

INDUSTRIAL CONCENTRATION AND CROWN CORPORATIONS

IN

BRITISH COLUMBIA

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BY

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Part Two: B.C. Crown Corporations

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Chapter Three: Crown Corporations / Concentration Regulation

3.1 Crown Corporations and Industrial Concentration

This report's important chapter aims to address the following queries:

- a. How much do important Crown Corporations add to British Columbia's industrial concentration?
- b. Do these important Crown Corporations' operations impede the growth of industry?

In response to the first query, British Columbia's industrial concentration is significantly influenced by a few non-B.C. crown enterprises. This is especially true in the important industrial sectors of pipelines, ports, railroads, and refineries of crude oil.

It is very challenging to determine whether or not these crown enterprises impede industrial growth. There have been claims that these companies have occasionally caused industrial development bottlenecks in British Columbia, harming the province's Gross Provincial Product (G.P.P.), labor force, and consumers.

Why might non-B.C. crown corporations impede economic growth? A different report on Federal Crown Corporations has addressed this in part. There is evidence that suggests Federal Crown Corporations may favor Canada's denser populated central regions. Although these companies do not intend to impede British Columbia's progress, this seems to be the inevitable outcome of the political process and Federal Crown businesses' accountability to the Canadian Parliament.

The great majority of directors and officials of federal crown corporations did not live in British Columbia, according to this linked Crown Corporation study. This is true even though a sizable amount of federal crown corporations' operations take place in British Columbia.

It is impossible to determine whether a board of directors' member's place of residence will affect their decisions. That such a circumstance to exist, however, does seem out of the ordinary. When assuming a directorship in a public business, a Canadian director of a private firm would apply the criterion of no conflict of interest. It would be quite unusual if their views and those of Central Canadian residents did not overlap on a significant number of topics, considering their residency and the political character of such appointments.

I shall now go into greater detail about these crown businesses' operations for ports, trains, pipelines, and crude oil refineries in order to demonstrate my worries about them.

3.2 Ports

- a. Port of Vancouver

Total tonnage through the Port of Vancouver in 1980 was 49,204,000 metric tonnes, a 9.4% increase over the 1979 tonnage. The total number of containers handled increased by 12.7% in 1980 124,644 TEU's from 110,599 TEU's in 1979, with an overall increase in tonnage of 12.2% to 10,095,00 tonnes from 976,00 tonnes in 1979.

**Principal Commodities Moving Through the Port
Five Year Comparison in Metric Tonnes**

	1976 (000)	1977 (000)	1978 (000)	1979 (000)	1980 (000)
Exports					
Grain	6,377	7,566	7,784	7,578	7,960
Coal and coke	11,488	12,517	14,426	13,833	15,002
Sulphur	2,345	3,375	3,967	4,069	5,112
Lumber and logs	2,287	2,313	2,280	2,401	2,549
Pulp	459	707	876	758	815
Potash	1,590	1,967	2,744	3,175	3,448
Copper ores	543	719	770	674	653
Fodder and feed	376	484	536	640	460
Propane gas	238	241	152	211	237
Imports					
Raw sugar	44	105	106	102	126
Phosphate rock	545	735	756	952	952
Common salt	318	318	417	348	401
Iron, steel, metals	171	175	139	165	110
Container					
Numbers					
Foreign Inward	43,000	44,681	45,887	47,428	55,313
Outward	29,600	53,258	55,672	53,697	58,704
Domestic Inward	11,200	10,316	5,063	3,627	5,433
Outward	12,100	11,261	8,394	5,847	5,699
Total Harbour	95,900	119,516	115,016	110,599	125,149
Tonnages					
Foreign Inward	331,854	334,867	331,591	316,183	353,359
Outward	392,999	521,502	585,410	571,077	637,359
Domestic Inward	146,513	164,177	91,391	25,714	47,947
Outward	87,998	83,700	70,506	62,577	56,126
Total Harbour	959,364	1,104,246	1,078,898	975,551	1,094,791

The commodity that continues to dominate the Port's tonnage is coal, with an 8.5% increase in throughput to 15,002,000 tonnes in 1980. The largest gain in shipments was the 25.6% increase registered by sulphur to 5,112,000 tonnes. Grain recorded a 5% gain to 7,924,000 tonnes. Potash and pulp shipments increased by 8.6% and 3% respectively, while lumber shipments decreased by 2.2%.

The following table relates capital investment by the N.H.B. to traffic volumes from 1970 to 1980.

Port of Vancouver

Traffic Volumes and Capital Investment (N.H.B.)

<u>Year</u>	<u>Traffic Volume</u> (Millions of Tonnes)	<u>Capital Investment</u> (\$ in Millions)
1970	24.6	2.1
1971	32.0	5.2
1972	33.3	4.6
1973	38.2	7.9
1974	38.0	12.6
1975	34.9	16.0
1976	37.1	6.4
1977	42.8	6.7
1978	44.8	2.3
1979	45.0	2.6
1980	49.2	4.7

In addition to the N.H.B., private terminal operators and the many ancilliary firms operating in the harbour have undertaken and will continue to undertake substantial investment in order to meet future needs. Several examples of private investment of the last number of years are:

- 1) Dow Chemical - tank farm
- 2) Fibreco - wood chips export facility
- 3) Burrard-Yarrows - floating dry dock
- 4) James Richardson - grain elevator

Coinciding with the fixed plant investment by private concerns are their expenditures for operating equipment such as forklifts, straddle carriers and other forms of plant machinery. No figures are available concerning private investment.

Investment intentions by the NHB to 1985 with forecast traffic volume follow:

Port of Vancouver

Expected Traffic Volumes and Investment

<u>Year</u>	<u>Traffic Volume</u>	<u>Capital Investment</u>
1981	49.5	24.5
1982	52.5	39.0
1983	55.7	25.7
1984	59.0	12.0
1985	62.5	8.5

Major investment programs planned by the Port for the period 1981 to 1985 include: (millions)

Roberts Bank - Phase II	\$48.0
Vanterm - Capacity Expansion	11.7
Lynnterm - Terminal Expansion	3.3
Centennial - Terminal Improvements	9.0
Pier B-C Passenger Facility	17.0
Roads and Overpasses	8.0

b. Port of Prince Rupert

Total tonnage through the port in 1980 was 2,620,727 metric tonnes, a 13.9% increase over the 1979 tonnage. The number of vessels increased from 1,740 to 2,068. Table contains a three year review of some of the major components of the Ports tonnage.

Prince Rupert is located on the northwest side of Kaien Island and on the south side of a deep inlet which forms a sheltered, deep-water harbour. The harbour is open on a year round basis with no ice at any period. It is the terminus of the Canadian National Railways trans-continental system, as well as the centre of extensive mining, lumbering, and fishing industries.

Principle Commodities Moving through the Port
Three Year Comparison in Metric Tons

	1978 (00)	1979 (00)	1980 (00)
<u>Exports</u>			
Grain	10,616	12,523	13,926
Woodpulp & Paper	2,063	2,809	3,294
Lumber, Logs & Plywood	777	1,186	1,189
Sulphur		252	1,039
Explosives	16		40
LP Gas	69	69	37
Fish	33	29	23
General	34	195	188
<u>Total</u>			
Exports	13,612	17,066	20,739
Imports	232	97	20
Domestic In	3,815	3,825	4,110
Domestic Out	1,166	1,572	1,337
<u>Grand Total</u>	18,825	22,562	26,207

BERTHING FACILITIES

Fairview Terminal

Wharf length - 427 metres

Depth - 13.7 metres

Shed Area - 4 585 m²

Open Area - 130,000 m²

A modern deep sea terminal equipped with an up-to-date 120 metric tonne Ro/Ro ramp, lumber dip tank, and truck and rail loading bays. The terminal is a general purpose facility currently used for the export of lumber, pelletized sulphur, and grain by-products.

Fairview Terminal is owned and operated by the National Harbours Board.

Ocean Dock

Wharf length - 150 metres

Depth - 9.15 metres

Ocean Dock is a pulp structure with a wooden deck. It is primarily used for passenger ships (cruise) and ships loading logs overside. Vehicle weight limit of 15 metric tonnes.

