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Continentalism versus nationalism : the politics of oil and gas.

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CONTINENTALISM VERSUS NATIONALISM:

THE POLITICS OF OIL AND GAS

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for Grandma Knight and John

ABSTRACT

The primary purpose of this thesis is to demonstrate that the proposals made by the Canadian nationalists offer the most effective solution to the problem of the determination of a national energy policy for Canada. This will be done by examining three policy alternatives. One alternative would be to maintain the present policies. The second alternative would be to adopt a continentalist position, with free energy sharing in energy resources. The third alternative would be to adopt a nationalist position, and a policy which would place primary emphasis on the returns to Canada from the exploitation of Canadian energy resources. This comparison will be made with the object of showing that the nationalist proposals offer the best guidelines for energy policy determination.

ACKNOWLEDGEMENTS

I would like to take this opportunity to express my gratitude to a number of people who were of major importance to me in my efforts to complete this thesis. First, I would particularly like to thank Dr. Lloyd Brown-John for his constant support and encouragement throughout the year in which I wrote this paper. His assistance and backing was instrumental to the completion of this work. I would also like to thank Dr. Ron Seale of the Department of Geography whose insistence on detail, and whose knowledge of energy matters in general was invaluable. Dr. Ron Wagenburg, Professor R. Krause, and Dr. Terry Keenleyside, who all gave encouragement and made helpful suggestions, all deserve a sincere vote of thanks.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES - APPENDIX I

LIST OF TABLES - APPENDIX II

LIST OF CHARTS

INTRODUCTION

Canadians traditionally have regarded their country as a land of considerable potential wealth because of the quantity and diversity of its natural resources. With the development of these natural resources, it was hoped that this potential wealth would be realized in concrete terms for Canadians. Encouraged by successive Canadian governments, investors at home and from other countries, particularly the United States, undertook to extract and utilize the country's resources, for a profit, and to discover and develop new areas of natural wealth.

In terms of the energy resource industry, ever-increasing capital inputs were required, and the interest of Canadian entrepreneurs, in raising massive amounts of capital for resource development, lagged behind that of non-Canadian businessmen. Consequently, a larger and larger slice of this resource industry came under foreign economic control or ownership. This foreign domination of Canadian energy resource industries was highlighted by a resurgence of nationalist fervour in the mid-1960's, which cried out against foreign domination of the Canadian economy, and in particular, of the resource industry.

The mere fact of foreign, or even American, domination of the energy resources of Canada is only one aspect of the overall question of the disposition of these resources

in the interests of the country and of Canadians. Within the United States, increased costs and decreasing known reserves of oil and natural gas have forced America to look abroad for supplies of energy resources, and to develop alternate sources of energy for domestic use. While Canada is close at hand, and has had easily transportable reserves which it was willing to sell, Canada has been able to supply at least part of that American need.

All of these elements became embroiled in controversy with the rise of nationalist sentiment, which in large part centred around the oil and gas segment of the energy resource industry. Two major schools of thought put forward ideas to deal with the problem of the utilization of oil and gas resources. One proposed solution, expressed by many Americans and a number of Canadians, was a formal or ad hoc continental energy pact which would create a North American energy grid transcending international boundaries. The Canadian nationalists, holding the traditional view of the vast potential wealth Canada might receive from these resources, seized upon this proposal as a further example of American encroachment. In their turn, the nationalists suggested limiting or cutting off American access to Canadian energy resources.

It is the purpose of this thesis to explore the "nationalism versus continentalism" clash and the dispute revolving around the oil and gas industry in Canada. Particular emphasis will be placed on political aspects, especially Canadian-American relations and, in Canada,

inter-governmental relations between the federal and provincial governments.

The oil and gas industry is particularly appropriate for study, since it is largely foreign-owned or controlled. Also, trade between Canada and the United States, in oil and natural gas, has been carried out on a large scale, which makes these energy resources a key element in continental energy pact proposals.

This thesis will demonstrate that nationalism has a valid place in the management of Canadian energy resources. To do so, this paper will show that the following statements are correct:

1. The foreign owned and controlled oil and gas industry represents an oligopoly of multinational corporations whose activities show more regard for immediate profit than for supplying future and sometimes present Canadian needs.

2. The Canadian money markets and oil and gas companies based in Canada generate sufficient funds to maintain and expand the industry without dependence upon foreign capital.

3. The oil and gas industry is capital intensive and a low level employer. Major long term oil and gas sales to the United States result in high levels of profits for the companies involved, while creating few jobs in Canada.

4. Tax concessions, royalty, land sales and leasing rates in Canada are lower than those in nearly every other

nation with sizeable oil and gas interests. The return to the Canadian economy from the depletion of these non-renewable resources, in international terms, is low.

5. Canada lacks a viable national energy policy.

This five-point outline, if proven correct, will show that an internally controlled Canadian oil and gas industry is (1) necessary; (2) viable; (3) in Canada's best economic interests.

To clarify these points it is necessary first to give a brief explanation of some of the recurring themes which are of major importance to the understanding of the following work. While all of these terms will be discussed at some length in the body of the paper, a base of clarification is included here as a preliminary explanation.

The two basic concepts running through the paper deal with "nationalism" and "continentalism." In terms of the discussion, "nationalism" means the belief that foreign control of all or a particular segment of the Canadian economy is a threat to Canadian economic and political independence. A corollary belief to this is that Canadian control of all, or those particular segments of the Canadian economy, is both possible and advisable.

The second term, "continentalism," is the belief that, in certain sectors of economy and defense, the interests and welfare of the people of Canada and the United States are better served by acting in concert than by acting separately. A free sharing of goods and resources for the benefit of all the people is necessary to maintain the growth and develop-

ment of the North American power bloc. A "continentalism energy pact," either as a package deal or a number of arrangements, is the term given to a variety of projects which were put forward in the mid-1960's. A continental energy pact would facilitate the flow of North American energy supplies to meet North American demands. Those flows would be unimpeded by tariffs, quotas, embargoes, or any other obstacles to free sharing of energy resources.

