and that, in joint ventures with private companies, governments' goals need not conflict with, but rather can achieve realization through, the business goals of the joint enterprise. Businessmen are finding that, in certain circumstances, governments can play a useful, sometimes substantial, and often vital role in the launching, development, or viability of the enterprise.

Willingness to wait for profits, share high risk, can make government a good partner

Governments are often more willing than some private investors to enter into high-risk projects and to adopt a long-run horizon — a willingness to wait several years before profits are made and a willingness to re-invest all of the early profits rather than requiring dividend income. With the rising risk and soaring costs of many projects — notably resource-development projects that require large amounts of capital, new technology, or the opening up of frontier areas — the equity participation of governments may be vital. Governments may, in fact, be the last resort for completing the equity funding of certain projects.

Businessmen also appreciate the fact that governments, through participation in business enterprises, will gain a greater understanding of business realities — and will therefore be less likely to impose what, from the business standpoint, might be seen as unreasonable taxation or legislation. Businessmen appreciate, as well, the opportunities for broader and better contacts with government which arise from joint business ventures with government. And businessmen may feel, through engaging jointly in business enterprises with governments, a sense of broader public support from the people of the country or the particular region in which the project creates jobs and other benefits.

Governments invest through their crown corporations

The Canadian government and several of the provincial governments have set up crown (government) corporations which co-ordinate the use of government equity funds. One of the principal functions of these crown corporations is to facilitate the establishment of joint ventures with private firms. The fact that these crown corporations have, in recent years, greatly augmented and diversified their portfolios of joint-venture arrangements would seem to reflect a growing realization on both sides that there can be mutual benefits in establishing public-private partnerships.

The degree of prevalence of these partnerships can, to a large extent, be perceived by examining the activities of four governments in Canada — the Canadian government and the provincial governments of Alberta, Saskatchewan, and Quebec.

Most of the Canadian government's joint-venture activities are in the resource-development sector. No less than 15 federal government agencies, or fully or majority-owned companies, are involved in some way in resource-development ventures in Canada. The larger joint ventures in which the federal government has equity participation with private enterprise are the Nanisivik Mines, the most northerly mining operation in Canada, which produces lead-zinc concentrates; Petrosar Ltd., a petro-chemical complex near Sarnia, Ontario, which has just started up production; Syncrude Canada Ltd., which will separate liquid hydrocarbons from the Athabasca tar sands in Northern Alberta; and Panarctic Oils Ltd., which carries out oil and gas exploration and development in the Canadian Arctic.

In the manufacturing and service sectors, the Canadian government's involvement in joint ventures with private companies is, for the most part, quite indirect. This involvement occurs largely through the Canada Development Corporation which, although majority owned by the federal government, is actually a highly independent holding company, with considerable non-government equity financing and operated on strictly business principles. The CDC, through its wholly or partly owned subsidiaries, is involved with private industry in 21 joint ventures in the manufacturing and service sectors.

More will be said later about the joint ventures in which the federal government and the CDC are involved.

Governments accept need for minimum political intervention

It should be understood that most of the Canadian government corporations are

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relatively "autonomous" — that is, relatively free of "unbusinesslike" intervention by the political government. While cabinet ministers have ultimate responsibility for the general direction of a crown corporation's performance, they do not participate directly in the day-to-day management, which is under the direction of a board of directors. Moreover, of course, the government realizes that where private-sector investors are involved with government in the enterprise, there is compelling need to be free of control or managerial intervention by the political government. Only by establishing a reputation for allowing public-private joint ventures to function like any private business can government hope to find the necessary private partners for the projects in which it is interested. This fact was clearly spelled out in recent hearings of the federal government's Public Accounts Committee (see, for example, the reported proceedings of December 13, 1977).

Among provincial governments, the one that has the most numerous and diverse involvements in joint ventures with private companies is the government of Quebec. It has quite a few agencies that participate in joint ownership with foreign and Canadian firms. La Société Québécoise d'Exploration Minière (SOQUEM) carries on mineral exploration, development, and production in partnership with private mining companies — involving iron ore, gold, salt, titanium, niobium, ilmenite, rutile, and many other minerals. In 1976, SOQUEM and a Spanish government agency formed a company called INI-SOQUEM to find and develop mineral deposits along the south shore of the St. Lawrence River. Another Quebec government company, Sidbec, together with the British Steel Corporation and a subsidiary of the United States Steel Corporation, formed Sidbec-Normines Inc. to mine and pelletize iron ore near Port Cartier. The provincial government's Société Générale de Financement du Québec has eight joint ventures with private industry — in sectors such as shipbuilding, electrical equipment, lumber, paper, particle board, and office furniture. Another provincial corporation, the Société de développement industriel du Québec, participates in several joint ventures that were established to promote efficient industry in Quebec.

The Alberta government has a 50% interest (the other shares are held by individual citizens) in the Alberta Energy Company, which is involved in several energy-related joint ventures. Among these is a 25% interest in a coal venture in Coal Valley; a 49% interest in Pan-Alberta Gas Ltd., which was set up to market Alberta-produced natural gas outside the province; a 50% interest in Steel Alberta Ltd., whose objective is to

determine potential investments in the steel industry, and a 40% interest in the forestry complex in the Whitecourt region of Alberta. The Alberta Energy Company also plans to invest in other ventures, including petrochemical projects, liquids pipelines, underground storage for petroleum, and a wide range of additional ventures.

The Saskatchewan government's mineral ventures are handled by the Saskatchewan Mining Development Corporation. Among this corporation's activities is participation with private interests in the search for and development of uranium in the Wollaston and Key Lake areas of Saskatchewan. The Saskatchewan government also has a 20.2% interest (as does Steel Alberta) in Interprovincial Steel and Pipe Corporation Limited, a steel-making and pipe-manufacturing company. On the manufacturing side, the Saskatchewan Economic Development Corporation (SEDCO) encourages industrial development in the province by several means, including equity participation. SEDCO's investment portfolio includes 15 companies four of which are joint ventures with foreign firms. The largest of these joint ventures with foreign firms is Prairie Malt Canada Ltd., which manufactures malt for export. This plant is 50% owned by SEDCO, the rest of the shares being held by German and Canadian private interests.

In the remaining provinces, there are few joint ventures between the provincial governments and private enterprise. The provincial governments have generally preferred to maintain 100% ownership of the corporations in which they place equity investments and, apart from that, to support industry through loans and other incentives. Two notable exceptions are the participation, along with private firms, of Ontario Hydro in two uranium exploration ventures and of Manitoba Mineral Resources Limited in a number of joint exploration ventures.

National governments of other countries too have taken an interest in investing in Canada, almost exclusively in the natural resources field. The Canadian government's Department of Energy, Mines and Resources, in its publication *Government Participation in Mineral Ventures in Canada*, identifies seven foreign governments which, in total, have 49 companies that explore for, develop, produce, and market Canadian minerals. The most active participant is France, with interests in 25 companies. Other substantial investors are West Germany, the United Kingdom, and Italy. Most of the 49 companies wholly or partly owned by non-Canadian governments participate in joint ventures with private companies, both Canadian and non-Canadian.

Government participation can mean benefits other than funding

Several reasons have been offered earlier as to why so many private businesses have become involved with governments in Canada in joint business ventures. Two reasons are probably the principal ones: governments and government-supported corporations are often more willing than private investors to enter into high-risk projects from which there is little hope of profits for several years; and governments are sometimes the last-resort partners to whom private interests can turn.

The Canada Development Corporation, in its 1976 Annual Report, noted the first of the above reasons as part of its operating philosophy: "CDC is prepared to be patient, recognizing that some of its opportunities will exist because others are unwilling or unable to wait through years of earnings buildup, but the projects selected should have the prospect of high, long-term growth and a superior rate of return on equity."