B.C. Timber Company Limited

Wharf length - 360 metres

Depth - 10.6 metres

Shed Area - 160 m²

This dock is privately owned and is used for the export of pulp.

Prince Rupert Grain Limited

Wharf length - 305 metres

Depth - 14 metres

Storage Capacity - 25,000 bushels

Loading Capacity - 75,000 bushels per hour

- 5 shippers

Beam Restrictions - None

The investment intentions of the federal government with respect to port facilities were reaffirmed in an October 30, 1981 press release. The details of the business joint undertaking between the National Harbours Board and Federal Commerce and Navigation Limited follow:

1. A joint undertaking will be formed between the National Harbours Board and Federal Commerce and Navigation Limited (FEDCOM), a Canadian Company.
2. The capital structure of the new corporation will be composed of 80 percent debt and 20 percent equity. The NHB will assume a 90 percent equity position in the corporation and Federal Commerce and Navigation Limited will assume the remaining 10 percent equity position.

3. The corporation is committed to build the coal terminal at Ridley Island and the completion date is scheduled to match the date at which the coal becomes available.
4. Loans for 80 percent of the financial requirements will be obtained from Canadian financial institutions, and will be guaranteed by the federal government. The remaining 20 percent will be equally shared by the NHB and Federal Commerce and Navigation Limited. The guarantee will be interim and replaced by throughput contracts for coal.
5. The new corporation will pass on the benefits to be derived from the government guarantee and a lower return on equity participation in the form of lower throughput charges to the coal shippers after 1989.
6. Upon the commencement of operations the new corporation is committed to meet interest payments on the capital loan from operating cash flows, while principal payments will begin only when any short-term debt has been eliminated.
7. Once the terminal is completed and a mutually agreed throughput has been obtained, any subsequent operating cash deficiencies will be borrowed and guaranteed 10 percent by FEDCOM and 90 percent by the federal government. This borrowing would be considered as short-term debt, and the repayment of the long-term debt and interest associated with the capital cost of construction will be subordinated to the repayment of the short-term debt.
8. The terminal will be operated as a neutral public facility with fair and equal access for all coal shippers on a first-come, first-served basis.
9. Fair and equitable rates will be charged to all coal shippers. Provision will be made to expand the coal terminal's capacity as warranted by demand.
10. Federal Commerce and Navigation Company Limited, will manage the operation of the coal terminal under contract with the new corporation.

3.3 Rail

a) CP Railways

While CPR is not a crown corporation, we document its activities in this section for completeness.

Following the extensive productivity and equipment improvements of the 1960's and 1970's, CP Rail has undertaken an accelerated program of capacity improvements and expansion -- the largest undertaking since the building of the original lines -- including double-tracking, grade reductions and yard expansion.

Net income for CP Rail amounted to \$121.6 million in 1980. This was \$12.9 million more than in 1979 and \$45.7 million greater than in 1978. Total revenue amounted to \$1,773.6 million in 1980, \$1,619.0 million in 1979 and \$1,428.4 million in 1978. Both in 1980 and 1979 the increases were for the most part

attributable to freight revenue. In 1980 freight revenue was up \$148.9 million, mainly as a result of improved prices; volume was essentially unchanged. Major commodities that contributed to higher revenues in 1980 were petrochemical products, pulp and paper, sulphur, food products, primary manufactured iron and steel, and potash.

Total rail expenses in 1980 were \$1,642.0 million, up from \$1,510.3 in 1979 and \$1,352.5 million in 1978. The increase of \$141.7 million in 1980 was attributable to continued escalation of labour rates and material and fuel prices.

Different and difficult geography in western Canada has presented CP Rail with different obstacles to overcome. Four major bottlenecks exist in the mountain ranges between the prairies and the west coast.

The most restrictive capacity bottleneck on CP Rail's main line between Calgary and Vancouver remains the Rogers Pass in the Selkirk Mountains in British Columbia. To eliminate the existing 2.6 per cent grade, CP plans to spend more than \$500 million on two tunnels and eleven new bridges. The new route would have a grade of no more than one per cent. This will be CP's single biggest building project since the transcontinental line was completed in 1985.

The other bottlenecks were at Salmon Arm, Revelstoke, and Lake Louise. Twenty one miles of double track at a cost of \$46 million were built to a maximum grade of one per cent. The old track continues to be used for east bound trains while all heavy westbound traffic moves on the new track.

CP Rail measures capacity in terms of the number of trains per day that can be moved over a line on a sustained basis under normal operating conditions, and includes an allowance for track maintenance. The following chart (from notes for presentation to Action Meeting on "Canada's Crises in Rail Transportation Capacity") by J. D. Bromley, Vice-President, Pacific Region CP Rail) shows a high and low range of projected traffic translated from tone per day. (Chart: Required # of Trains to Carry Westbound Traffic - CP Rail).

From the chart it appears that CP Rail should be handling 20 trains per day, Westbound. The existing capacity of its mainline is 15 trains per day. When the Rogers project is complete, capacity immediately jumps to 19 trains per day and CP will be able to use heavier trains.

Minimum capital requirements for CP Rail for the past five years were \$0.8 billion dollars. These requirements will grow to \$3 billion for 1981-85 and to almost \$5 billion for the 1986-90 period. Of the \$7.6 billion required, about two-thirds will be spent on fixed plant replacement, improvements and expansion and one-third on freight equipment and locomotives.

Western Canada's potential economic growth during the 1980's is unprecedented, and can bring substantial economic and social benefits to all Canadians. Western exports of grain, coal, potash, sulphur, petrochemicals, forest products and other commodities will more than double by 1990, and have a vital role in realizing that potential.

Billions of dollars must be invested in new rail capacity if CN Rail, CP Rail, Transport Canada, and B.C. Rail are to move these substantially larger tonnages. Traffic rationing on the mountain lines of CN and CP may begin as early as 1983-1984. Such rationing due to a rail capacity shortfall would do great damage to Canada's reputation as a reliable exporter of commodities. (Action Meeting: "Canada's Crisis in Rail Transportation Capacity: Proceedings: Vancouver, B.C.).

Among the potential results of a rail line capacity shortfall are:

- diversion of some traffic to more expensive modes of transport such as road and water.
- increases in transportation costs beyond what would normally occur (rate control in Canada is based on modal competition with rationing of capacity, competition for space would drive prices for transportation services up. The only current significant exceptions to rate control through modal competition, are the statutory grain rates.
- decline in rail service resulting from capacity problems and the inability to handle more business.
- diversion of traffic through the U.S. resulting in higher costs and lost jobs for Canadians.
- slower growth in the extractive industries than would otherwise occur, with a negative impact in Canadian suppliers of goods and services.

Almost 40 per cent of all freight transported in Canada is handled by the railways. The country's geography and world demand for Canada's basic natural resource guarantees the need for railways will accelerate. Given the distribution of resources and rates of growth of demand, 70 per cent of railway traffic growth will occur in Western Canada, including movements from west to east and to and from the United States but primarily made up of westbound traffic to the Pacific coast.

b) CN Rail

CN Rail had revenues of \$2,645.2 million in 1980 and expenditures of \$2,394.7 million resulting in income of \$250.5 million. In 1980, CN Rail invested capital of \$453.9 million, an increase of \$140.7 million over the 1979 level. This total was made up of \$408.1 million in capital expenditures, \$34.5 million related to the acquisition of Northern Alberta Railways and \$11.3 million for the capital value of leased rolling stock.

Traffic on CN Rails Western system has risen dramatically over the past two decades. Prospective movements of coal, sulphur, grain, potash and forest products in the next decade will call for a capital intensive program of railway plant expansion. Traffic on the busiest section of CN track between Edmonton and Red Pass Junction has passed 50 million gross ton miles in 1980 and should exceed 86 million gross ton miles (MGTM) by 1990. Growth on the British Columbia south line starts from a lower base of 39 MGTM in 1980 but still rises to 69 MGTRM by the end of the decade. The British Columbia north line is a special case in that a good part of its growth is in British Columbia coal which moves on CN only from Prince George to Prince Rupert.

CN has already embarked on a program of double tracking, beginning in the crucial segments between Edmonton and Red Pass Junction. The following table displays the Mountain Region Plant Improvement/Expansion Program.