Since the focus for both the nationalism and continentalism discussed in this work centres on the subject of energy, this is the next major term which must be defined. A distinction should here be made between primary and secondary energy sources. Primary sources supply energy directly, and include the fossil fuels, oil, gas, and coal, as well as nuclear electricity and hydroelectric power. Secondary energy sources are those produced from primary sources for eventual consumption. Thus, electricity may be from primary energy sources directly, as is the case of nuclear and hydroelectricity, or may be secondary when produced from the primary fossil fuels.

In a publication prepared for the Royal Commission on Canada's Economic prospects, titled Canadian Energy Prospects, actual and potential energy resources were discussed in terms of Canadian consumption and production of "energy" or power.

Three of these remain as minor today as they were when the report was published in 1957. The first was firewood, which then accounted for less than five per cent of

all energy consumed in Canada, much of that in Québec and New Brunswick. The second energy source is as yet an unexplored one: tidal power. This would utilize the particular geographical features of Maritime rivers, such as the Passamaquoddy, to create power. To date, it has not been deemed feasible. The third minor energy source in Canada, also speculative, is solar power. While it could be used only as a supplementary source of power in many parts of the world, including Canada, because the sun's rays come in at such an oblique angle, so as to minimize their potential power, overall costs of creating power from solar energy are prohibitive for the foreseeable future.

Fortunately, since none of these sources seem promising for Canadians, there are a number of other energy resources in Canada available for mass consumption. The first of these is coal. Like fuelwood, the use of coal has suffered a relative decline. Although absolute figures projected by the National Energy Board in the analysis, Energy Supply and Demand in Canada and Export Demand for Canadian Energy, 1966 to 1990, estimate that coal production will "increase six-fold between 1966 and 1990,"[1] as significant mining operations are undertaken in the western provinces; the relative importance of coal as an energy resource is on the wane.

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[1]Canada, National Energy Board, Energy Supply and Demand in Canada and Export Demand for Canadian Energy, 1966 to 1990, (Ottawa: Queen's Printer, 1969), p. 12.

Although the use of coal as a major energy resource is diminishing, in comparison with the utilization of other energy resources, the second of the major power sources, electrical power, is increasing in relative and absolute importance. The use of electrical power will jump from supplying fifteen to thirty per cent of Canada's power needs between 1966 and 1990. One source of electrical power, though presently of minor importance, is nuclear power. Although Canada has had considerable success with the CANDU[2] reactor, problems in supplying the heavy water needed for the production of nuclear power, by these reactors, have limited the expansion of this potential power source.

There are two sources of energy which are suffering from no lack of utilization. Petroleum and natural gas rank first and second respectively in energy consumption in Canada, and will do so for some time. Natural gas will have an ever-increasing share of the Canadian energy market, as emphasis swings to the use of low polluting, "clean" gas. By 1990, natural gas will supply over thirty per cent of Canadian needs. This represents an increase of about fifteen per cent in residential and commercial sectors, and gas will surpass oil as the main energy resource of the industrial sector by 1990.[3]

However, the major single source of energy in

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[2]CANDU is a term derived from "Canadian" and "deuterium," or heavy water, a moderating agent in the nuclear chain reaction.

[3]Canada, National Energy Board, op. cit., p. 7.

Canada at present is supplied by the oil industry. This industry provides crude oil for refining, and is also now producing synthetic crude from the bitumen of the vast Athabasca Tar Sands at a profit. The petroleum industry was supplying fully half of Canada's residential and commercial energy needs in 1966, and the National Energy Board report estimates oil will remain Canada's largest single energy resource for the rest of the century.[4]

A final general definition in terms of energy is that of "resources." The term may be used to mean economic resources, as with the money supply; physical resources, as with manpower, or natural resources, as with agricultural products, minerals, water or timber. Unless otherwise specified, when used in this paper, "resources" will refer solely to the primary energy resources.

Having cleared the hurdle of what constitutes energy resources in Canada, the next phrase to be defined will be "national energy policy." This term is meant to describe the set of goals and policies established by the governments involved, with complimentary legislation, which would reflect the position of those governments on the development of Canadian power resources and the resource industry for the benefit of the country as a whole.

With these definitions in mind, research was undertaken to examine the positions and proposals of the continentalists and nationalists with regard to the oil and

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[4]Canada, National Energy Board, op. cit., p. 7.

gas industry in Canada. To fully understand the stands of both sides, it was necessary to investigate the industry in both national and international contexts. The research required that the avowed stances of the Canadian and American governments be examined, and compared to their legislative and direct actions. It was further necessary to examine present energy supply and demand in Canada and the United States, and to investigate a variety of Canadian and American predictions for future supply and demand. Finally, an analysis of all these factors was undertaken in an effort to prove or disprove the stated hypothesis that Canadian control of energy resources is practical and necessary for Canada's future.

When undertaking this kind of research, that is, the examination of published material, a number of problems occur. There is a surfeit of information on the role played publicly by the corporations which dominate the industry in Canada, and a dearth of information of the "behind the scenes" motives and activities of those involved in the decision-making process within the industry. It is very difficult to determine with certainty how or if a branch plant in Canada is used by the parent company abroad; for example, if prices are set in other countries to apply directly to Canada.

While examining the actions of the governments involved, it is necessary to contend with public statements and actions which are contradictory or confusing, and which seem to reflect no consistent policy by either Canadian or

American leaders. It is often difficult to sift through the information to ascertain one continuous trend or direction taken by either government.

However, some tentative conclusions can be made based on readily available data which have a bearing on the topic under review. Analysis of figures available disproves the myth that Canada is dependent upon heavy inputs of direct investment capital from abroad for its continued growth. Indeed, expansion in Canada by foreign owned firms is largely financed by retained earnings, and from the Canadian money market. A recent examination by Professor John Warnock of the University of Saskatchewan, using 1968 statistics from the U.S. Department of Commerce, showed the following breakdown of American investment funds in Canada:

	U.S. millions
Total U.S. Direct Investment in Canada	$3,611
Sources:	
Retained earnings	1,027
Depreciation and Depletion	864
Funds from Abroad	539
Other Sources and Adjustments	53
New Funds from the U.S.	127[5]

It is therefore clear that investment funds from the United States amount to less than five per cent of the total American investment, while over half of that investment comes from retained earnings and depreciation and depletion --funds generated in Canada itself. Even more than that, the United States is a direct importer of capital. "In

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[5]P. J. Brossard, Sold American!, (Toronto: Peter Martin Associates, 1971), p. 59.