Among its high-risk undertakings, the CDC has part ownerships in three venture capital companies that invest mainly in high-technology — often research-oriented — areas, such as solar products for swimming pools, automated mapping equipment, geographical instruments for use in mineral exploration, a process to convert waste cellulose into cattle feed, development of a rear projection screen, and the design and manufacture of sensing and control equipment for the pulp and paper industry.

Another high-risk project in which the federal government participates is through its 45% interest in Panarctic Oils Ltd. (the other 55% is owned by a consortium of 30 companies and individual participants). Benefits in the form of profits accruing from this exploration of the Arctic islands are not expected to be realized before the mid-1980s, the earliest possible completion date for the Polar Gas pipeline hook-up in Ontario to the existing Trans-Canada pipeline. The Canadian government has been able to contribute to this project large amounts of capital and a willingness to wait quite a number of years for a return on the investment.

As for the need to turn sometimes to governments as partners of last resort, the most prominent example of this occurred in 1974 in the case of Syncrude Canada Ltd. One of the four original partners, Atlantic Richfield Canada Ltd., wished to withdraw from the project and there seemed to be no other private company willing to take on the huge financial requirement necessary for participation.

It became clear to the governments which became involved that, if they did not make substantial investments as equity partners, the project would be dropped with considerable loss of future oil supplies, employment, and other benefits. As a consequence, the federal government took 15% of the equity, the province of Alberta 10%, and the Ontario government 5%. (The private-industry partners are Imperial Oil, Gulf Canada, and Canada-Cities Service.)

Joint ventures serve government objectives too

Governments too have several reasons for wanting to participate in joint business-government ventures.

First, these arrangements can be used as tools to promote resource or industrial development, and regional development, in the area within a government's jurisdiction. Equity investment in particular projects, along with experienced private entrepreneurs, enables governments to focus their funds more effectively than they can through, say, tax incentives, which tend to have a more generalized or diffuse impact.

Secondly, it enables governments to obtain a better understanding of various industries.

For both these reasons, many of the crown corporations established by the provinces have included, in their statements of purpose, the objective of participating in joint ventures with private industry.

For example, one of the stated goals of Quebec's Société générale du financement, as noted in its 1976 annual report, is "to take an active part in major new industrial projects involving, for the most part, utilization and processing of natural resources in Quebec." SGF's largest joint venture is the Donohue Company Limited. This company is 55% owned by SGF and 45% owned by two French companies, La Cellulose du Pin S.A. and Papeterie de la Seine S.A. Donohue, in 1975, made an agreement with British Columbia Forest Products Limited (partly owned by The Mead Corporation of the United States) to form a joint subsidiary — Donohue St.-Félicien Inc. — in the construction of a \$300 million pulp mill. SGF has publicly indicated its belief that, without its participation, the project would never have got off the ground — meaning that an estimated 950 new jobs and the resulting economic development of that region would have been lost. SGF has also indicated that the technical knowledge and marketing expertise obtained from the private company was fundamental in attracting

SGF's participation and in assuring the success of the project.

Another illustration of a province's use of a joint venture to promote resource and industrial development is the establishment of the Prairie Malt operations in Saskatchewan. A provincial study was carried out in 1973 to determine possible growth areas in selected farm-based industries. One of the study's recommendations was that it would be economically feasible to establish a malt factory. Private foreign and Canadian interests knowledgeable in the industry approached the provincial government, and the discussions led to the 50-50 joint ownership arrangement between the private investors and the Saskatchewan Economic Development Corporation.

The establishment of Petro-Canada in 1975 as a federal crown corporation to become involved in the many stages of the petroleum industry was intended to promote Canadian resource development and to ensure the existence of a significant Canadian participation in these key sectors in which foreign investment is so predominant. Another important purpose was for the federal government to acquire a better understanding of the operations of the industry. In the words of Donald Macdonald, then Minister of Energy, Mines and Resources, when he introduced into Parliament the bill to establish Petro-Canada: "A degree of knowledge and insight will be available which simply cannot be acquired by other means. This insight will extend to a first-hand experience of the effects of our own and provincial governments' policies to the benefit of all parties." Petro-Canada has taken responsibility for federal participation in several joint operations, the larger ones being the Polar Gas Project, Syncrude Canada Ltd., and Panarctic Oil Ltd. Many more joint-venture activities with private firms, especially in exploration, can be expected for Petro-Canada in the next few years.

The goal of "Canadian participation" or "local participation" in important Canadian industries is an explicit policy aim of the Canadian and provincial governments and might be regarded as the third reason why governments participate in joint ventures with private companies. Although governments would often be happier if the goal of "Canadian participation" could be achieved more frequently through the participation of private Canadian investors rather than governments, the fact of the matter, as noted earlier, is that governments are sometimes the only ones forthcoming to take up certain opportunities for joint ventures with foreign investors.

An example of such a situation occurred in 1976, when the Simpson Timber Co. (Alberta) Ltd., a subsidiary of a wholly

owned American firm, wished to establish a forestry complex in Alberta. The proposal came before the Foreign Investment Review Agency. As both the Canadian government and the Alberta government preferred to see some Canadian participation, the American firm agreed to accept the bid of the Alberta Energy Company to obtain a 40% interest in the complex. As mentioned earlier, the Alberta Energy Company is 50% owned by the Alberta government.

One should not underestimate the extent to which businessmen appreciate opportunities to develop their contacts at the various levels of government, and this goal is greatly facilitated through equity partnerships with governments or crown corporations. Mr. Walter Fischer, Chairman of Prairie Malt Canada Limited, believes that his company's involvement with the Saskatchewan Economic Development Corporation has assisted him in expanding his contacts with provincial authorities. Mr. George Hatton, a senior officer of SEDCO, pointed out to this writer that the Chairman of the Board of SEDCO is the provincial Minister of Industry and Commerce and that the Deputy Minister is also on the board. "Through the interaction between businessmen and these high government officials", observed Mr. Hatton, "there is a real input into government's thinking and understanding about business."

One concern that businessmen may have about being involved with government-supported companies is that the joint venture may be more carefully scrutinized than if it were totally in private hands. The press and public may more quickly point a finger at the company for allegedly "unsocial" activities. This possibility does not, however, seem to be a serious concern to most businessmen. As Mr. Hatton of SEDCO notes, "Businessmen accept the fact that a government agency lives in a fishbowl world. Therefore, both are willing to work towards finding socially acceptable solutions."

It would probably be incorrect to suppose that joint ventures in which government corporations participate must be "purer than pure" and obliged to demonstrate higher social and environmental standards than are required of private business by the laws or conventions of the community; or must maintain higher levels of employment than can be justified by business considerations.

As Mr. Joel Bell, Senior Vice-President of Petro-Canada, remarked: "Although Petro-Canada is guided by standards of good corporate citizenship, it is not its role to oblige its joint-venture partners to exceed the standards required by law or accepted as good practice by the industry. Petro-Canada does pursue sound and fair business practices, is a good

corporate citizen in every sense that any other corporation is expected to be, and expects to gain the respect of both the business community and the wider public."

Mr. Bell and Mr. Peter Powell, the latter a Vice-President of the Canada Development Corporation, both noted that once their corporations had established a reputation for using sound and fair business practices, then companies from the private sector treated their corporations in a normal business manner. This was substantiated by Mr. D. H.

MacAllan, a Vice-President of Imperial Oil, who commented that his company "approached Petro-Can in business dealings in the same way as it did any other commercial operator."

With no "inherent" reasons for conflict between government and business in their joint ventures, and with a number of potential advantages to be sought by both sides, there seems to be every likelihood that the noticeable trend towards government-business joint ventures in Canada will continue, and perhaps accelerate, during the next few years.

Photo: Energy, Mines and Resources



Mineral Exploration in Canada: the needs and the prospects

by Jan Zwartendyk

Some 200 new mines must be put into production in Canada before the end of this century if the country is to meet forecast domestic requirements and take advantage of its export opportunities for metals to the year 2000. This estimate refers to mineable deposits of copper, zinc, lead, uranium and molybdenum yet to be discovered, over and beyond those that have already been found and are likely to be developed into mines.