Unless the financial community has confidence in the future of the railways, capital funds will not be readily available from the market place. Lack of a Crow resolution hampers CN earnings, the rate of return on investment, and consequently CN's ability to borrow. Most railway traffic other than grain is handled in a competitive environment.

The average rates for coal, sulphur and potash are four to five times higher than statutory grain on a revenue-ton-mile basis. They are higher even though this traffic can be handled much more efficiently and therefore at lower cost than grain.

Funds currently foreseen as available for CN investment in the 1980's fall short of the needs. CN Rail's current 5-year plan contemplates some \$3 billion available for capital investment but this amount falls \$1.6 billion short of requirements.

c) British Columbia Railway

Freight traffic accounts for 79 percent of the railway's total revenues and approximately 58 percent of the freight revenue is derived from products of the forest. Of total annual carloadings, more than two-thirds are derived from forest products (excluding pulp and paper), and 5.6 percent from manufacturing. The major remaining categories include cars from connecting railroads, agricultural products, less than carload lots, mining and piggyback shipments.

With railway connections at North Vancouver, Prince George and Dawson Creek, B.C. Rail's freight service extends to all corners of North America. The two national railways and two major U.S. carriers form a close network linking the railway with major points on the continent.

Reflecting its economic significance to the province, some 20 percent of net rail freight tons loaded in British Columbia originate on the B.C. Railway which serves approximately 700 carload shippers including 71 planer and sawmills, six veneer and plywood plants and six pulp mills.

The railways's 250 mile (400 km) Fort Nelson Extension, completed in September, 1971, is now being upgraded to branch line standards.

Work began in June, 1978 on a three year rehabilitation program expected to cost approximately \$42.7 million. The program has reduced derailments and maintenance-of-way costs and has resulted in increased operating efficiency.

B.C. Rail today has 1,631 miles (2,609.6 km) of track, including yard tracks, sidings and extensions of which 1,260.8 miles (2,017.3 km) are designated as "main trackage".

Equipment comprises 128 diesel electric locomotives, including 12 new 3000 h.p. units acquired from General Motors during the last half of 1980, more than 10,000 freight cars and six self-propelling passenger rail diesel cars. Its fleet of trucks and road trailers totals some 340 units.

On behalf of the Province of British Columbia, pre-engineering studies were completed on rail access routes to the north east coal fields. Detailed engineering studies have also begun on the exploration and design of proposed tunnels and grade on the Tumbler Ridge branch line route.

The recent announcement that the development of the north east coal fields of British Columbia will proceed has resulted in further activities by the railway towards the construction of the 130 ton branchline into the coal fields from a point near Anzac, 121 km north of Prince George. (February, 1982).

Commodities Carried

Carloadings:

	1980	1979	1978	1977	1976
Lumber (to Canadian & U.S. & off-shore markets - Includes plywood & veneer)	50,677	58,286	64,586	65,654	49,341
Other Forest Products (to Canadian & U.S. & off-shore markets - Includes logs, wood chips & miscellaneous forest products)	50,475	45,782	44,328	39,217	32,944
Manufactured & Miscellaneous	23,141	22,482	23,126	23,449	19,014
Piggyback	8,716	9,175	8,762	8,560	5,699
Merchandise (less-than-carload lots)	3,147	4,202	4,547	4,643	3,985
Products of Mines	4,598	2,652	2,553	3,644	2,973
Grain	2,855	1,819	1,695	2,749	2,539
Total Revenue Cars Loaded on Line	143,609	144,398	149,597	147,916	116,495
Received from Connections	4,634	5,525	5,253	4,681	2,985
	143,243	149,923	154,850	152,597	119,480
 Rolling Stock Fleet					
Motive power-diesel units	126	116	119	119	119
Freight cars	9,966	9,862	9,376	9,254	8,851
Passenger cars	7	8	6	6	5
Boarding and work cars	509	538	549	562	546

3.4 Natural Gas Pipelines

The structure of the B.C. Natural gas industry is relatively simple. Westcoast Transmission company owns the trunk lines in the Province. Westcoast purchases domestic gas on the basis of an agreement from the British Columbia Petroleum Corporation (BCPC) and out of province gas from out of province producers. B.C.P.C. establishes and administers purchase contracts with all of B.C.'s natural gas producers. Through resale of natural gas to Westcoast, BCPC collects an implicit royalty on behalf of the Provincial government.

Westcoast supplies the domestic market through eight natural gas utilities. B.C. Hydro and Power Authority serves the Lower Mainland and Victoria.

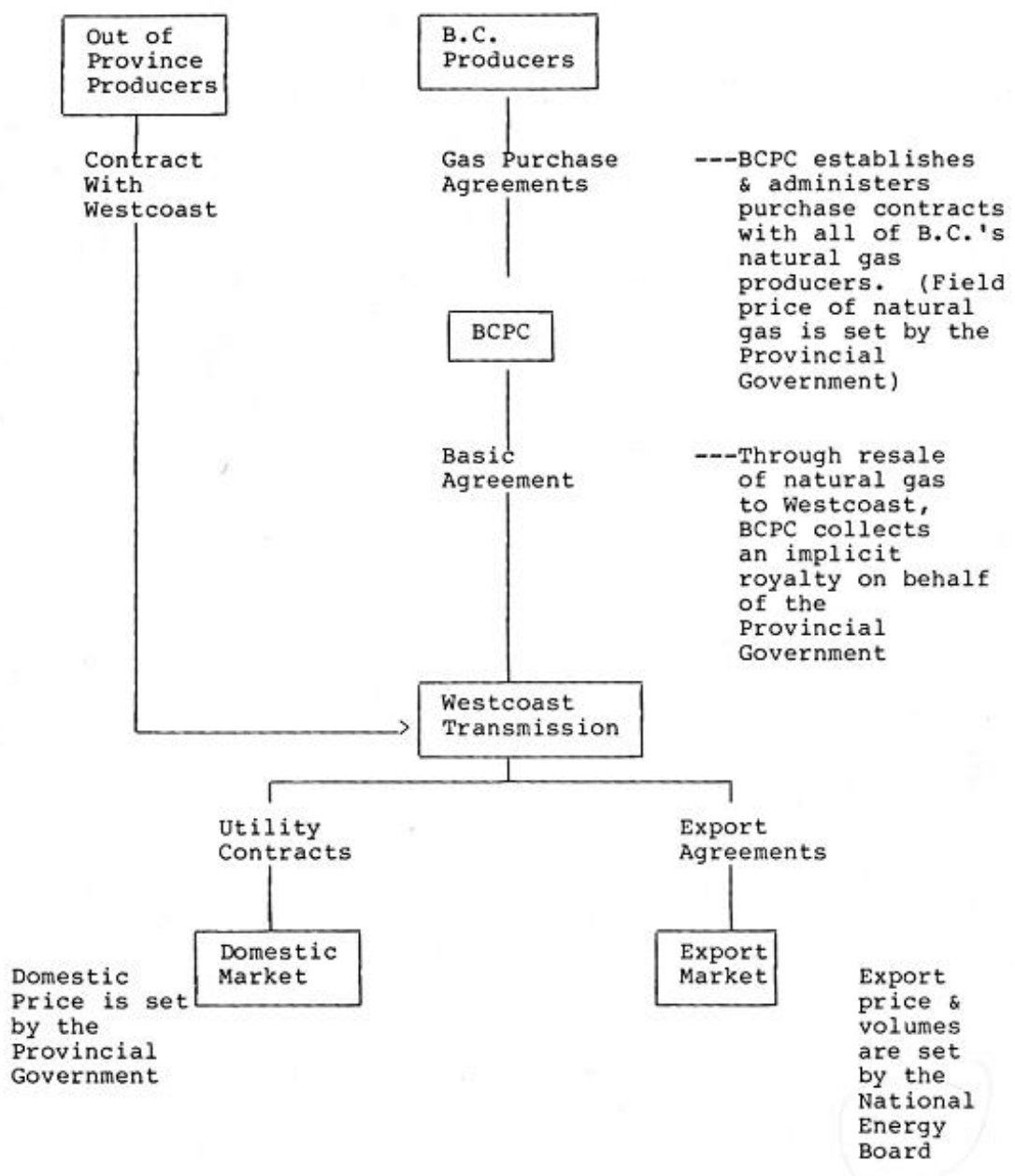
The privately owned gas utilities and their service areas are:

Columbia Natural Gas Limited	East Kootenays, B.C.
Fort Nelson Gas Ltd.	Fort Nelson, B.C.
Gas Trunk Line of B.C. Ltd.	Peace River Area, B.C.
Inland Natural Gas Co. Ltd.	Okanagan, Central and Northern Interior, B.C.
Northland Utilities (B.C.) Ltd	Dawson Creek and Pouce Coupe, B.C.
Pacific Northern Gas Ltd.	Summit Lake to Prince Rupert and Kitimat, B.C.
Plans-Western Gas & Electric Co. Ltd., Fort St. John Division	Fort St. John, B.C.