1968, the Americans took out of Canada $511 million."[6] As a corollary, it is fully possible to assume the Canadian economy can expand, financed by funds generated within Canada.

In more specific terms for this paper, a number of comments can be made on the oil and gas industry itself. It is well known that the petroleum and natural gas industry in Canada is largely foreign owned. The 1963 statistics given by Kari Levitt in Silent Surrender show that twenty-six per cent of production is controlled in Canada, sixty-two per cent of the production industry is controlled by the United States, and the remaining twelve per cent is controlled by other foreign interests.[7] In terms of revenue versus employment figures, Canada Yearbook, 1970-71 has a list of forty leading Canadian industries in which petroleum refining alone ranked fourth in the value of production, while standing thirty-fifth in employment figures,[8] and exploration and extraction segments of the industry are similarly capital intensive. In terms of sales to the United States as opposed to internal use of crude and pentanes,[9] Oilweek, the Canadian industry trade paper, estimated that

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[6] Ibid., pp. 59-60.

[7] Kari Levitt, Silent Surrender (Toronto: Macmillan Co., 1970), p. 120.

[8] Canada, Statistics Canada, Canada Yearbook, 1970-71 (Ottawa: Information Canada, 1971), p. 778.

[9] Pentanes are partially refined petroleum products.

of a total production of 1,690,000 barrels a day, 936,000 barrels went to the United States while only 754,000 barrels went to Canadian refineries.[10] Since a large part of the profits from oil and gas come from the refining arm of the industry, the United States is receiving a larger refinery profit from Canadian crude than Canada.

One final point should be made in defense of the proposal for government involvement in the oil and gas industry. In at least one instance, the Canadian government has proved itself willing and able to participate in oil and gas exploration where the privately owned industry had shown some reluctance to extend operations. To foster exploration of the Arctic islands, the government gave a $9 million grant to a consortium, in return for forty-five per cent equity in the company which was formed for that purpose.[11] This 1967 investment illustrated the position that government involvement in Canada can be undertaken realistically.

These and many other elements which will be further discussed and analysed in the bulk of the paper lead to some very general, basic conclusions. Takeovers within Canada are largely financed by funds already in the country. The oil and gas industry itself is capital intensive, creating few jobs while reaping huge profits. Greater

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[10] Oilweek, Vol. 24, No. 1, January 19, 1973, p. 12.

[11] A. D. Hunt and H. W. Woodward in Oil Potential of Canada's Arctic Islands," in J. D. Holborn (ed.), Dusters and Gushers (Toronto: Pitt Publishing Co., 1968), p. 68.

profits from the refining of Canadian crude are made in the United States than in Canada. Finally, the Canadian government has shown that it can become an active participant in the oil and gas industry, when it perceives a need to do so.

As a general conclusion, it seems reasonable to say that Canadians, who subsidize the foreign domination and expansion of their industry, do not receive a fair return from the oil and gas industry in terms of either jobs or profits, for themselves or for the country as a whole. This is the major premise of this paper, and the major purpose will be to show that a fair return should and can be achieved for Canadians.

The method of research undertaken for this paper involved an analysis of the available literature. It has not been possible to acquire first-hand data, and thus heavy dependence has been placed on secondary and tertiary sources of information. General background information was first analysed, with subsequent reviews of more specific areas such as production, profits, taxation, and ownership figures found in industry publications, and in books written by major figures from the Canadian petroleum industry.

A second major source of information was Canadian and American government documents, which included annual statistical reviews, reports of Standing Committees and Cabinet Committees, and White Papers on government policy.

Since the topic is one of considerable current interest, a running analysis was made of newspaper articles on events as they unfolded, from the fall of 1972 through the summer

of 1973. A similar analysis was made of Canadian magazines for their analysis of these events.

However, the final and largest source of information was found in a variety of books published to discuss in part or whole the industry itself; proposed and actual government policy; taxation, pricing and other aspects of the industry; and general analyses of Canadian and the question of foreign ownership within Canada.

These sources of material cover the historical, governmental, nationalist, continentalist, and economic aspects and orientation of the issue and those involved. The literature, as used within this paper, will serve to illustrate the proposed hypothesis that nationalism has a viable role to play in energy resource management in Canada.

CHAPTER ONE

BACKGROUND - OIL AND GAS IN CANADA

There is an aura of glamour attached to the oil and gas industry, with overtones of romantic sheikdoms and Texas millionnaires. There are the eras of the huge trusts at the turn of the century, of price fixing and monopolies. There are stories of wildcatters and geologists, of dusters and gushers, of fortunes won and lost. The history of the industry is a history of people and power and politics. This history applies as well to Canada as to any other state with a significant oil and gas industry.

For one thing, oil and gas has a long recorded past in Canada.[1] More interesting, and perhaps more ironic in terms of later developments is the establishment of the oil industry itself. While it had long been known that there were large deposits of oil in Ontario's Enniskillen Township, it was not until a successful method of converting crude oil into lighting fuel was devised that a practical use for the oil made the establishment of an extracting and refining industry viable.[2] In a period notable for the

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[1]Stories of oil and gas discoveries, usually at inauspicious moments, appear in early settlers and explorers accounts, including the account of the discovery of the Athabasca Tar Sands by Peter Pond in 1788. J. C. Sproule, "Exploration and Discovery" in J. D. Hilborne (ed.), Dusters and Gushers (Toronto: Pitt Publishing Co., 1968), p. 13.