Exploration expenditures required in the search for mineable deposits of metals, industrial minerals, and coal are estimated to have to rise from current levels of less than \$150 million annually to some \$500 million annually (in 1975 dollars) in the 1990s. Whether such levels of exploration expenditures will be reached depends first of all on whether investors are confident that Canada's land mass continues to hold mineral resources in sufficient abundance and quality to justify the risks of large-scale exploration.

If the past and the present are any guide to the future, foreign investors will continue to be heavily involved in exploration activities in Canada. In 1975, for example, foreign interests accounted for at least one-half of the \$129 million spent in Canada in the search for new mineral deposits (excluding oil and gas) beyond the boundaries of properties with mines already in operation or being prepared for production.

Concerns for the limits to mineral resources

Much has been said and written in recent years about the growing need for mineral commodities by a rising world population. The demand curves are expected to go on climbing, not only in Canada but, even more so, in many countries to which Canada exports mineral commodities. In the early 1970s, the question of where all those mineral products were going to come from began to worry many people, even in Canada where previously it had not been given much serious thought. The country always seemed too vast to warrant any concerns about limits to mineral resources. ("Mineral" resources, in this article, are meant to exclude oil and gas.)

Such concerns began to spread, not because of anything the mining industry did or failed to do, but in reaction to a general feeling of alarm among some academics and industrialists from various countries about the future path of industrial development. The book *The Limits to Growth* (1972), which reported on the Club of Rome's project on the predicament of mankind, gained widespread attention and shocked many people into wanting to have a closer look at where consumption trends are taking us. (The Club of Rome is an international

group of 100 businessmen, scientists and professors.) *Limits to Growth* was meant chiefly to rattle us out of our smugness, in which it succeeded. The "desirable" rate of resource usage quickly became a subject of fierce controversy. There were those who saw mankind racing for the precipice, rapidly approaching the point of no return beyond which economic collapse on a worldwide scale would be inevitable because of crippling resource shortages. This doomsday view was vigorously rejected by the "cornucopians", who claimed that there was little reason to doubt man's ability to bring to bear the necessary ingenuity to any resource problems that might develop.

The word "reserves" may be misleading

It may be natural to worry about man's ability to deal with problems that have no precedents, but there is little excuse for feeding such worries by a misuse or misreading of statistics. In the minds of many, mineral "reserves" are mistakenly interpreted as an indication of all we think there is, and thus all that can ultimately be produced. Such a misunderstanding of the nature of mineral reserves is largely responsible for fears of "running out" of minerals.

The fact of the matter is that ore "reserves" of a country are, essentially, merely the sum of the working inventories of unmined ore of all existing and prospective mines in that country. Reserves are continually being diminished by mine production and replenished by the development of new reserves. It would be premature and uneconomic for a company to develop reserves at a mine — a costly process — beyond the needs of a rational mining plan; this would tie up capital unnecessarily and unproductively. Therefore, at any mine, an effort is made to maintain a reserves inventory which is the "best" size for that mine and which, given the characteristics of the orebody in question, is determined mostly by economic considerations. As a result of rising demand and the development of more mines in response to it, world reserves of practically all mineral resources, far from showing any signs of exhaustion, have historically risen with rising production rates.

Thus, if we wish to consider the foundation for long-run supply adequacy, our current reserves inventories alone cannot tell us much. It is necessary to look at "resources" as a whole. The concept of mineral "resources" is imprecise and much wider than "reserves"; it refers generally to all mineral concentrations, found and unfound, that are of current economic interest or may become so in the foreseeable future. Quantification of resources in the same way as reserves is,

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and always will be, impossible. Making judgments, estimates, and guesses is the best we can do. The experts' views will differ. But what is clear is that an effective threat of physical limits is clearly unprovable.

The general outlook on Canadian resources of the major metals is that, as far ahead as one can reasonably try to look, Canada's enormous land mass will continue to offer many opportunities for discovering new deposits and developing new reserves of such metals. For the next two or three decades, which is as far ahead as we can hope to see, no fundamental problems are in sight for Canada that would be the result of a lack of resources of the major metals produced in the country. (See *A Summary View of Canadian Reserves and Additional Resources of Nickel, Copper, Zinc, Lead, Molybdenum* (MR 169), 1977.)

Our ability to explore and develop is the key to the future

Whether or not the mineral supply stream will be adequate will depend on the action taken by investors and on their judgment of future needs. In the case of Canada, these needs go well beyond satisfying long-term domestic requirements and include maintaining a sizable export sector of mineral commodities. Thus, the adequacy of future supply should not be equated solely with having sufficient minerals in the ground, as it depends also on our ability to discover, produce, process, and transport minerals within certain cost limits and at a required pace. The development of new mines is a process that is subject to our success at resolving such practical problems as mustering the necessary capital and labour. And one must bear in mind that the transformation from undiscovered resources to production capability may take as long as 20 years.

At the beginning of this article, it was stated that forecast demand to the year 2000 for copper, zinc, lead, uranium and molybdenum from Canadian mines calls for some 200 new mines to come on-stream in deposits yet to be discovered. This estimate is based on a study, made in the Department of Energy, Mines and Resources, which contained the generalized conclusion that, in addition to new mines likely to be developed in deposits already found, the total number of new metal mines required during the 25-year period 1976-2000 would be about the same as the number of new metal mines discovered during the 25-year period of 1946-1970 (a total of 228, disregarding iron mines). (See H. L. Martin, D. A. Cranstone, and J. Zwartendyk, 1976, *Metal Mining in Canada 1976-2000* (MR 167).) Although this study was done in the 1973-75 period

when the picture of the future growth in the world economy — and therefore of mineral demand — looked rosier than it does now, the amount of exploration required remains formidable.

The pattern of expenditures for general exploration in Canada for minerals (not considering oil and gas) shows that large sums continue to be committed to the search for new mineral deposits. During the period 1968-1975, such expenditures have fluctuated in the range of \$100-\$180 million annually (constant 1975 Canadian dollars). An all-time peak was reached in 1970, followed by a low in 1972. Since that year, expenditures have shown a persistent rise to 1975, apparently levelling off in 1976. The focus of mineral exploration tends to shift from one or more specific minerals to others, depending on market conditions and on the kinds of discoveries recently made. For instance, uranium exploration was vigorous in the early 1950s and is again now. Base metals are receiving less attention at this time because of low prices brought on by temporary oversupply as a result of lower-than-anticipated demand levels for copper, nickel and zinc.

As mentioned earlier, a rise in mineral exploration expenditures in Canada is required, from the current level of less than \$150 million to some \$500 million per year in the 1990s (1975 dollars). While this is a considerable increase in absolute terms, such rising annual expenditures would remain a fairly constant percentage of the value of annual mineral production, which is likely to grow at a comparable rate.

In summary, the rapid rate at which new mineral production capacity may be required in the 1980s suggests that much will have to be accomplished in the near future in mineral exploration and development in Canada. So far as fundamental shortages of mineral commodities are concerned, they seem unlikely. Unfortunately, many of us panic rather easily. We tend to become nervous at any new uncertainty that moves into the limelight. For instance, until some years ago, the long-term price of energy was seldom mentioned in connection with material adequacy. Now, having become a

prominent question mark, the price of energy is vying for first place among the factors alleged to threaten mineral supplies. Yet, it is obvious that man's talents and flaws play major roles in determining the "finiteness" of mineral resources, since it is our own behaviour that will determine how far the limits will be extended.

Canada, with its immense land mass, is fortunate in being able to offer an unusually large variety of mineral opportunities. The chief determinant of the adequacy of Canadian mineral resources will not be what is in the ground — we probably have not even begun to see any signs of limits on that — but what we are going to do about it. Foreign participants who wish to join with Canadians in exploring for and developing Canada's mineral resources may well find the enterprise highly rewarding.