These privately owned utilities have contracted for 214 MMcf per day while B.C. Hydro has a contract for 388 MMcf per day. The domestic price for natural gas is set by the Provincial Government. Export price and volumes are set by the National Energy Board.

Rates are set by the Utilities Commission

INSTITUTIONAL FRAMEWORK FLOWCHART



Source: Energy Resources Branch

3.5 Crude Oil Refineries

According to the Bureau of Competition Policy on "The State of Competition in the Canadian Petroleum Industry," the Pacific region has the highest concentration of petroleum majors in Canada, with the exception of the Maritimes. In 1954, Imperial, Shell, and the regional major Chevron controlled 90% of capacity. Gulf joined the market in 1958. The share of the three national giants and the regional majors remained largely stable at about 86% until 1976 due to the majors' expansion and Gulf's acquisition of Royalite, despite later entries by Pacific Petroleum and Union Oil. The national and regional majors accounted for 90% of the overall refinery capacity as late as 1980.

The Bureau's report alleged that a pattern of refinery agreements existed with a number of pairwise arrangements that were made between the same companies across different Canadian regions.

To quote the report: "A web of connections is revealed which, when traced in their entirety from region to region and from company to company, linked the set of national and regional majors together across the entire country."

The report further states: "The tendency to engage in price competition in any industry is reduced as a firm's marginal demand curve approaches the industry demand curve. While a direct link at the refinery level among all firms guarantees that no firm will regard its demand curve as having any greater elasticity than that of the industry, indirect linkages have the same effect if each company fully comprehends the existence and the effects of these linkages."

According to Gorecki's engineering estimations, there are significant economies of scale in the petroleum refining industry. The fact that Canada's regional marketplaces are comparatively concentrated is therefore not shocking. The bureau's claim that a network of relationships "linked the set of national and regional majors together across the entire country" is unsettling.

If a company (or collection of companies) can generate profits above a normal rate of return by limiting output and raising the price of its product, it is said to have market power or a degree of monopoly power. One such obstacle to entrance could be the refinery's economies of scale.

One obstacle to entering is the petroleum industry's vertically integrated structure. In actuality, this argument is comparable to the growing returns to scale argument. Assume that a vertically integrated company is the least expensive organizational structure and that there are few businesses that can fully utilize this structure. Then, a barrier to entry is the cost benefits of vertical integration. In the majority of industrial stages, independents face competition from majors. By working with the majors, these companies are typically able to generate a respectable return on investment. The majors may make above-average earnings by setting their prices correctly.

Given market power at the refinery stage, an incentive exists for these firms to integrate forward. This incentive is the potential gain from exploiting differing elasticities of demand among its customers. If customers can resell the good in question, the firm with market power must necessarily charge a single price. By purchasing the productive assets of customer with the lowest elasticities of demand (and operating these assets itself), the firm can charge a higher price to its new customers and its remaining customer's with relatively high elasticities of demand. The acquisition of gasoline retail outlets is a prime example of such conduct.

The information in section 2.5 makes it abundantly evident that over the previous 20 years, the majors have significantly expanded their dominance over the retail industry. The above analysis provides a very powerful motive for doing so.

Can the federal government use Petro-Canada to counter the concentrated nature of the petroleum industry in B.C. and in Canada? In B.C., Petro-Canada operates less than 10% of the crude oil refinery capacity, 16% of the company and commission agent operated service stations, and supplies about 9% of the lessee and independent operators.

Such capacity would not be sufficient for Petro-Canada to be the "residual supplier." By residual supplier is meant the ability to supply the market the difference between output levels of the private companies and a level of output where industry marginal cost equals industry prices.

Table 3.5.1
Crude Oil Refineries, 1980

<u>Name</u>	<u>Location</u>	<u>Year of First Operation</u>	<u>Source of Crude</u>	<u>Crude-oil Capacity m³/calendar day</u>	<u>Storage Capacity m³</u>	<u>Cracking Plant Units</u>	<u>Cracking Capacity m³ Calendar day</u>
Chevron Canada Ltd.	South Burnaby	1936	B.C. & Alta	5560	309390	Catalytic fluid	1270
Gulf Canada Products Company	Kamloops	1954	B.C. & Alta	1480	49685	Catalytic fluid	445
Gulf Canada Products Company	Port Moody	1958	B.C. & Alta	5915	280295	Catalytic fluid	1815
Husky Oil Limited	Prince George	1967	B.C.	1590	152000	Catalytic fluid	475
Imperial Oil Limited	Loco	1915	B.C. & Alta	6465	485705	Catalytic fluid	1955
Petro-Canada	Taylor	1960	B.C.	2275	175000	Catalytic fluid	770
Shell Canada Limited	North Burnaby	1932	B.C. & Alta	4200	390360	Catalytic fluid	980

- Westcoast Transmission Company Limited built the first major natural-gas processing plant in British Columbia at Taylor, completed in 1957, as part of its 1,046-km natural-gas pipeline system. Purchased by Petro-Canada, closed in 1991.

- Petro-Canada – Port Moody Refinery was originally Gulf Canada. Purchased by Petro-Canada in 1985, closed in 1993.
- Gulf Canada – Kamloops Refinery, closed in 1983.
- Imperial Oil – Port Moody Refinery, closed in 1995.
- The Prince George Refinery was established in 1967, owned over time by several companies including Husky Energy (from 1982) and later Tidewater Midstream (from 2019), and it has *not* been closed — it continues to operate today.

Table 3.5.2

CONCENTRATION OF REFINING CAPACITY IN PACIFIC REGION

Year	Principal Refiners	Total Capacity of Principal Refineries (barrels per day)	Total B.C. Refining Capacity (barrels per day)	Concentration Ratio for the Majors	Number of Operating Refineries	Number of Refineries Operated by the Majors
1956	IOL, Shell, Chevron	63,500	70,250	90.4%	5	3
1957	IOL, Shell, Chevron	67,500	74,250	90.9%	5	3
1960	IOL, Shell, Chevron, Gulf	89,000	98,700	90.2%	7	4
1965	IOL, Shell, Chevron, Gulf	93,900	100,400	93.5%	6	5
1970	IOL, Shell, Chevron, Gulf	107,400	125,800	85.4%	7	5
1975	IOL, Shell, Chevron, Gulf	128,100	150,100	85.3%	7	5
1976	IOL, Shell, Chevron, Gulf	141,900	163,900	86.6%	7	5

Source: Department of Energy, Mines and Resources, Petroleum Refineries in Canada, various years.

Refineries Operating as of April, 2026:

<u>Refinery</u>	<u>Location</u>	<u>Owner</u>	<u>Capacity (bbl/day)</u>	<u>Established</u>
Burnaby	Burnaby	Sunoco LP	55,000	1935
Prince George	Prince George	Tidewater	12,000	1967

3.6 Public and Private Investment Projections

Capital and Repair Expenditures

The capital and repair expenditures are shown historically in the following tables, together with predictions of such expenditures through 1990. The cost of acquiring, building, and installing new, long-lasting equipment and machinery—whether to replace worn-out or obsolete assets or as net additions to already-existing assets—is included in new capital expenditures. Additionally provided are non-capitalized repair costs for buildings, machinery, and equipment.

The size and content of the investment program provide important information about the demands to be placed on the economy's productive capacities because capital and repair expenditures make up a sizable and somewhat variable component of gross national expenditures.