[2]For further details, see Earle Gray, The Great Canadian Oil Patch (Toronto: Maclean-Hunter, 1970), pp. 16-29.

rise of self-made men, there were numerous individuals willing and eager to turn to this new discovery, and to parlay an investment and some initiative into a financial empire. A few even succeeded.

The first major attempt to found such an empire was undertaken in Enniskillen Township early in the 1850's by two enterprising brothers named Tripp, who concentrated on extracting bitumen from the many "gum beds" of the area, without commercial success. A slightly different approach, adopted by J. M. Miller, of pumping crude oil rather than of mining for bitumen, prospered where the Tripp's method had failed. Miller started his efforts in Enniskillen in 1857, and by the next year, the first well successfully drilled in North America came in.[3]

The well, at the town of Oil Springs, started a boom that would set the pattern for similar oil and gas rushes in Canada over the next century. The discovery of one producing well brought hordes of individuals, and later corporations, into the area of the find. The conflict between increasing demand for land, drilling supplies and equipment, and the shrinking supply of these exploration necessities caused tremendous rises in their prices. Every available or promising acre of land was drilled, and every useable piece of equipment was utilized. Greed and violence

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[3]The irony of this situation lies in the fact that credit for founding the industry on this continent is commonly given to "Colonel" Edwin Drake, who brought in a successful well at Titusville, Pennsylvania on August 29, 1859. The Canadian precedent is largely ignored.

were commonplace. Yet a viable Canadian oil industry was established in Oil Springs and in the surrounding area.[4]

However, the Ontario industry was not of lasting importance to the oil industry in Canada. The development of a commercially practical incandescent lamp, the forerunner of the modern electric light bulb, by Thomas Edison in 1879, eliminated most of the need for illuminating fuel. The loss to the oil and gas industry of this market was more than compensated for by the demand for fuel to run automobiles. Internal combustion engines to operate vehicles were developed in Europe around 1885, and the United States became heavily involved in their manufacture by the 1890's. Production of oil and gas soon lagged behind demand, necessitating intense searches for new sources of supplies.

In Canada, the search was turned to the prairie provinces, in particular, to Alberta. There, in 1914, Canada's first major oil field,[5] was struck in Turner Valley, a little southwest of Calgary. In the ensuing boom, over five hundred companies were formed to exploit the field. More than half a million acres of land were under oil leases, and nearly half a million dollars were invested.[6] The

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[4]Gray, op. cit., p. 28.

[5]A "major" oil field is one with over 100 million barrels of recoverable oil. Earle Gray, Impact of Oil (Toronto: Ryerson, 1969), p. 10.

[6]Ibid., p. 10. For a more detailed account of the Calgary boom, see Gray, The Great . . . Patch, pp. 55-77.

massive oil deposits of the field lay below the level of this original find, and it was not until 1936 that the major reservoir was tapped.

For all the time and effort and money invested in the prairies over the next thirty years, no new major fields were discovered. "Canada, in 1946, was consuming petroleum at a rate of 221,000 barrels a day - and importing 200,000 barrels a day at an annual cost of more than half a billion dollars in foreign exchange funds."[7] While the supplies from Turner Valley diminished, Canada faced a heavy economic burden, and prospects of rapidly increasing oil prices. Many small firms went bankrupt or faced financial disaster. When exhaustive efforts made to find commercially recoverable oil deposits proved fruitless, one last effort was made before the exploration project was abandoned.

Imperial Oil commissioned a geological survey of the Canadian west from the Arctic to the American border, and from the Pacific coast to Hudson's Bay. After analysing the data, Imperial chose an area just southwest of Edmonton, near the village of Leduc, to sink a well. Tests indicated that the site had possibilities, but the first well did not produce a gusher in the rock level which Imperial had intended to probe. In a final attempt, the company authorized drilling into the lower regions of the site on the off chance that a commercially recoverable deposit might be found at a greater depth. Three separate tests proved that re-

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[7]Gray, The Great . . . Patch, pp. 97-98.

coverable oil did exist, and Leduc No. 1 was brought in in February of 1947. With the drilling of Leduc No. 2 several months later, Imperial and the rest of the industry realized that the most prolific field in Canada, to that date, had been discovered.[8]

The oil industry in Canada has progressed rapidly since the Leduc discoveries. Major fields have been discovered throughout the west. The Athabasca Tar Sands, which are estimated to contain "enough bitumen . . . to yield . . . synthetic crude oil, almost equal to the entire world supply of proved reserves of conventional crude in 1969,"[9] is being developed. The industry also has two frontiers to explore. One is the Arctic and Arctic Islands; the other potential source lies in the offshore areas of the Atlantic, Pacific, and Hudson's Bay.

Drilling is underway in three major basins of these frontiers. The potential reserves of the basin underlying Canada's Arctic archipelago are vast. J. C. Sproule, former operations manager for Imperial Oil in Saskatchewan, states that "it is conservatively estimated that this basin should contain ultimately recoverable reserves of 50 to 100 billion barrels of oil and 200 to 300 T.C.F. [trillion cubic feet] of gas."[10] The second basin lies off the west coast

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[8]Further details of this discovery may be found in Gray, The Great . . . Patch, pp. 97-105.

[9]Gray, Impact of Oil, p. 48.

[10]J. C. Sproule and N. A. Cleland, "The Present and Future of Oil and Gas in Canada," in Hilborn (ed.) op. cit., p. 223.

of Canada, where the reserves ultimately expected "should be in the order of 10 billion barrels of oil and 60 T.C.F. of gas."[11] The third major area presently under initial exploration is the Atlantic coast which may have "an ultimate reserve of 10 billion barrels"[12] of oil. Minor frontier regions also include southwestern Ontario, the interior of British Columbia, and the Hudson's Bay region.