Since the beginnings of the "limits-to-growth" controversy in the early 1970s, the focus of the debate has shifted from the stark issue of insurmountable physical limits towards a concern about the uneven global distribution of resources. We have moved onto political ground toward North-South questions between "rich" and "poor" countries. These questions are based on the common, but flawed, notion that the rich countries — which consume most of the world's mineral products — are relatively mineral-poor and satisfy most of their mineral requirements by importing from poor countries. In fact, world mineral production is dominated by five developed countries — the U.S., the U.S.S.R., Canada, South Africa and Australia, which are the major source of mineral imports for the industrialized countries. (See, for example, G. J. S. Govett and M. H. Govett: "The Inequality of the Distribution of World Mineral Supplies" in *CIM Bulletin* (the Canadian Mining and Metallurgical Bulletin), August 1977, p. 59-71.)



Photo: George Hunter

Capital investment projects in Canada

III. MANUFACTURING

This list shows major capital spending projects now in progress or proposed. Parts I and II (published in previous issues of *Foreign Investment REVIEW*) covered minerals, forests products, oil, gas and electric power. Part III covers the manufacturing sector and is limited to projects costing over \$3 million. Information on these projects has been obtained mainly from press reports verified, where necessary, by the companies concerned.

This report was prepared for *Foreign Investment REVIEW* by L. E. Dewis, Analyst with the Capital Expenditures Group, Economic Analysis Branch, Department of Industry, Trade and Commerce.

In the **manufacturing sector**, the value of new capital expenditure projects started or proposed in 1977 was nearly double the 1976 level. Steel and petrochemicals, in particular, showed substantial new investment.

New projects in the **steel industry** are expected to bring Canadian steel-making capacity to 20 million tons by 1980, compared with only 13 million tons in 1970. Steel companies in the IT&C large firm Survey of Capital Investment (October 1977) reported a 22% expected increase in investment in plant and equipment for 1978. In the Atlantic region, renovations are underway at the government-owned Sydney Steel Corporation to enable the company to produce slab steel, and a new steel plant on Cape Breton Island is under active consideration. A Quebec government study group has recommended that the province's steel production be tripled in the next 10 to 12 years with growth centered around Sidbec, the provincially owned steel company, which is at present expanding its Contrecoeur plant. The Ontario mills of three major Canadian steel companies are undergoing expansion or renovations. These three, together with Interprovincial Steel and Pipe Corporation Ltd. of Regina, Sask., are capable of furnishing major pipe requirements for any and all proposed pipeline systems. A new steel facility was completed at Edmonton, Alberta, late in 1977. The Government of Alberta has been attempting to diversify its resource-based economy by expanding its manufacturing base. As part of this policy the Government of Alberta was instrumental in creating Steel Alberta, a vehicle to pursue opportunities for steel development in the province. In British Columbia, a mini steel mill is under active study for Prince George.

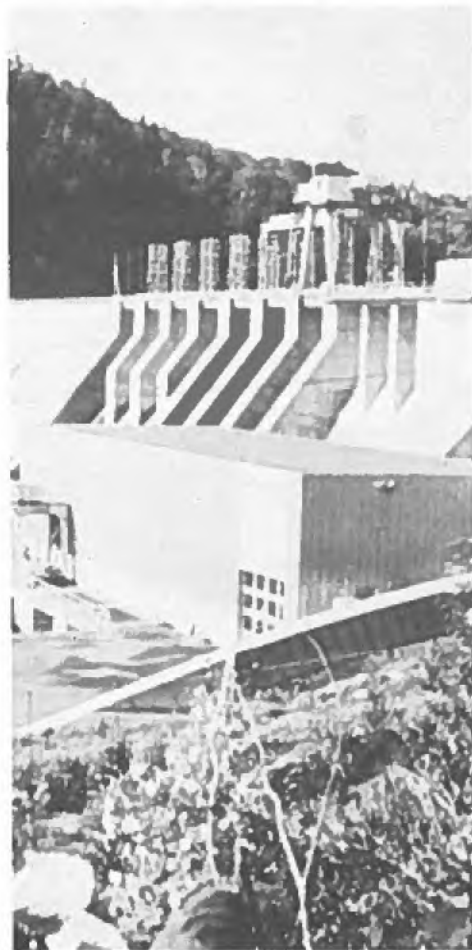
A major round of investment is taking place in Canada's three **petrochemical** centres. Following recent Montreal expansions by Gulf Canada Ltd. (ethylene) and Union Carbide Canada Ltd. (polyethylene, ethylene glycol), Hercules Canada Ltd. has recently brought a new 150 million pound-per-year polypropylene plant in Montreal into production. At Sarnia, Ontario, the Petrosar plant is now on stream and Union Carbide (polyethylene) and Polysar (styrene) are operating new world-scale plants. Also Du Pont has expanded polyethylene capacity in Sarnia. Shell Canada will complete a new 150 million-pound polypropylene plant in early 1979. Shell is doubling its Sarnia benzene capacity and Sun Oil Company is installing a benzene plant. In Alberta, the Alberta Gas Ethylene Company plant near Red Deer is due to begin operations in late 1978 with a capacity of 1.2 billion pounds per year. Construction of new ethylene glycol, ethylene dichloride and vinyl chloride monomer plants, as well as expansion of its chlor alkali facilities, are underway by Dow Chemical Company of Canada at Fort Saskatchewan, Alberta. In a joint venture in Alberta, Diamond Shamrock and Alberta Gas Ethylene are building a polyvinyl chloride facility. In addition, a number of benzene projects are being evaluated in Alberta.

Company and project description	Completion date	Cost (\$ million)	Location
Atlantic Region			
Canada Cement Lafarge Ltd. Proposed expansion	n/a*	25.0	Brookfield, N.S.
Combustion Engineering Superheater Ltd. Nuclear fuel fabrication	1978	4.5	Moncton, N.B.
Labatt Breweries of Canada Ltd. Proposed expansion, bottling plant	n/a	5.3	Saint John, N.B.
C.M. McLean Ltd. Proposed expansion, potato processing plant	n/a	8.0	New Annan, P.E.I.
Michelin Tires Manufacturing Company of Canada Ltd. Expansion, tire manufacturing	1979	25.0	Granton, N.S. Bridgewater, N.S.
St. Anne Nackawic Pulp & Paper Co. Ltd. Chloralkali and sodium chlorate plant	1980	10.0	Nackawic, N.B.
Sydney Steel Corporation Renovation to permit slab steel production	1979	19.0	Sydney, N.S.