The total capital and repair expenditures for the year 1990 in Table 3.6.4 should be viewed as extremely approximate estimates. 16-year and 5-year trends are shown in the tables. Keep in mind that, given the state of the market in recent years, the 5-year trend should be viewed as a prudent upper bound, while the 16-year trend offers a lower bound. The best estimate, if a "one-number" prediction is needed, is most likely 2/5th of the 16-year trend + 3/5th of the 5-year trend.

How much productivity growth is correlated with investment is an intriguing subject. Compared to any cyclically comparable period in the preceding two decades, productivity growth in the Canadian business sector was lower between 1975 and 1980. Since 1954, the Canadian manufacturing sector has had annual productivity increases of 4 to 5 percent during each business cycle. The average growth rate of manufacturing productivity in Canada over the past five years has been 2%. Is it possible that the rate of capital formation has decreased in comparison to the rate of workforce growth?

Table 3.6.5 charting B.C. indexed capital/output ratio by industry is very suggestive. It shows that, on average, the capital/output ratio for B.C.'s manufacturing industries has declined over the last twenty years. Other industries that have also declined are construction, transport, communication, storage, trade, public administration and defence.

Many reasons could be responsible for the capital decline. Production methods could save more money. It's interesting to note that real manufacturing production per worker rose during the relevant time period (Table 2.3.2). Unit labor expenses were basically unchanged, as Table 2.7.2 demonstrates. Given the numbers in the tables, it appears that a lack of profitable investment could be the cause of the productivity loss. Industry-by-industry analysis is necessary to determine whether this is caused by concentration. Refer to Chapters 4 and 5.

Table 3.6.1

Capital and Repair Expenditures (Millions of Dollars)

<u>Year</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>	<u>1979</u>	<u>1981</u>
Total	4506	5824	7423	9670	13569
Agriculture & Fishing	101	127	214	356	360
Capital	75	97	179	309	303
Repair	26	30	35	47	57
Forestry	175	180	265	343	370
Capital	112	108	151	203	206
Repair	63	71	114	140	164
Mines, Quarries, Oil	233	320	540	948	1570
Capital	131	166	357	732	1285
Repair	102	154	183	216	285
Manufacturing	628	724	1023	1430	2312
Food & Beverage	53	62	60	74	90
Capital	35	42	35	47	59
Repair	18	19	24	27	31
Wood	235	183	287	466	498
Capital	135	90	132	254	255
Repair	101	94	154	217	243
Paper & Allied	155	199	317	391	882
Capital	56	90	186	220	661
Repair	98	110	130	171	221
Metal Fabricating	16	18	20	24	26
Capital	11	11	12	18	16
Repair	5	7	9	7	9
Transportation Equip	7	11	12	26	46
Capital	4	7	7	18	39
Repair	3	5	5	8	7
Petroleum and Coal	15	49	26	31	73
Capital	9	36	12	19	51
Repair	7	13	14	13	22
Chemical	17	26	31	44	176
Capital	8	12	10	23	147
Repair	9	15	21	21	29
Other Manufact	130	174	271	374	522
Capital	83	109	198	271	394
Repair	47	66	73	103	128
Construction & Housing	1105	1381	1885	2084	3181
Capital	927	1156	1592	1702	2723
Repair	178	225	293	382	458
Transportation	522	575	525	864	1134
Capital	370	368	232	523	756
Repair	152	207	293	341	379
Communication	246	312	402	407	484
Capital	187	235	294	306	363
Repair	59	77	109	101	121
Misc. Other Utilities	360	646	696	884	1074
Capital	335	600	636	818	990
Repair	29	46	60	66	84

<u>Year</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>	<u>1979</u>	<u>1981</u>
Trade	121	133	162	216	314
Capital	103	113	132	176	271
Repair	18	20	30	40	43
Finance	153	255	289	492	695
Capital	141	240	270	458	651
Repair	12	15	19	34	44
Commercial Services	226	252	289	473	573
Capital	210	227	255	425	521
Repair	17	25	34	48	52
Institutions	143	236	283	328	403
Capital	123	201	236	277	341
Repair	20	34	46	52	62
Government Depts	489	684	850	846	1101
Capital	379	516	668	654	882
Repair	110	168	183	192	219

Source: Statistics Canada

Table 3.6.2

Trends (1.5 of 16 year trend plus
3/5 of the 5 year trend)

Capital and Repair Expenditures (Millions of Dollars)

<u>Year</u>	<u>1982</u>	<u>1984</u>	<u>1986</u>	<u>1988</u>	<u>1990</u>
Agriculture & Fishing					
Capital	328	382	435	490	545
Repair	59	67	76	85	94
Forestry					
Capital	223	250	275	306	327
Repair	172	194	215	238	260
Mines, Quarries, Oil					
Capital	1338	1711	2094	2455	2827
Repair	293	337	682	413	472
Food and Beverage					
Capital	63	73	84	95	91
Repair	32	35	39	43	46
Wood					
Capital	279	325	371	93	458
Repair	251	286	321	42	391
Paper and Allied					
Capital	574	739	905	1072	1235
Repair	226	260	293	329	363
Metal Fabricated					
Capital	20	24	27	30	33
Repair	9	10	11	11	12

<u>Year</u>	<u>1982</u>	<u>1984</u>	<u>1986</u>	<u>1988</u>	<u>1990</u>
Transport Equip					
Capital	39	51	62	76	88
Repair	8	9	10	10	11
Petroleum & Coal					
Capital	48	62	75	87	88
Repair	23	26	29	32	11
Chemical					
Capital	135	185	234	284	334
Repair	28	31	34	32	43
Other Manuf.					
Capital	398	486	575	663	751
Repair	133	153	175	195	217
Construction					
Capital	2682	3151	3621	4092	4562
Repair	469	538	604	675	744
Transportation					
Capital	762	942	1117	1314	1483
Repair	395	441	486	531	584
Communication					
Capital	378	418	460	503	544
Repair	124	130	142	150	157
Other Utilities					
Capital	981	419	1241	1392	1503
Repair	85	133	106	116	126
Trade					
Capital	259	311	405	414	467
Repair	45	51	56	62	67
Finance					
Capital	680	828	976	1124	1273
Repair	46	56	66	85	87
Commercial Services					
Capital	543	647	751	854	958
Repair	55	61	69	80	85
Institutions					
Capital	345	390	434	477	522
Repair	63	71	78	86	94
Government Depts					
Capital	891	998	1104	1211	1317
Repair	227	248	269	291	312

Source: B.C. Central Statistics Bureau

Table 3.6.3

Private and Public Investment
(Millions of Dollars)

	<u>1973</u>	<u>1975</u>	<u>1977</u>	<u>1979</u>	<u>1981</u>
<u>Total Private</u>	3339	4003	5319	7306	10462
<u>Total Business</u>	2299	2699	3522	5342	7404
Capital	1578	1820	2367	3942	5648
Repair	721	879	1155	1400	1756
<u>Private Institution & Housing</u>	1040	1304	1797	1964	3058
Capital	899	1127	1559	1654	2687
Repair	141	177	238	310	371
<u>Total Public</u>	1167	1820	2104	2364	3107
<u>Gov't Enterprises</u>	566	952	1055	1285	1776
Capital	480	801	834	1005	1511
Repair	87	151	221	280	265
<u>Gov't Housing & Institutions</u>	113	185	199	234	230
Capital	97	159	166	196	184
Repair	16	26	33	38	46
<u>Gov't Departments</u>	489	684	850	846	1101
Capital	379	516	668	654	882
Repair	110	168	183	192	219
<u>Federal</u>	71	129	183	136	173
Capital	50	102	145	94	129
Repair	22	27	38	42	44
<u>Provincial</u>	212	306	399	6117	556
Capital	150	195	286	297	414
Repair	62	111	113	120	142
<u>Municipal</u>	205	249	269	293	371
Capital	179	219	237	263	338
Repair	26	31	32	30	33

Source: Statistics Canada

Table 3.6.4
Private and Public Forecasts (Trends)
 (Millions of Dollars)