It must be noted that the question of estimated reserves or potential reserves is a moot one. Sproule's figures indicate potential reserves of the three major frontier regions to be between seventy and one hundred billion barrels of oil, and between two hundred and sixty and three hundred and sixty trillion cubic feet of natural gas. The Canadian Petroleum Association in a report issued in 1969 projected "ultimate recoverable oil reserves for Canada as being 120.8 billion barrels of crude oil plus 19.6 billion barrels of N. G. L. natural gas liquids."[13] From these totals, the Association maintained that the Western Sedimentary Basin[14] alone contains "45 billion barrels of crude plus 7.5 billion barrels of N. G. L."[15]

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[11] J. C. Sproule and N. A. Cleland, "The Present and Future of Oil and Gas in Canada," in Hilborn (ed.) op. cit., p. 224.

[12] Ibid.

[13] Canada, National Energy Board, Energy Supply and Demand in Canada and Export Demand for Canadian Energy, 1966 to 1990 (Ottawa: Queen's Printer, 1969), p. 57.

[14] This basin underlies the area from the Mackenzie Delta down through Alberta and across the southern half of Saskatchewan and Manitoba.

[15] Canada, National Energy Board, op. cit., p. 57.

This disparity in figures is frequently seen in discussions of oil and gas potentials for Canada. The disparity is the result of a number of different methods of calculation. One report may estimate reserves in all possible offshore sites and in all of the lands of the territories. Another report might only estimate potential reserves in areas where drilling is presently under way. Different groups or companies may use different geological and geophysical survey data as a basis for calculations. Since there has not been a major find of commercially recoverable oil or gas in the North or in offshore areas, any estimates must be speculative.

The oil and gas industry involves four operations. The first is exploration. This involves geological and geophysical surveys, leasing or buying land for drilling, and sinking wells. In the final phase of exploration, new wells are sunk in likely areas in the hopes of discovering a new producing source. Since the ratio of dry wells to producing wells is high, this segment of the industry involves high risks. Of a total of 1,539 exploratory wells drilled in 1973, 1,026 were dry.[16] Even wells which do find deposits of oil or gas may be abandoned or operations may be suspended where quantities or locale make the wells economically unfeasible. Even in proven areas, where successful wells are operating, many dry wells are dug.[17]

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[16] Oilweek, Vol. 24, No. 1, January 19, 1973, p. 30.

[17] In 1972, 319 dry wells were drilled in proven areas, out of a total of 1,812 wells drilled. Oilweek, Vol. 24, No. 1, Jan. 19, 1973, p. 30.

Thus, there is a considerable capital outlay which may yield little or no capital returns. Between 1947 and 1971 $7,235.4 million were spent by the petroleum industry in exploration, of which $578.6 million were spent in 1971.[18]

The second major segment of the oil and gas industry is production, or getting it out of the ground. Crude oil and natural gas are hydrocarbons, compounds of hydrogen and carbon, which may exist in a liquid, solid or gaseous state. With the exception of the synthetic crude made from the bitumen of the Athabasca Tar Sands, crude and natural gas come from the wells as liquids or gases respectively.

While the third phase of the industry will not be discussed in this paper in detail, the transportation aspects are a necessary link between the production and refining phase. Transportation is largely by pipeline. The large oil and gas companies have control of pipelines directly or by subsidiaries. However, Canadian-controlled companies hold most of the assets in pipeline transportation, and this paper will concentrate on the foreign-owned segments of the industry.

The final segment of the industry, processing and refining, is essential to an understanding of oil and gas in Canada. Since natural gas usually contains impurities which must be removed before the gas can be transported by pipelines, a large part of gas processing is done in the field. Crude oil processed in Canada is shipped to refineries

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[18]Canadian Petroleum Association, 1971 Statistical Yearbook, 1972, p. 89.

TABLE ONE

Canadian Production - 1971

Source	Daily Production
crude oil	1,305,000 barrels
natural gas	7,073,000 million cubic feet
synthetic crude	72,575 barrels
condensate	2,447 barrels

Source	Annual Production
pentanes plus	46,005,247 barrels
propane	24,220,498 barrels
butane	15,443,624 barrels
sulphur	4,555,000 long tons

Source: Canadian Petroleum Association, 1971 Statistical Review. pp.71-89

via pipelines or tankers. There are a number of ways to assess Canadian production. The first method is by looking at the level of production for each of the major products of oil and gas. In its most recent review, the 1971 Statistical Yearbook, the Canadian Petroleum Association reported the final production output of the major products from hydrocarbons in 1971. They are given in Table One.

The second method of assessing oil and gas production in Canada is to examine in comparison with production in other countries. This second method translates the absolute output figures in Table One into the relative production rate of Canada vis-à-vis the rest of the world. One comparative table is given here: Table Two.

A third method of understanding production figures is in terms of the monetary value of the goods produced. In 1971, the value of producers sales of crude and condensate, synthetic crude, natural gas, pentanes plus, propane, butane, and sulphur reached $1,876,713,000.[19] The largest

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[19] Production figures are given for the basic energy resources which are crude oil and natural gas, and for the byproducts directly derived from processing these fuels. In the Canadian Petroleum Association's review, these main byproducts are condensate, pentanes plus, synthetic crude, sulphur, pentane, butane and propane. Synthetic crude is manufactured from the bitumen of the Atahbasca Tar Sands. Condensate is a mixture of pentanes and heavier hydrocarbons. Pentanes plus is a mixture produced from crude oil, natural gas or condensate, which contains mainly pentanes. Propane and butane, and propane-butane mixes are liquified petroleum gases (LPG's); they are hydrocarbon compounds. Sulphur is the only one of these hydrocarbon derivatives which is not liquid. From these byproducts further refining is made. In the next refining stage, petroleum products like diesel fuel and gasoline are manufactured.

TABLE TWO

World Energy Production, Percentage Distribution by Source 1925 and 1965

Energy Source	United States		Canada		Middle East	
	1925	1965	1925	1965	1925	1965
(A) As percent of each regions's total energy production *						
solid fuels	72.8	28.9	0.2	1.5	8.8	0.9
liquid fuels	21.1	36.7	0.3	0.7	91.1	97.6
natural gas	5.8	33.0	-	0.4	0.2	0.7
electricity	0.4	1.4	0.2	0.7	-	0.1
(B) As percent of world's production						
solid fuels	43.5	22.0	0.8	0.4	0.1	0.2
liquid fuels	70.9	27.4	-	2.8	3.1	26.7
natural gas	92.6	63.2	1.3	5.9	-	1.0
electricity	32.4	21.9	13.7	13.9	-	0.8

Source: J. Darmstadter, P. D. Teitlebaum, and J. G. Polach, Energy in the World Economy - A Statistical Review of Trends in Output, Trade and Consumption Since 1925. p. 22.