* not available

Company and project description	Completion date	Cost (\$ million)	Location
Quebec			
Canadian Industries Ltd. Expansion, caustic soda plant	1979	100.0	Bécancour
Catelli Ltd. Food processing plant	1978	5.2	St. Hyacinthe
Co-Operative Agricole de Granby Dairy processing complex	1979	22.0	Granby
Dominion Textiles Ltd. Conversion for new product	1979	6.5	Drummondville
Du Pont of Canada Ltd. Polyester yarn plant	1978	55.0	Coteau-du-Lac
Métallurgie Farnham Inc. New iron foundry	1979	16.5	Farnham
O'Keefe Brewing Company Ltd. Expansion bottling and distribution plant	1978	22.5	Montreal
Pratt & Whitney Aircraft of Canada Ltd. Proposed re-organization of plant	n/a	3.2	Longueuil
Sidbec-Dosco Ltd. Steel mill expansion	1979	30.0	Contrecoeur
Ontario			
The Algoma Steel Corporation, Ltd. Rebuilding coke oven	1978	18.5	Sault Ste. Marie
Atomic Energy of Canada Ltd. Proposed plutonium extraction plant	n/a	1,500.0	n.a.
Canadian Gibson Distillery Ltd. Proposed new distillery	n/a	10.0	St. Thomas
Canadian Industries Ltd. CAP sensitive slurry plant	1978	6.9	Parry Sound
The Canada Starch Co., Ltd. Addition to produce liquid sweetener	1979	12.0	Cardinal
Canadian Pittsburgh Industries Ltd. New glass plant	1978	35.0	Owen Sound
Chrysler Canada Ltd. Expansion, engine plant	1978	40.0	Windsor
Cooper Bessemer of Canada Ltd. Proposed expansion	n/a	25.0	Stratford
Daymond Ltd. Aluminum extrusion and fabricating plant	1978	4.0	Chatham
Dominion Foundries and Steel, Ltd. Basic oxygen steel making plant New coke ovens	1978 1978	133.0 109.0	Hamilton
Eldorado Nuclear Ltd. Proposed uranium refinery	n/a	80.0	Port Granby
Erco Industries Ltd. Sodium chlorate plant	1979	10.0	Thunder Bay
ESCO Ltd. Expansion	1978	5.0	Port Hope
Fiberglas Canada, Ltd. New plant, fiberglas products	1979	25.0	Scarborough
Hudson Bay Diecastings Ltd. Expansion, zinc plating and buffing	1978	4.7	Bramalea
Inco Metals Company Steel fabricating and electric motor winding shop Proposed treatment plant	1979 n/a	29.0 4.2	Copper Cliff Port Colborne
John Labatt Ltd. and Redpath Industries Ltd. New plant, liquid sweetener	1980	60.0	London area

Photo: Ontario Hydro



Company and project description	Completion date	Cost (\$ million)	Location
Maple Leaf Mills Ltd. New oilseed processing plant	1978	30.0	Windsor
Schneider J.M. Ltd. Expansion, processed meat plant	1978	7.5	Kitchener
Shell Canada Ltd. Isopropyl alcohol plant	1978	45.0	Sarnia
Polypropylene plant	1978	100.0	
Standard Tube Canada Ltd. Proposed expansion	n/a	3.1	Woodstock
The Steel Company of Canada Ltd. New steel plant	1981	1,250.0	Nanticoke
Expansion	1978	22.8	Welland
Sun Oil Company Ltd. Petrochemical plant addition	1978	7.0	Sarnia
Thunderbrick Ltd. Proposed new brick plant	n/a	4.8	Thunder Bay
Union Carbide Canada Ltd. Expansion, carbon products plant	1979	4.9	Welland

Manitoba — Saskatchewan

Astral Refrigeration Manufacturing Ltd. Proposed plant to make refrigerators for recreational vehicles	n/a	3.4	Moose Jaw, Sask.
McCain Foods Ltd. New potato processing plant	1978	12.0	Portage la Prairie, Man.
Parsons and Whittemore Inc. Proposed new flax mill	n/a	12.0	Prince Albert, Sask.
Prairie Malt Ltd. Proposed new malting plant	n/a	15.0	Biggar, Sask.
Supercrete Ltd. Proposed expansion, concrete products	n/a	7.2	Winnipeg, Man.

Alberta — British Columbia

Alberta Energy Co. Ltd. Proposed benzene plant	n/a	225.0	Fort Saskatchewan Alta.
Alberta Gas Chemicals Ltd. Methanol plant	1978	62.0	Medicine Hat, Alta.
Alberta Gas Ethylene Ltd. Ethylene from ethane plant	1978	250.0	Joffre, Alta.
Canada Cement Lafarge Ltd. Expansion	1980	70.0	Exshaw, Alta.
Carling O'Keefe Ltd. New winery	1978	27.0	Surrey, B.C.
Celanese Canada Ltd. Proposed vinyl acetate monomer plant	n/a	20.0	Edmonton, Alta.
Diamond Shamrock Alberta Gas Ltd. Polyvinyl chloride plant	1979	50.0	Fort Saskatchewan, Alta.
Dow Chemical of Canada, Ltd. Vinyl chloride monomer plant	1979	166.0	Fort Saskatchewan, Alta.
Ethylene glycol plant	1979	100.0	
General Foods, Ltd. New plant	1978	12.0	Lethbridge, Alta.
Inland Cement Industries Ltd. New cement plant	1980	60.0	Edmonton, Alta.
Palm Dairies Ltd. New milk processing plant	1978	12.0	Edmonton, Alta.
Polaris Steel Ltd. Proposed new mini steel mill	n/a	20.0	Prince George, B.C.
Union Carbide Canada Ltd. New gaseous oxygen and nitrogen plant	1979	25.0	Fort Saskatchewan, Alta.

Photo: George Hunter



Incentives to industry

The following is a regularly updated list of the major incentives to industry offered by the federal and provincial governments and available to both Canadian and non-Canadian investors. To qualify, companies must be incorporated in Canada.

FEDERAL GOVERNMENT INCENTIVES

Note: a number of programs which are cost-shared and jointly administered by the federal and provincial governments are listed only under **Provincial Government Incentives**.

Department of Industry, Trade and Commerce

Enterprise Development Program (EDP)

The program assists eligible manufacturing and processing firms to become more viable and internationally competitive through grants and loans. The grants are to help firms to develop proposals for project assistance, study market feasibility or productivity improvement, procure industrial design services, and develop or introduce new technology. Loans or loan guarantees assist restructuring or rationalization. Further grants or loans are also available to help firms to meet special problems or to further specific government objectives. **Contact:** Enterprise Development Board, Department of Industry, Trade and Commerce, 240 Sparks St., Ottawa, Ontario, Canada K1A 0H5.

Machinery Program

This program provides for remission of import duty on types of machinery not manufactured in Canada, when the importation of such machinery is vital to an enterprise. **Contact:** Machinery and Equipment Advisory Board, Department of Industry, Trade and Commerce, 240 Sparks St., Ottawa, Ontario, Canada K1A 0H5.

Agricultural and Food Products Market Development Program (AGMAP)

Financial assistance to develop domestic and export markets for agriculture and food products. **Contact:** Program Unit, Agriculture Fisheries and Food Products Division, Department of Industry, Trade and Commerce, 240 Sparks St., Ottawa, Ontario, Canada K1A 0H5.

Other Programs

Financial assistance programs are also available for shipbuilding, defence production, fashion design, grains and oilseeds marketing and for export market development. **Contact:** Department of Industry, Trade and Commerce, 240 Sparks St., Ottawa, Ontario, Canada K1A 0H5.

National Research Council

Industrial Research Assistance Program (IRAP)

Shares cost of selected research projects. **Contact:** National Research Council, Montreal Road, Ottawa, Ontario, Canada K1A 0R6.

Pilot Industry/Laboratory Program (PILP)

Provides shared-cost research between NRC laboratories and industrial firms. **Contact:** National Research Council, Montreal Road, Ottawa, Ontario, Canada K1A 0R6.

Department of Regional Economic Expansion (DREE)

Regional Development Incentives Program (RDIP)

The program provides grants and loan guarantees to foreign and Canadian firms undertaking ventures in designated regions in all provinces under the Regional Development Incentives Act. Incentives are provided principally to manufacturing or processing operations and loan guarantees are also available to certain new service facilities. The Montreal Special Area designated under the DREE Act is eligible for grants in certain manufacturing or processing sectors. **Contact:** Industrial Incentives Branch, Department of Regional Economic Expansion, Sir Guy Carleton Building, 161 Laurier Avenue West, Ottawa, Ontario, Canada K1A 0M4.

Federal Business Development Bank (FBDB)

Provides financial assistance to business, particularly small business, in the form of loans, loan guarantees, equity financing or leasing. Management services are also available to small businesses. **Contact:** Federal Business Development Bank, 901 Victoria Square, Montreal, Quebec, Canada H3C 3C3.

Department of Finance

Guarantees loans up to \$50,000 from approved lenders to proposed or existing businesses whose actual (or estimated) gross revenue is less than \$1 million. **Contact:** Guaranteed Loans Administration, Department of Finance, Place Bell Canada, 160 Elgin St., Ottawa, Ontario, Canada K1A 0G5.