	<u>1982</u>	<u>1984</u>	<u>1986</u>	<u>1988</u>	<u>1990</u>
<u>Total Business</u>					
Capital 16 yr	4510	5052	5595	6138	6680
5 yr	6633	8408	10184	11960	13735
Repair 16 yr	1681	1875	2068	2262	2455
5 yr	1889	2185	2481	2777	3073
<u>Private Institution and Housing</u>					
Capital 16 yr	2345	2633	2921	3209	3498
5 yr	2846	3438	4030	4622	5215
Repair 16 yr	345	383	421	460	498
5 yr	402	468	534	600	666
<u>Gov't Enterprise</u>					
Capital 16 yr	1264	1409	1554	1698	1843
5 yr	1580	1899	2218	2537	2856
Repair 16 yr	289	324	359	395	430
5 yr	277	293	309	324	340
<u>Gov't Institutions & Housing</u>					
Capital 16 yr	200	217	233	249	265
5 yr	182	184	186	187	189
Repair 16 yr	45	50	55	60	65
5 yr	48	55	62	69	76
<u>Government Depts.</u>					
Capital 16 yr	864	960	1055	1151	1246
5 yr	909	1023	1137	1251	1365
Repair 16 yr	231	256	280	305	329
5 yr	225	243	262	281	300
<u>Federal</u>					
Capital 16 yr	135	148	162	175	188
5 yr	107	97	88	78	68
Repair 16 yr	49	54	59	65	70
5 yr	47	50	54	57	60
<u>Provincial</u>					
Capital 16 yr	379	421	462	504	545
5 yr	431	497	564	630	697
Repair 16 yr	144	160	176	192	207
5 yr	145	160	175	190	205
<u>Local</u>					
Capital 16 yr	350	391	432	472	513
5 yr	370	427	484	541	598
Repair 16 yr	38	42	45	49	52
5 yr	33	34	35	35	36

Source: B.C. Central Statistics Bureau

Table 3.6.5

YEAR	BRITISH COLUMBIA INDEXED CAPITAL/OUTPUT RATIO BY INDUSTRY, 1961-1979																		
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
	(1961 = 100)																		
AGRICULTURE AND FISHING	100.0	103.7	97.6	89.6	110.0	97.1	107.7	98.5	137.4	107.1	122.0	124.9	120.1	132.0	173.7	146.8	136.7	152.7	156.8
FORESTRY	100.0	79.2	91.0	99.7	98.6	113.2	115.0	121.6	122.4	111.5	134.5	178.5	143.1	116.0	145.7	125.9	135.5	157.2	171.1
MINING	100.0	107.6	116.7	130.9	152.8	163.2	158.0	174.7	198.7	217.1	236.1	234.2	187.5	254.8	312.1	296.0	297.5	372.0	314.5
MANUFACTURING INDUSTRIES:	100.0	95.0	91.1	90.8	93.5	95.9	100.7	100.0	97.1	99.5	97.2	95.6	91.1	89.8	99.1	87.2	88.3	88.2	89.8
FOOD AND BEVERAGE	100.0	103.0	99.1	98.4	100.2	95.4	99.7	107.3	107.6	109.5	118.8	125.4	133.6	127.4	136.3	148.8	151.2	156.1	177.1
WOOD INDUSTRIES	100.0	91.1	84.1	83.5	86.7	91.2	91.4	84.0	95.5	110.8	105.5	102.8	101.7	130.6	141.9	105.9	101.0	108.4	116.2
PAPER AND ALLIED	100.0	103.5	102.0	99.5	113.2	132.9	152.0	147.6	128.3	120.0	130.1	130.0	110.9	94.1	129.8	95.8	113.6	102.4	100.1
METAL FABRICATING	100.0	93.6	83.8	74.4	69.3	57.9	61.4	71.5	61.7	54.9	55.0	62.3	57.0	52.4	65.5	69.2	69.0	69.8	65.4
TRANSPORTATION EQUIPMENT	100.0	85.2	85.5	136.0	145.9	159.5	135.8	151.2	140.2	160.5	13.3	90.1	106.6	112.3	111.8	105.7	126.0	118.2	103.5
PETROLEUM AND COAL PRODUCTS	100.0	105.7	95.5	83.8	76.8	75.3	90.9	77.7	91.5	78.8	70.2	81.2	61.1	63.0	52.0	71.7	67.0	64.0	64.1
CHEMICAL	100.0	104.8	117.7	127.3	138.4	156.6	130.8	150.7	136.5	151.2	118.8	117.1	115.9	112.8	107.1	101.9	97.6	104.1	100.4
CONSTRUCTION	100.0	88.4	81.3	75.1	72.8	71.8	72.4	86.1	76.4	81.6	67.7	66.4	60.6	61.4	60.6	69.0	76.4	86.4	97.1
TRANSPORT., COMMUN., & STORAGE	100.0	101.9	91.9	85.8	79.4	75.4	74.6	74.1	69.1	71.5	69.5	69.1	64.7	61.2	67.7	64.9	64.8	64.3	62.7
UTILITIES	100.0	118.8	119.0	125.7	141.0	162.7	173.1	183.9	192.9	172.7	198.8	195.1	193.0	175.7	173.8	143.7	127.7	127.5	122.0
TRADE	100.0	95.6	93.0	86.0	84.8	83.0	81.2	82.4	75.8	74.9	75.2	70.7	67.8	63.0	65.7	67.1	72.1	72.5	66.8
FINANCE, INSURANCE, REAL ESTATE	100.0	104.0	107.0	112.5	112.3	121.9	129.1	131.2	138.4	157.3	158.5	160.9	179.0	223.5	256.8	268.3	281.0	291.0	350.4
COMM., BUS., AND PERS. SERVICE	100.0	105.3	109.3	110.4	111.2	110.5	116.2	121.4	116.9	121.4	119.2	120.2	114.8	108.1	108.2	107.7	110.0	110.0	109.0
PUBLIC ADMIN. AND DEFENCE	100.0	100.5	101.6	102.2	97.9	94.6	92.6	87.8	85.0	86.2	88.7	88.6	87.5	86.1	85.3	81.9	83.3	81.9	83.9
ALL INDUSTRIES	100.0	99.9	98.5	96.8	95.8	96.1	98.6	100.9	97.9	100.1	99.3	98.1	95.3	92.3	97.5	94.2	95.9	97.3	98.0