Canada and the United States comprise the North American region. The Middle East is part of the non-Communist Asian region.

revenues came from crude and condensate, while natural gas sales had a value of about one-quarter that of crude and condensate.[20] The figures available cover only the four western provinces and the territories. The net cash expenditures in this section of the country, by the industry, excluding income taxes, were $1,602,900,000. A further expenditure of $84,000 was made in the rest of Canada. This allows for a profit from western production alone of almost $275,000,000, without considering profits from refineries in the east. The most recent information available on corporate income taxes is found in the Corporations and Labour Unions Returns Act - Report for 1970 (CALURA), put out by Statistics Canada. These statistics show that foreign mineral fuel corporations in 1970 paid $32 million in federal income taxes while Canadian-controlled firms paid one million dollars. The rate of taxation as a percentage of profits, in that year, was fifteen per cent for foreign firms, and two per cent for Canadian firms.[21] Since corporations are able to deduct the previous year's losses from the current year's taxes, the actual amount of taxes paid by an individual firm may be less than the normal rate. In 1970, the net cash expenditures of the petroleum industry,

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[20]The relevant figures for the value of production in 1971 and for 1947-1971 are listed in Table Three (A). Table Three (B) has a breakdown of petroleum revenues in the west.

[21]Canada, Department of Industry, Trade and Commerce, Corporations and Labour Unions Returns Act - Report for 1970 (CALURA) (Ottawa: Information Canada, 1972), p. 68.

including income taxes were $1,471,800,000.[22] The value of producers sales for the Northwest Territories and the four western provinces alone was $1,622,484,000. Thus, the net profits from production appeared to be at least $216,500,000.

In the case of pricing in the oil and gas industry, appearances are deceptive. Profits are more a reflection of pricing policies within the national and multinational corporations than a reflection of free enterprise capitalism. The profits of the industry must be considered in terms of transfers within corporations. The integrated oil firms control all aspects of exploration, production and refining. Within individual corporations, pricing policies can often be "accounting fictions."

> In integrated firms in which producing affiliates sell wholly or largely to processing or marketing affiliates, profits are maximized for the operations of the integrated firms and not necessarily for the affiliate in an individual producing country. Intrafirm pricing policies may not be based on a world market price, but may instead reflect a desire to concentrate profits in one affiliate or another, to minimize taxes, to avoid restrictions on transfers of profits, or other reasons. Thus, a petroleum firm may want to concentrate profits in producing affiliates because of depletion allowances at the extractive stage. Also, if it has a monopoly position in sales to certain independent refineries in competition with its own refineries, a high price for crude oil or minerals puts the independent refineries at a disadvantage. On the other hand, if taxes on net profits are high at the extractive stage relative to taxes at other stages in an integrated operation, prices established for the resources may be low.[23]

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[22] Canada, Statistics Canada, Industrial Corporations - Financial Statistics, First Quarter, 1971, Vol. 18, No. 1, pp. 158-9.

[23] R. F. Mikesell, et. al., Foreign Investment in the Petroleum and Minerals Industry (Baltimore: The Johns Hopkins Press, 1971), p. 44.

TABLE THREE (A)

Value of Producers Sales

(in thousand dollars)

	Canada 1971	Western Canada 1947-1971	Western Canada 1971	Western Canada & Territories 1947-1971
crude and condensate	1,314,195	12,367,681	1,315,698	12,374,278
synthetic crude	46,511	124,032	46,511	124,032
natural gas	305,886	2,064,542	306,099	2,065,099
pentanes plus	134,630	850,010	134,630	850,010
propane	35,859	198,936	35,859	198,936
butane	19,927	121,364	19,927	121,364
sulphur	19,705	367,337	19,705	367,337
all products	1,876,713	16,092,905	2,499,578	16,110,059

Source: Canadian Petroleum Association, 1971 Statistical Review. p.53.

TABLE THREE (B).

Value of Producers Sales by Province

(in thousand dollars)

Province	1971	1947-1971
Alberta	1,527,562	12,575,714
Saskatchewan	228,768	2,583,714
British Columbia	103,222	694,225
Manitoba	15,445	222,486

Source: Canadian Petroleum Association, 1971 Statistical Review. pp. 54-55.

In terms of the petroleum and coal products industry, which is primarily involved in crude refining, the 1970 level of "profits" was about $138,000,000. Total revenues for the industry that year were $1,313,000,[24] and the amount paid in taxes was $71,600,000.[25] This industry produces a variety of products such as asphalt, coke, automobile gasoline, diesel and airplane fuel, lubricating oil and petrochemical feedstocks from the mineral fuels.[26]

After examining the oil and gas industry in terms of production, and of the value of production and processing, the question of ownership becomes important. The CALURA statistics for 1969 and 1970 examine the production and processing segments of the oil and gas industry in terms of control by foreign owners, Canadian owners, and ownership by other corporations. These statistics are given in Table Four.

The production segment is divided into four categories: petroleum and gas wells, pipeline transportation, wholesale and retail of petroleum products, and "other" petroleum and natural gas industries. In 1970, there were 436 foreign-controlled corporations involved in production; 687 Canadian-controlled corporations; and 4,090 companies controlled by other corporations. The large proportion of control by

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[24] See Table Four for revenue and profit figures.

[25] See Table Five.

[26] "Mineral fuels" include coal. It was not possible to find figures which excluded coal in production and refining in the figures from Statistics Canada.