PROVINCIAL GOVERNMENT INCENTIVES

ALBERTA

Alberta Opportunity Company

Provides financing for Alberta manufacturing and service businesses through direct loans or guarantees of loans for fixed assets or working capital when funding is not available from conventional lending institutions.

Contact: *Alberta Opportunity Company, Box 1860, Ponoka, Alberta, Canada T0C 2H0.*

Canada-Alberta Subsidiary Agreement on Nutritive Processing Assistance

The maximum grant under this program is 35 per cent of the total capital required to build or expand a facility. The grant is restricted to nutritive processing operations in which raw or semi-processed products are physically or chemically altered, processed, or refined or made more marketable as nutritional products for humans, animals, or plants. The grants are available for operations anywhere in Alberta except Edmonton and Calgary. **Contact:** *Executive Director, DREE Program, Agriculture Building, 11th floor, 9718 — 107th St., Edmonton, Alberta, Canada T5K 2C8.*

BRITISH COLUMBIA

British Columbia Development Corporation

The corporation provides financing in the form of term loans, loan guarantees, performance bonds, deficiency guarantees, leasing of buildings and machinery, and in special cases, equity. While there is no limit on the amount of funds the corporation may provide, in large scale projects it prefers to provide assistance in conjunction with other financial institutions. BCDC provides serviced land on a sale or lease basis to secondary manufacturing and related service industries. Land is available through the land development division. BCDC acts as project manager of large capital projects in British Columbia. **Contact:** *British Columbia Development Corporation, 272 Granville Square, 200 Granville St., Vancouver, British Columbia, Canada V6C 1S4.*

Ministry of Economic Development

The business development program provides assistance in marketing British Columbia-manufactured products outside

the province by providing financial support to businesses to participate in trade shows and trade missions outside Canada. It also provides a market development assistance program, a technical assistance program, a small businesses assistance program and a business information service on the availability and source of various forms of financial and other assistance to business. The new business service provides counselling and information about government regulations. **Contact:** *Business and Industrial Development Branch, Ministry of Economic Development, Box 10111, 700 West Georgia St., Vancouver, British Columbia, Canada V7Y 1C6.*

MANITOBA

Design Assistance Program

Cost-sharing of consulting and advisory services for market research, design and redesign of products and packages. **Contact:** *Manitoba Design Institute, 155 Carlton St., 5th floor, Winnipeg, Manitoba, Canada R3C 3H8.*

Export Incentive Program

Cost-sharing of promotion for new export markets. **Contact:** *Manitrade, 155 Carlton St., Winnipeg, Manitoba, Canada R3C 3H8.*

Manitoba Research Council

The Research and Development Assistance Program provides shared-cost assistance for research and development of new or improved products or processes. The council's Canadian Food Product Development Centre provides advice and in-plant assistance including laboratory work for food and feed industries. **Contact:** *Manitoba Research Council, 155 Carlton St., 6th floor, Winnipeg, Manitoba, Canada R3C 3H8.*

Manitoba Department of Industry and Commerce

The Feasibility Studies Incentive Program assists manufacturing and processing industries with shared-cost feasibility studies on establishing or expanding manufacturing. The DREE Application Incentives Program provides shared-cost assistance to employ outside consultants in the preparation of applications to the federal government's Department of Regional Economic Expansion programs for the establishment or expansion of manufacturing facilities. The Productivity Improvement Program provides shared-cost assistance to identify problems and obstacles to growth. The Manpower

Development Assistance Program provides cost-sharing of manpower development programs. **Contact:** *Department of Industry and Commerce, 155 Carlton St., Winnipeg, Manitoba, Canada R3C 3H8.*

NEW BRUNSWICK

New Brunswick Industrial Development Board

Provides financial assistance to manufacturers or processors, normally in the form of a loan guarantee or direct loan. Administers a joint federal-provincial interest-free forgivable loan program oriented to small businesses. **Contact:** *Department of Commerce and Development, P.O. Box 6000, Centennial Building, Fredericton, New Brunswick, Canada E3B 5H1.*

New Brunswick Provincial Holdings Limited

Will take an equity position in manufacturing companies locating in New Brunswick. **Contact:** *N.B. Provincial Holdings Ltd., P.O. Box 6000, Centennial Building, Fredericton, New Brunswick, Canada E3B 5H1.*

Research and Productivity Council

Provides technical support services for industry in New Brunswick, including engineering and problem solving, industrial research and development, and management consulting, on a cost-recovery basis. **Contact:** *N.B. Research and Productivity Council, College Hill Road, Fredericton, New Brunswick, Canada E3B 5C8.*

NEWFOUNDLAND

Newfoundland and Labrador Development Corporation

This joint federal-provincial corporation provides equity and loan financing up to \$1 million for establishing or expanding small and medium-sized businesses. **Contact:** *Newfoundland and Labrador Development Corporation, P.O. Box 1738, 44 Torbay Road, St. John's, Newfoundland, Canada A1C 5P5.*

Department of Industrial Development

Approved financing of new or expanding business ventures in amounts of more than \$1 million. **Contact:** *Department of Industrial Development, Confederation Building, St. John's, Newfoundland, Canada A1C 5T7.*

NOVA SCOTIA

Industrial Estates Ltd.

Long-term loans on 20-year first mortgages on 100% of the cost of new land and buildings of secondary manufacturers and up to 60% financing of new machinery with 10 years to repay. Minimum loan financing available under this program is \$150,000. **Contact:** *Industrial Estates Ltd, 5151 George St., Suite 700, Halifax, Nova Scotia, Canada B3J 1M5.*

Industrial Development Manager, Industrial Estates Limited, Niederkasseler Kirchweg 95, 4000 Düsseldorf 11, Germany

Industrial Loan Act, Industrial Development Act

Loans for new or expanding resource-based industries and tourist facilities at current interest rates. **Contact:** *Nova Scotia Resources Development Board, Bank of Montreal Towers, P.O. Box 519, Halifax, Nova Scotia, Canada B3J 2R7.*

Department of Development

The department offers a number of assistance programs to business and industry. These include: The Marketing Assistance Program, the Management Development Program, the Product Design and Development Program, the Rural Industry Program, the Opportunity Identification Program and the Industrial Malls Program. The Strait of Canso Development Office is a joint federal-provincial agency funded by the Department of Regional Economic Expansion and the Nova Scotia Department of Development. The deepwater port is particularly appropriate for the location of heavy industry, particularly as related to the petrochemical industry and "bulk supership" shipments. **Contact:** *Nova Scotia Department of Development, 5151 George St., P.O. Box 519, Halifax, Nova Scotia, Canada B3J 2R7.*

ONTARIO

Ontario Development Corporation

Programs include: industrial mortgages and leasebacks, export support loans, venture capital loans, pollution control equipment loans, loans to small businesses, tourist industry loans, and incentive loans to encourage industries to locate or expand in slow-growth areas of Ontario. **Contact:** *Ontario Development Corporation, Mowat Block, 3rd floor, 900 Bay St., Toronto, Ontario, Canada M7A 2E7.*

Ontario Industrial Training Program

Assistance for training programs to companies locating in areas where such

programs will help improve employment opportunities. **Contact:** *Ministry of Colleges and Universities, Industrial Training Branch, Mowat Block, 900 Bay St., Toronto, Ontario, Canada M7A 2E7.*

Retail sales tax exemption for production machinery and equipment

A retail sales tax exemption is granted to a manufacturer or producer who purchases machinery and equipment which alters the goods in process as well as a wide variety of mining, logging, waste removal and pollution control equipment and other types of machinery. **Contact:** *Ministry of Revenue, Retail Sales Tax Branch, Queen's Park, Toronto, Ontario, Canada M7A 1X9.*