Source: B.C. Central Statistics Bureau

Table 3.6.6

YEAR	BRITISH COLUMBIA CAPITAL/OUTPUT RATIO BY INDUSTRY, 1961-1979																		
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
	(1961 = 100)																		
AGRICULTURE AND FISHING	2.42	2.51	2.36	2.17	2.66	2.35	2.61	2.38	3.32	2.59	2.95	3.02	2.91	3.19	4.20	3.55	3.31	3.70	3.79
FORESTRY	1.62	1.29	1.48	1.62	1.60	1.84	1.87	1.97	1.99	1.81	2.18	2.90	2.32	1.88	2.37	2.04	2.20	2.55	2.78
MINING	2.36	2.54	2.75	3.09	3.61	3.85	3.73	4.12	4.69	5.12	5.57	5.52	4.42	6.01	7.36	6.98	7.02	8.77	7.42
MANUFACTURING INDUSTRIES:	2.08	1.97	1.89	1.89	1.94	1.99	2.09	2.08	2.02	2.06	2.02	1.98	1.89	1.86	2.06	1.81	1.83	1.83	1.86
FOOD AND BEVERAGE	1.04	1.07	1.03	1.03	1.04	.99	1.04	1.12	1.12	1.14	1.24	1.31	1.39	1.33	1.42	1.55	1.58	1.63	1.85
WOOD INDUSTRIES	1.33	1.21	1.12	1.11	1.16	1.22	1.22	1.12	1.27	1.48	1.41	1.37	1.36	1.74	1.89	1.41	1.35	1.44	1.55
PAPER AND ALLIED	3.76	3.89	3.83	3.74	4.26	5.00	5.71	5.55	4.82	4.51	4.89	4.89	4.17	3.54	4.88	3.53	4.27	3.85	3.76
METAL FABRICATING	.98	.92	.83	.75	.68	.57	.60	.70	.61	.54	.54	.61	.56	.52	.64	.68	.68	.69	.64
TRANSPORTATION EQUIPMENT	.43	.37	.37	.59	.63	.69	.59	.65	.61	.69	.56	.39	.46	.49	.48	.46	.55	.51	.45
PETROLEUM AND COAL PRODUCTS	6.63	7.01	6.33	5.55	5.09	4.99	6.02	5.15	6.07	5.23	4.65	5.38	4.05	4.17	3.44	4.75	4.44	4.24	4.25
CHEMICAL	1.83	1.92	2.16	2.33	2.54	2.87	2.40	2.76	2.50	2.77	2.17	2.14	2.12	2.07	1.96	1.87	1.79	1.91	1.84
CONSTRUCTION	.46	.40	.37	.34	.33	.33	.33	.39	.35	.37	.31	.30	.28	.28	.28	.32	.35	.40	.44
TRANSPORT., COMMUN., & STORAGE	4.82	4.91	4.42	4.13	3.82	3.63	3.59	3.57	3.33	3.45	3.35	3.33	3.12	2.95	3.26	3.12	3.12	3.10	3.02
UTILITIES	6.52	7.75	7.76	8.20	9.19	0.61	11.29	12.00	12.58	11.27	12.97	12.72	12.59	11.46	1.34	9.37	8.33	8.32	7.96
TRADE	.86	.83	.80	.74	.73	.72	.70	.71	.66	.65	.65	.61	.59	.54	.57	.58	.62	.63	.58
FINANCE, INSURANCE, REAL ESTATE	.30	.31	.32	.34	.34	.37	.39	.40	.42	.48	.48	.49	.54	.68	.78	.81	.85	.88	1.06
COMM., BUS., AND PERS. SERVICE	.95	1.00	1.04	1.05	1.06	1.05	1.10	1.15	1.11	1.15	1.13	1.14	1.09	1.03	1.03	1.02	1.04	1.04	1.03
PUBLIC ADMIN. AND DEFENCE	7.34	7.37	7.45	7.50	7.18	6.94	6.79	6.44	6.24	6.33	6.51	6.50	6.42	6.32	6.11	6.01	6.11	6.01	6.15
ALL INDUSTRIES	2.28	2.28	2.25	2.21	2.19	2.19	2.25	2.30	2.24	2.29	2.27	2.24	2.13	2.11	2.23	2.15	2.19	2.22	2.24

Source: B.C. Central Statistics Bureau

3.7 Regulatory Agencies/Regulations

(Derived from a Center of Public Sector Studies Report)

3.7.1 Utilities Commission

History:

From an economic point of view, the B.C. Utilities Commission is the most important regulatory agency in the province. The Utilities Commission Act replaced the Energy Act which was administered by the B.C. Energy Commission. The Energy Commission had three areas of responsibility:

1. The regulation of rates, standards of service, financing and facilities expansion of energy utilities within the province, except for B.C. Hydro (Energy Act, Part III).
2. The regulation of the petroleum industry, with authority to monitor the industry to issue price guidelines, and to register and license sellers (Energy Act, Part III).
3. To provide the Lieutenant-Governor-in-Council with advice on energy matters.

The new Act defines "energy resource" to include natural gas, oil, and all other forms of petroleum and hydro carbon in gaseous or liquid state, and electricity.

When the B.C. Utilities Commission took over from the B.C. Energy Commission its role was expanded to include regulation of B.C. Hydro rates in respect of its electrical and gas utility services. Regulation to include customer rates, service standards and additions to facilities. However, B.C. Hydro is exempt from those sections of the Act dealing with debt management. The Minister of Finance continues to Act as fiscal agent for the Authority.

Energy Projects Review Process:

The powers of the Commission were further increased by the major energy review process. The public hearing process is administered by the Utilities Commission, but is separate from its regulatory function. Recommendations to Cabinet on the merits of each project by means of public hearings reviewing major energy generation and use projects.

Staff support to come from government and the Utilities Commission.

Reviewable Projects:

Projects subject to review are:

1. electric transmission lines of 500 kv or higher;
2. energy storage facilities of over 3 PJ (peta joules);
3. transmission pipelines capable of transporting over 16 PJ of energy per year;
4. electric power plant, or additions thereto, with a capacity of 20 MW or more;
5. energy use projects which use, convert or process 3 PJ or more per year of total energy resources and coal;
6. any undertaking deemed by the Lieutenant-Governor-in-Council to be significant to warrant review.

Energy Removal Certificates:

Energy removal certificates can be issued for energy supplies deemed to be surplus to provincial needs. Exemptions are provided for

- Contracts already in force;
 - Export licenses, permits, etc., issued by the NEB prior to Utilities Commisison Act coming into force;
- and
- Exports which are exempt by regulation, e.g. and ship refuelling.

Telecommunications:

The new legislation also provides for the provincial regulation of telecommunications within the province, once this responsibility has been delegated to the province by the federal government.

3.7.2 Marketing Boards:

Marketing Boards establish production levels - for the industry and production unit - and prices of products under the boards control. They may also control the price and way in which production rights are transferred from one owner to another. From a producers point of view they provide a relatively stable price and expected rate of return at which the producer can sell his product and with respect to which he can plan his investments in productive assets. From a consumers point of view they provide products at a reasonable price. This price may be higher, on the average, than the average price that obtains with an impeded competition. However, the variance in price over time will be smaller with the presence of a Marketing Board. Marketing boards also facilitate the transition from numerous uneconomic production units to fewer economic production units.

Note that the expected present value of any returns that may result from the creation of a Marketing Board will be captured by the owners of production rights at the time the Marketing Board is established. If production rights are transferred the new owner will only earn a "normal rate of

return" on the capital required to purchase the production rights. Future increases in the prices of products and/or reductions in production quotas should only reflect unanticipated shift in the underlying demand/supply conditions.

B.C. Marketing Boards

1. B.C. Milk Board

- Milk Industry Act
- supervise the production; supply, processing and distribution of milk
- power to licence firms, fix classifications of milk, determine minimum prices and set quotas for fluid milk.
- annual budget 220,000

2. B.C. Marketing Board

- Natural Products Marketing Act
- general supervision of the eleven farm products marketing boards established under the Act
- power to amend or to cancel rules or regulations made by the products marketing boards.
- annual budget 100,000

3. B.C. Egg Marketing Board

- provide for the promotion; control, regulation of transportation, packing, storage and marketing of eggs in British Columbia
- power to make rules concerning product requests, egg quotas and permits, transfers of quotas, marketing of eggs and prices.
- annual budget 780,000

4. B.C. Coast Vegetable Marketing Board

- to promote, control and regulate the production, packing, transportation, storage, and marketing of regulated product (including greenhouse tomatoes and cucumbers, potatoes and vegetables of all kinds, and strawberries for manufacturing purposes).
- in the case of bush beans, corn and strawberries, the Board licenses the grower and processor.
- annual budget \$120,000

5. B.C. Cranberry Marketing Board

- to regulate and to promote the transportation, processing, packing, storage and marketing of any variety of cranberries grown in B.C.
- has the additional power of issuing quotas
- annual budget \$4,000 producer levy

6. B.C. Grape Marketing Board

- regulates the marketing of grapes grown in B.C. for manufacturing purposes
- licenses producers, collects fees, cancels licenses, requires producers to submit information on request.

7. B.C. Interior Vegetable Marketing Board

- regulates the sale of vegetables of all kinds
- keeps a registrar of "owers" of land and producers
- note: regulation 26Y/73 creates ten marketing zones and designates the Interior Vegetable Marketing Agency Ltd. as sole agency through which all registered product shall be packed, stored, or marketed.

8. B.C. Mushroom Marketing Board

- regulates the production; packing, transportation, storage and marketing of all mushrooms grown in B.C.
- Reg 216/66 - set up the Fraser Valley Mushroom Growers' Co-op Association as agency through which all produce shall be packed, stored and marketed.

9. B.C. Tree Fruit Marketing Board

- promotes, controls and regulates the transportation, storage, packing and marketing of any tree fruit grown in B.C. - there is no quota system.
- for the Interior Region - reg 282/72 includes any tree fruits not grown in the area and articles of food or drink.

10. B.C. Turkey Marketing Board

- promotes, controls, regulates the sale of any class of turkey raised for meat or egg production in British Columbia.
- reg 525/74 the Board is to establish a quota system to cooperate with CTMA pursuant to Farm Products Marketing Agencies Act.