TABLE FOUR

Statement of Estimated Revenue, Expenses and Retained Earnings
(in million dollars)
1970

	Mineral Fuels*	Petroleum and Coal Products Industries
1. Revenues	1695	1313
2. Expenses	1458	1275
3. Net Profit	237	38
4. Retained Earnings	614	504
5. Dividends	-58	-31
6. Adjustments	-94	-9
7. Bad debts written off		1
8. Capital Cost Allowance	85	59
9. Amounts capitalized for:		
i. exploration and development	118	
ii. geological and geophysical projects	73	
iii. land, lease auuisitions and rental expenses	69	
10. Base Profit	707	138

* includes coal

Source: Statistics Canada, Industrial Corporations - Financial Statistics, First Quarter, 1971. pp. 158-9, 44-5.

TABLE FIVE (A)

1971 Net Cash Expenditures of the Petroleum Industry

(in million dollars)

	Western Canada and Territories	Canada
1. Exploration		
(a) Geological and Geophysical	161.0	189.9
(b) Drilling	174.4	210.3
(c) Land aquisitions and rentals	174.5	178.3
	509.9	578.3
2. Development		
(a) Drilling	72.5	72.7
(b) Field Equipment	106.4	108.0
(c) Secondary recovery and pressure maintenance	24.4	24.4
(d) Natural Gas Plants	242.1	248.7
(e) Other	15.0	15.3
	460.4	469.1
3. Operating		
(a) Wells including flow lines and rental facilities	201.4	203.4
(b) Natural Gas Plants	86.5	88.6
(c) Taxes (excluding income taxes)*	19.3	19.5
(d) Interest expenses	53.2	53.2
(e) Other	38.7	39.6
	399.0	404.4
4. Royalties	244.3	234.9
5. Total	1,602.9	1,686.9
6. Net Cash Expenditures 1970	1,407.0	1,471.8

* See Table Five (B)

Source: Canadian Petroleum Association, 1971 Statistical Review. pp. 56-7.

TABLE FIVE (B)

Federal and Provincial Income Taxes Declared by Corporations, 1970

(in million dollars)

	Mineral Fuels	Petroleum and Coal Products
1. Foreign control		
(a) corporations with assets - 1,000,000-4,999,999	0.7	0.4
(b) corporations with assets - 5,000,000+	31.4	70.9
2. Canadian control		
(a) corporations with assets - 1,000,000-4,999,999	0.1	-
(b) corporations with assets - 5,000,000+	0.4	-
3. Other corporations	0.7	0.8
4. Total		
(a) corporations with assets - 1,000,000-4,999,999	0.8	0.4
(b) corporations with assets - 5,000,000+	31.5	70.9

Source: Department of Industry, Trade and Commerce, Corporations and Labour Unions Returns Act - Report for 1970 - Part I, (CALURA) p.208.

other industries is chiefly composed of companies involved in the wholesale and retail sale of petroleum products.

Foreign-controlled firms had assets of $4,523,000,000 in 1970, and showed a profit of $206,000,000. Canadian-controlled corporations had assets of $687,000,000 in 1970, and profits of $203,000,000. Firms controlled by other corporations had assets of $237,000,000 in 1970, and profits of $11,000,000. It is worth noting that the bulk of profits for the foreign-controlled corporations were made largely from petroleum and gas wells. The Canadian-controlled firms made most of their profits from transportation. The profits of firms controlled by other corporations, in the main, were made from sales of petroleum products.

The manufacturing segment of the industry is divided into two categories: refining of petroleum and coal products, and "other" petroleum and natural gas industries. The refining section, as illustrated in Table Six, is wholly controlled by foreign interests. These fourteen foreign-controlled firms have assets of $5,670,000,000 and showed profits of $440,000,000 in 1970. In the second category, the twenty-two foreign-controlled firms have assets of $1,787,000,000 and profits in 1970 of $397,000,000. The nineteen Canadian-controlled firms had assets of $1,325,000 and showed profits of $70,000,000.

These figures give overall statistics relevant[27] to

[27]This paper does not consider pipelines and transportation statistics in detail, but does concentrate on production and manufacturing. The figures given in Table Six omit transportation and pipeline statistics.

this paper. In 1970, there were 5,184 companies involved in the production and manufacture of oil and gas in Canada. These firms had assets of $13,559,000,000 and showed profits of $916,000,000. The 430 foreign-controlled firms had assets of $11,026,000,000 and showed profits of $706,000,000. In more simple terms, just over eight per cent of the companies involved in the production, manufacturing and sale of petroleum and coal products in Canada are foreign controlled, yet these firms had over eighty per cent of the assets, and made over seventy-seven per cent of the profits in 1970.

The federal government report, Foreign Direct Investment in Canada, popularly known as the Gray Report, examined some aspects of the foreign ownership issue. It stated that the petroleum and coal products industry was 97.9 per cent non-resident owned, and the mineral fuels industry was 77.1 per cent non-resident owned.[28] The report further pointed out that the latter industry exports almost twenty-five per cent of net output.[29] In the oil and gas industry, corporations which were engaged in exports to parents and affiliates in 1969 were studied. Of those, one quarter exported solely within the multinational to which they belonged.[30] The total exports of subsidiaries amounted to $569,000,000 in 1969, or 13.8 per cent of total sales. The

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[28]Canada, Foreign Direct Investment in Canada (Ottawa: Information Canada, 1972), p. 28.

[29]Ibid., p. 161.

[30]Ibid., p. 171.