PRINCE EDWARD ISLAND

Industrial Enterprises Incorporated

Provides assistance for capital expenditures in the form of first mortgage loans on real estate and/or equipment. **Contact:** *Industrial Enterprises Incorporated, West Royalty Industrial Park, Charlottetown, Prince Edward Island, Canada C1E 1B0.*

P.E.I. Department of Industry and Commerce

The Industrial Assistance Program provides assistance in the form of forgivable performance loans to manufacturing and processing businesses. Where the maximum capital expenditure is \$25,000, eligible businesses may receive a maximum forgivable performance loan of \$12,500 or 25% of the total capital cost and up to \$2,000 for each new job created. The Service Sector Assistance Program provides assistance to primary resource industries and/or secondary manufacturers and processors to purchase new, used, or reconditioned equipment and machinery. It also assists in the financing of construction or renovation of production facilities. For a maximum capital expenditure of \$60,000, the amount of forgivable performance loan would be 25% of the approved capital costs to a maximum of \$30,000 and up to \$2,000 for each new full-time job created. Financing for these programs is on a joint federal-provincial basis. **Contact:** *Department of Industry and Commerce, P.O. Box 2000, 180 Kent St., Charlottetown, Prince Edward Island, Canada C1A 7N8.*

QUEBEC

Quebec Industrial Development Corporation (QIDC)

QIDC offers financial assistance to manufacturing projects in compliance with the industrial policies of the Quebec Ministry of Industry and Commerce.

Long-term financing of capital costs, reduced rates of interest and shared equity in manufacturing projects, are available. These forms of financial assistance are offered to most sectors of industry in Quebec by QIDC together with direct government grants offered by DREE's specially-designated zone in Montreal. **Contact:** *Quebec Industrial Development Corporation, 1126, Chemin Saint-Louis, Room 700, Sillery, Quebec, Canada G1S 1E5.*

Quebec Ministry of Industry and Commerce

An industrial financing fund to encourage the development of small plants through fiscal abatement at the accrued rate of 25% annually and a tax rebate to encourage regional industrial development for the general industrial sector is available in addition to QIDC development assistance programs. (See listing above.) The costs of exporting Quebec-manufactured products are supported by interim financing. The ministry also contributes financially to the organization of trade missions, feasibility studies and market surveys, promotes manufacturing under foreign licenses, conducts regional labour surveys, and studies problems related to industrial productivity, at the request of potential investors. The ministry maintains permanent economic delegations in New York, Boston, Chicago, Dallas, Los Angeles, Toronto, Brussels, Dusseldorf, London, Milan, Paris, and Tokyo. **Contact:** *Quebec Ministry of Industry and Commerce, Industrial Promotion Directorate, Place Ville-Marie, Suite 2300, Montreal, Quebec, Canada H3B 3M6.*

SOQUEM, SOQUIM, SOQUIP, SOQUIA, REXFOR

These Quebec government-owned societies are involved in financial participation in joint ventures with Canadian or foreign private sector investors in the mining sector (SOQUEM), oil and gas (SOQUIP), agriculture and food industries (SOQUIA) and forestry (REXFOR). **Contact:** *Quebec Ministry of Industry and Commerce, Industrial Promotion Directorate, Place Ville-Marie, Suite 2300, Montreal, Quebec, Canada H3B 3M6.*

SASKATCHEWAN

Saskatchewan Economic Development Corporation (SEDCO)

Provides mortgages up to 20 years, loan guarantees, venture capital and industrial land for lease or sale. **Contact:** *Saskatchewan Economic Development Corporation, 1106 Winnipeg St., Regina, Saskatchewan, Canada S4R 6N9.*

Book list

International business

The Board of Directors: Perspectives and Practices in Nine Countries

Bacon, Jeremy, and Brown, James K.
New York: The Conference Board Inc.,
1977. Report No. 728

Explores the changing relationships between board of directors and management, with particular reference to three developments — workers as directors, two-tier boards, and the revival of board independence — and compares characteristics and practices of boards in the Federal Republic of Germany, Sweden, United Kingdom, France, Turkey, United States, Canada, Venezuela and Japan.

Multinational Corporations in Comparative Perspective

LaPolambara, Joseph, and Blank, Stephen
New York: The Conference Board Inc.,
1977. Report No. 725

This report (the second in a series on the conduct of multinational enterprises abroad) compares U.S.-based multinationals with those based in other countries as to organizational structure and style, attitude to joint ventures, management policy, and effectiveness in analyzing host country environments.

Political Risks in International Business

Thunell, Lars H.
New York: Praeger Publishers, 1977

A statistical analysis of the relationship between investment decisions of multinational enterprises and host country political conditions.

International Intracorporate Pricing — Non-American Systems and Views

Arpan, Jeffrey S.
New York: Praeger Publishers, 1977

A study of the factors involved in the transfer-pricing decisions of non-American firms with subsidiaries in the United States, based on a sample survey of companies.

The Multinational Enterprise in a Hostile World

Curzon, Gerald, and Curzon, Victoria (editors)
Toronto: MacMillan Canada/Maclean-Hunter, 1977

Academics, civil servants and journalists discuss some of the areas of conflict between state and multinational enterprise.

The Case for the Multinational Corporation

Madden, Carl H. (editor)
New York: Praeger Publishers, 1977

Papers presented at the National Chamber Foundation's National Conference on Multinational Corporations for Corporate Leaders, November, 1975. Subjects include transfer-pricing policies, effects of investments on the economies of host and parent countries, tax policies affecting multinational corporations, and other current questions.

In Defence of Multinationals: The Myths, the Realities and the Future

Roach, E. Hugh
Toronto: Canadian Institute of International Affairs, 1977

A short rebuttal of some of the common criticisms of multinationals in such areas as ownership, employment of nationals in management, disclosure of financial data, economic impact on host countries, technology transfer and intracorporate pricing.

Multinationals from Small Countries

Agmon, Tamir and Kindleberger, C.P.
Cambridge, Mass.: The MIT Press, 1977

Papers presented at a 1976 conference sponsored by the Center for International Studies and the Sloan School of Management at M.I.T. on aspects of the operations of international firms — headquartered in small countries, including developing countries.

Canada: Business, Investment, Government Policy

Assessing Trends in Canada's Competitive Position

Frank, James G.
Ottawa: The Conference Board in Canada, 1977

An examination of recent trends in the competitiveness of Canadian industry compared with its counterparts in the United States. The analysis focuses on two determinants of competitiveness — trends in relative labour costs and in relative productivity levels.

Sources of Venture Capital in Canada

McQuillan, Peter, and Taylor, Howard
Ottawa, Department of Industry, Trade & Commerce, 1978

An outline of the policies and practices of venture capitalists, with profiles of venture capital groups in Canada, as well as a survey of other sources of financing available to business.

Canadian Directorship Practices: A Profile

Ferrari, Leslie Ann
Ottawa: The Conference Board in Canada, 1977. Canadian Studies: No. 45

Results of a survey of Canadian companies, including foreign-owned firms, on the characteristics of their boards of directors. The report shows the size of boards, numbers of inside and outside directors, citizenship and residence of inside and outside directors and stock ownership requirements.

The Availability of Capital to Fund the Development of Canadian Energy Supplies

Downs, J. R.
Calgary: Canadian Energy Research Institute, University of Calgary, Alberta 1977

Outlines the scale of investment required for future energy development in Canada and examines the likely sources of funds, with special reference to the financing problems and issues that will arise in each major energy sector.

Oil in the Seventies: Essays on Energy Policy

Watkins, G. Campbell and Walker, Michael (editors)
Vancouver: The Fraser Institute, 1977

Essays by Canadian and American authorities on Canadian demand for energy, oil and gas prices in Canada, government enterprise, multinationals and the financial position in the petroleum industry.

Government Support of Scientific Research and Development

McFetridge, D. G.
Downsview (Ont.) and Buffalo (N.Y.): University of Toronto Press, 1977

An assessment of Canadian government policies in support of research and development, and of alternative policies.