11. B.C. Oyster Board

- regulate the production and sale of all oysters grown in British Columbia
- no control over processing and no quota system
- reg 286/67 provides for licence fees for grower-packers and wholesalers - a schedule of prices is also included.

12. B.C. Sheep and Wool Commission

- Board may initiate, support or conduct programs for promoting stimulating, increasing, regulating and improving marketing and the economic well being of persons engaged in production, processing and marketing of these products.

- it may establish quality standards and undertake advertising, educational and research programs.
- it may also licence producers, packers, transporters, storers, and marketers.

13. B.C. Broiler Board

- regulate the transportation, processing, packing, storage and marketing of broilers.

3.7.3 Transportation Regulation

Jurisdictional Boundaries

Under the BNA each provincial government has jurisdiction over intra-provincial transport, while the federal government has jurisdiction over between province and international transport.

In air transport, the federal government is the most active regulator and the provinces have not challenged the customary federal licensing of within province airlines; in highway transport the provinces are the most active regulators because the federal government has formally delegated to them its powers over out-of-province carriers; in pipeline transport the major oil and gas pipelines fall under federal jurisdiction and are regulated through its controls over energy marketing; in rail transport the federal government predominates because most railways cross provincial boundaries; and in water transport, the provinces have small or non-existent within province shipping industries and do not choose to regulate them.

Transportation regulators can place the following constraints on commercial transport:

1. control of routes and service level, e.g. specify routes and where to call;
2. control of rates, e.g. prescribe a new rate;
3. control of entry and exit, e.g. licensing.

Statutes promulgated to regulate transportation include: Aeronautics Act, Ferry Act, Lords Day Act, Motor Vehicle Transport Act; National Transportation Act, Railway Act, Transport Act.

The two main reasons for transportation regulation are:

1. To remedy market failure
2. To achieve distributive justice

Market failure may occur because of market imperfections due to natural monopolies, price wars, spill-over effects and imperfect information. Distributive justice refers to the wish of government to influence the market to increase real incomes for some groups at the expense of usually less needy groups. This can be achieved through cross-subsidization, control of unjust discriminatory pricing, and support for specific regions or industries (e.g. Crow Rates).

Rail Transport

The Crow Rate

The Crows Nest Pass rates are the maximum rates which the railways are allowed to charge for the movement of most grain and grain products through the railroad system. They have been established by various acts of the federal government.

In return for a subsidy of \$11,000 per mile (3.4 million in total) to assist the railway in building a line from Alberta into southeastern British Columbia through the Crows Nest Pass; a freight rate agreement was reached between the federal government and Canadian Pacific Railway.

Rate Levels

The structure and level of these rates today are the same as those that existed at the close of the 19th century. The change to individual producers varies according to the length of the haul, and is an equal rate for equal distance, regardless of volume. These rates apply to wheat, barley, buckwheat, oats, rye, flax seed and rape seed, as well as about 45 additional grain and oilseed products.

The average rate is about 21¢ per hundred pounds, or \$4.62 per metric tonne, or 12 1/2¢ per bushel.

These statutory grain rates were reaffirmed in Section 271 of the National Transportation Act. They apply to export grain movements from the prairies to Thunder Bay, Vancouver, Prince Rupert and Churchill, and to domestic movement as far as Thunder Bay over all rail lines constructed by any company subject to the jurisdiction of Parliament.

Snavely Commission

Snavely estimated that the railways lost \$60 million in 1974 and \$140 million in 1977 in transporting statutory grain. CN/CP have used the Snavely methodology to compute losses for 1981.

	<u>Railway Calculated Grain Compensation</u>
<u>Railway Costs</u>	
(1) Variable	545
(2) Fixed	117
(3) Branch Line Financing	16
Total Railway Costs	<u>478</u>
<u>Less Railway Revenues</u>	
(4) Statutory Revenues	140
Brumel Line Subsidies	203
Total Railway Revenues	<u>343</u>
<u>Equals Uncompensated Loss</u>	335

Financing Arrangements

The railways have projected capital shortfalls and capacity constraints by the mid 1980's with existing financing arrangements. Recognition of the railway financing problem and the conviction that a new arrangement for grain movement is a part of its solution, have been growing in recent years. Over the past two years the Western Agricultural Conference and the Prairie Farm Commodity Coalition have agreed that:

1. Railways should be adequately compensated for grain movements,
2. The new arrangement should be statutory,
3. The federal government should bear the cost of the base year "Crow gap" (i.e. the difference between a compensatory rate and the Crow Rate).

They do not agree on:

1. Whether federal payment should go to the railways or to the shippers,
2. Whether variable rates, such as lower rates for higher volume shipments, should be allowed,
3. Exactly who should bear future cost increases (i.e. from inflation and increased volumes) and in which proportions.

3.7.4 Provincial Statutes that Impinge On B.C.'s
Industrial Structure

Revision and Consolidation of 1979

1. Agriculture and Rural Development Act
2. Agriculture Land Commission Act
3. Agriculture Land Development Act
4. Agriculture Produce Grading Act
5. Apprenticeship Act
6. Arbitration Act
7. British Columbia Buildings Corporation Act
8. British Columbia Cellulose Company Act
9. British Columbia Railway Act
10. British Columbia Railway Finance Act
11. Business Licence Act
12. Coal Act
13. Coal Mine Regulation Act
14. Commercial Transport Act
15. Commodity Contract Act
16. Company Act
17. Consumer Protection Act
18. Cooperative Association Act
19. Copper Industry Incentive Act
20. Corporation Capital Tax Act
21. Credit Union Act
22. Crown Corporation Reporting Act
23. Crown Franchise Act
24. Development Corporation Act
25. Employment Standards Act
26. Energy Act
27. Environment and Land Use Act
28. Expropriation Act
29. Factory Act
30. Farm Income Insurance Act
31. Farm Product Industry Act
32. Ferry Act
33. Ferry Corporation Act
34. Financial Control Act
35. Financial Disclosure Act
36. Financial Information Act
37. Fish Inspection Act
38. Fisheries Act
39. Forest Act
40. Foresters Act
41. Gas Act
42. Gas Utility Act
43. Gasoline Tax Act
44. Geothermal Resource Act
45. Greenbelt Act
46. Harbour Board Act
47. Highway Act

47. Highway (Industrial) Act
(Industrial Transportation Act)
48. Hotel Room Tax Act
49. Housing Construction (Elderly Citizens) Act
50. Hydro and Power Authority Act
51. Hydro Power Measures Act
52. Income Tax Act
53. Industrial Development Act
54. Industrial Development Fund Act
55. Inflation Control Act
56. Inquiry (Ministerial Inquiries Act; Public Inquiries Act)
57. Insurance Act
58. Insurance Corporation Act
59. Investment Contract Act
60. Labour Code
61. Labour Regulation Act
62. Land Act, Land Titles Act, Lands Clauses Act
63. Logging Tax Act
64. Mineral Act
65. Mineral Land Tax Act
66. Mineral Processing Act
67. Mineral Prospectors Act
68. Mineral Resource Tax Act
69. Mining (Placer) Act
70. Mining Regulation Act
71. Mining Tax Act
72. Mortgage Brokers Act
73. Motive Fuel Use Tax Act
74. Motor Carrier Act
75. Municipal Act
76. Ocean Falls Corporation Act
77. Petroleum and Natural Gas Act
78. Petroleum Corporation Act
79. Petroleum Underground Storage Act
80. Pipeline Act
81. Pollution Control Act
82. Property Law Act
83. Railway Act
84. Range Act
85. Real Estate Act
86. Regulation Act
87. Resource Investment Corporation Act (BCRIC)
88. Revenue Act
89. Revenue Sharing Act
90. Sale of Goods Act
91. Sale of Goods in Bulk Act
92. Securities Act
93. Statistics Act
94. Taxation (Rural Area) Act
95. Telecommunications Utility Act
96. Tobacco Tax Act
Trade and Convention Center Act

97. Trade Licence Act
98. Trade Practice Act
99. Utilities Commission Act 1981
100. Wage (Public Construction) Act
101. Water Act
102. Water Utility Act
103. Workers Compensation Act