TABLE 3 — COUNTRY OF CONTROL

REVIEWABLE ACQUISITION CASES

	1974†	1975	1976	1977
Total	102	166	171	261
United States	61	116	109	171
United Kingdom	21	15	23	40
Other Europe	15	27	34	41
Belgium	1	2	1	2
Denmark	—	—	—	2
France	3	6	6	6
Germany, West	5	2	10	15
Italy	—	2	1	3
Liechtenstein	2	2	—	—
Luxembourg	—	—	3	—
Netherlands	—	5	—	4
Norway	—	1	—	—
Sweden	—	2	9	2
Switzerland	4	5	4	7
All other	5	8	5	9
Australia	2	1	—	1
Bermuda	—	2	1	—
Japan	2	2	3	3
Others	1	3	1	5
Allowed cases as percent of resolved	%	%	%	%
United States	65	77	73	91
United Kingdom	70	79	82	95
Other Europe	71	50	86	90
All other	50	30	100	80

† Provisions for review of acquisitions came into force April 9, 1974.

REVIEWABLE NEW BUSINESS CASES

	1975*	1976	1977
Total	6	196	328
United States	4	90	184
United Kingdom	—	22	30
Other Europe	1	63	85
Belgium	—	1	—
Denmark	—	5	6
Finland	—	1	1
France	—	9	17
Germany, West	—	22	26
Greece	—	—	1
Italy	1	9	10
Liechtenstein	—	2	—
Monaco	—	—	1
Netherlands	—	2	3
Norway	—	—	3
Spain	—	1	—
Sweden	—	3	9
Switzerland	—	8	8
All other	1	21	29
Australia	—	2	3
Hong Kong	—	3	3
India	—	3	1
Japan	—	4	10
Others	1	9	12
Allowed cases as percent of resolved	%	%	%
United States	—	73	88
United Kingdom	—	93	82
Other Europe	—	82	94
All other	—	95	77

* Provisions for review of new businesses came into force October 15, 1975.

Statistical tables

QUARTERLY FIGURES

TABLE 1 — SUMMARY

REVIEWABLE ACQUISITION CASES

	1976		1977			
	third quarter	fourth quarter	first quarter	second quarter	third quarter	fourth quarter
Total	45	58	41	60	80	80
Industry						
Primary	4	3	3	2	11	4
Manufacturing	28	29	16	27	28	34
Construction and services	13	26	22	31	41	42
Country of control						
United States	28	40	25	40	55	52
United Kingdom	7	8	10	10	9	11
Other Europe	8	9	6	4	16	14
All other	2	1	—	6	—	3

REVIEWABLE NEW BUSINESS CASES

	1976		1977			
	third quarter	fourth quarter	first quarter	second quarter	third quarter	fourth quarter
Total	64	61	62	93	86	87
Industry						
Primary	3	5	3	6	8	5
Manufacturing	17	17	16	25	29	25
Construction and services	44	39	43	62	49	57
Country of control						
United States	31	28	35	48	52	49
United Kingdom	7	6	5	11	6	8
Other Europe	17	23	15	24	21	25
All other	9	4	7	10	7	5

ANNUAL FIGURES

TABLE 2 — OUTCOME OR STATUS

REVIEWABLE ACQUISITION CASES

	1974†	1975	1976	1977
Reviewable new cases	102	166	171	261
Carryover from previous period	—	51	55	67
Total of above	102	217	226	328
Total resolved	51	162	159	277
Allowed	33	116	124	232
Disallowed	9	21	19	21
Withdrawn	9	25	16	24
Carried over to next period	51	55	67	51
Allowed cases as percent of resolved	65%	72%	78%	84%

REVIEWABLE NEW BUSINESS CASES

	1975*	1976	1977
Reviewable new cases	6	196	328
Carryover from previous period	—	6	60
Total of above	6	202	388
Total resolved	—	142	336
Allowed	—	115	297
Disallowed	—	9	12
Withdrawn	—	18	27
Carried over to next period	6	60	52
Allowed cases as percent of resolved	—	81%	88%

† Provisions for review of acquisitions came into force April 9, 1974.

* Provisions for review of new businesses came into force October 15, 1975.

TABLE 4 — INDUSTRIAL SECTOR

REVIEWABLE ACQUISITION CASES

	1974†	1975	1976	1977
Total	102	166	171	261
Primary	15	18	15	20
Agriculture	2	—	2	3
Forestry	3	1	—	1
Fishing and trapping	—	1	—	1
Mines, quarries, oil wells	10	16	13	15
Manufacturing	47	82	93	106
Food and beverage	5	10	9	15
Tobacco products	1	1	—	—
Rubber and plastic products	2	2	3	6
Leather	1	1	1	—
Textiles	2	—	2	4
Knitting mills	1	1	—	1
Clothing	—	2	1	—
Wood	5	6	2	5
Furniture and fixture	—	2	4	2
Paper and allied	1	2	1	5
Printing, publishing, and allied	—	3	1	2
Primary metal	—	3	7	2
Metal fabrication	2	6	12	9
Machinery	5	11	4	9
Transportation equipment	8	6	3	5
Electrical products	1	9	11	11
Non metallic mineral products	8	3	9	5
Petroleum and coal products	—	—	2	1
Chemical	3	11	15	10
Miscellaneous	2	3	6	14
Construction and services	40	66	63	135
Construction	2	2	2	3
Transportation, communication, utilities	6	6	9	10
Trade	18	37	38	73
Finance, insurance, real estate	10	14	8	16
Community, business, personal services	4	7	6	33

† Provisions for review of acquisitions came into force April 9, 1974.

REVIEWABLE NEW BUSINESS CASES

	1975*	1976	1977
Total	6	196	328
Primary	—	12	22
Agriculture	—	2	5
Forestry	—	—	2
Fishing and trapping	—	—	1
Mines, quarries, oil wells	—	10	14
Manufacturing	2	67	95
Food and beverage	—	3	7
Tobacco products	—	—	—
Rubber and plastic products	—	3	4
Leather	—	—	1
Textiles	—	2	4
Knitting mills	—	—	2
Clothing	—	2	3
Wood	—	2	2
Furniture and fixture	1	2	1
Paper and allied	—	1	2
Printing, publishing, and allied	—	—	—
Primary metal	—	5	6
Metal fabrication	1	10	13
Machinery	—	5	14
Transportation equipment	—	1	6
Electrical products	—	7	5
Non metallic mineral products	—	3	5
Petroleum and coal products	—	—	—
Chemical	—	6	3
Miscellaneous	—	14	17
Construction and services	4	117	211
Construction	—	4	4
Transportation, communication, utilities	1	10	5
Trade	1	68	131
Finance, insurance, real estate	1	10	17
Community, business, personal services	1	25	54

* Provisions for review of new businesses came into force October 15, 1975.

Foreign Investment Review Agency Publications *

- Foreign Investment REVIEW
 - a quarterly journal on investment conditions in Canada
- L'investisseur étranger
 - French language edition of Foreign Investment REVIEW
- Annual Report 1974/75
- Annual Report 1975/76
- Annual Report 1976/77

- Foreign Investment Review Agency Information Kit (Red) — of particular interest to lawyers and consultants.
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 - A Guide to Filing Notice with the Foreign Investment Review Agency
 - Forms for use in giving notice pursuant to the Foreign Investment Review Act
 - The Foreign Investment Review Act (S.C. 1973, c46)
 - The Foreign Investment Review Regulations (SOR/77-226)
 - Guidelines
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- FIRA Paper series
 - Published in 1977
 - No. 1: Foreign Acquisition Activity in Canada: A Long-Term Perspective by G. A. Edwards
 - No. 2: Selected Readings in Canadian Legislation Affecting Foreign Investment in Canada (Part I)

- Weekly news releases on FIRA activities

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