TABLE SIX

Major Financial Characteristics of Corporations in the Petroleum and Natural Gas Industries by Control for 1969 and 1970

(in million dollars)

(A) Corporations operating in one petroleum and natural gas industry and classified to-

Major Financial Characteristics	Petroleum & Gas Wells		Pipeline & Gas Transportation		Wholesale & Retail of Petroleum Products		Other Petroleum and Gas Industries	
	1969	1970	1969	1970	1969	1970	1969	1970
I. Foreign Control								
1. No. of Corps.	209	218	44	42	116	132	42	44
2. Assets	2692	2985	865	954	290	230	265	263
3. Equity	1698	2007	257	295	61	54	84	77
4. Sales	678	732	304	337	597	637	697	126
5. Profits	241	128	49	60	10	10	15	8
II. Canadian Control								
1. No. of Corps.	158	169	36	38	380	417	59	63
2. Assets	504	638	2240	2442	176	204	113	132
3. Equity	360	442	716	758	74	88	48	47
4. Sales	58	69	638	723	360	429	119	140
5. Profits	10	22	132	159	10	14	9	160

III. Other corporations								
1. No. of Corps.	295	346	29	40	3191	3840	255	244
2. Assets	14	26	3	3	189	198	22	10
3. Equity	-24	8	1	1	61	68	11	19
4. Sales	28	11	4	4	531	586	96	38
5. Profits	-1	-4	-	-	13	14	1	1

(B) Corporations operating in more than one petroleum and gas industry

	Refining & Petroleum & Coal Products		Other Petroleum & Gas Industries		Totals for (A),(B)	
I. Foreign Control						
1. No. of Corps.	14	14	20	22	445	472
2. Assets	5258	5670	1720	1787	11090	11980
3. Equity	3378	3974	1004	1072	6482	7060
4. Sales	3335	3974	679	874	6288	6860
5. Profits	350	440	47	120	711	766
II. Canadian Control						
1. No. of Corps.	-	-	18	19	651	706
2. Assets	-	-	1253	1325	4286	4741
3. Equity	-	-	546	591	1744	1925
4. Sales	-	-	375	431	1550	1791
5. Profits	-	-	68	70	228	272

III. Other Corporations

1. No. of Corps.	–	–	–	–		3770	4090
2. Assets	–	–	–	–		228	237
3. Equity	–	–	–	–		50	96
4. Sales	–	–	–	–		659	639
5. Profits	–	–	–	–		14	11

Source: CALURA. pp. 190-191.

Gray report also noted that the "mineral fuels" industry imported 56.1 per cent of total output, which was the third highest import rate of the thirty-eight industries listed.[31]

Further statistics available from the Department of Industry, Trade and Commerce in its Statistical Supplement to "Foreign-Owned Subsidiaries in Canada, 1964-1969" expand on this theme.[32] Among the figures, the Statistical Supplement pointed out that in 1970, the gas and oil industry exported 65.7 per cent of total exports to parents or affiliates, and receives 84.3 per cent of its total imports from parent or affiliate firms. The industry received $32,000,000 from abroad, and paid out $219,000,000 to foreign interests in 1970--nearly 13 per cent of its total revenues in that year. The oil and gas industry had a current accounts balance of $121,600,000 with U.S. parents and affiliates in 1970; and a current accounts balance of $-376,600,000 with other foreign parents and affiliates. In 1970, the industry received $170,700,000 in funds of which $24,600,000 came from the United States (14.4 per cent), primarily in capital not paid by parents or affiliates. Of the total funding, $70,900,000 or 41.5 per cent was raised from within Canada, primarily through bonds and debentures, and short-term loans.

A final point to be made about the financial aspect of the oil and gas industry revolves around returns to the

[31]Canada, Foreign Direct Investment in Canada (Ottawa: Information Canada, 1972), p. 193.

[32]These statistics are given in Table Six.

country from the exploitation of Canadian energy fuels. Return fall under four major headings: land sales; leasing; royalties; and, income taxes. An analysis of the four provinces most actively involved in energy fuels, British Columbia, Alberta, Saskatchewan and Manitoba, well illustrates the Canadian picture. Total returns to these provinces were $2,732,069,000 from leasing, land sales and royalties.[33] This represents a rate of 5.0 per cent return compared to the value of producers sales. As has been stated, $33,000,000 was paid in federal and provincial income taxes in 1970, which represents a taxation rate of two per cent on Canadian-controlled firms, and fifteen per cent on foreign-controlled companies.[34] The amount of taxes paid by the mineral fuels industry as a whole was 4.6 per cent of profits and only 1.9 per cent of revenues. The petroleum and coal products industry, which is wholly foreign-controlled, paid $72,100,000 in federal and provincial income taxes, which is a rate of 52.2 per cent of base profits, but only 5.5 per cent of total revenues.[35]

These statistics give an overall picture of the oil and gas industry in Canada, from production and manufacturing to revenues, expenses and taxation. Another perspective on

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[33]For figures on returns to the western provinces from royalties, land sales and leases, see Table Seven. For percentage breakdowns, see Table Eight.

[34]See Table Five.

[35]It must be noted that the petroleum and coal products industry does not pay royalties, or for land sales and leases which are paid for by the oil and gas wells industry.

TABLE SEVEN

Provincial Oil Revenues

(in thousand dollars)

Provinces	Land Sales	Rentals	Royalties	Totals 1971	Totals 1947-1971
Alberta	23,922	68,844	167,721	260,486	1,948,354
Saskatchewan	2,473	3,619	14,566	20,958	362,237
British Columbia	22,165	9,428	14,668	40,281	411,821
Manitoba	34	21	372	428	9,651
Totals				Total	
1971	48,615	82,112	197,428	328,153	
1947-1971	1,622,670	1,504,422	1,474,565	2,732,063	

Source: Oilweek, "Annual Review and Forecast", Vol. 19, No. 1, January 19, 1973. P. 47.

TABLE EIGHT

Provincial Revenues as a Percentage of Production Revenue*

	1971	1947-1971
Alberta	5.8%	6.4%
Saskatchewan	19.1	7.1
British Columbia	2.1	1.7
Manitoba	36.0	22.0
Western Provinces	5.7	5.0

* To compare provincial revenues from oil and gas exploitation to the revenues received from the sale of those products by the industry involves a rather large jump in logic. Provincial revenues come from fixed rates on land leases, land sales and royalties on the wellhead price of crude and natural gas. Production revenues are dependent upon market prices which may vary widely. This Table is included merely to show, through one method, the differences between the returns to the oil and gas industry and to the four western provinces from the development of petroleum and natural gas in the west.

Source: Tables Three (A),(B) and Table Seven.

the industry may be gained by an examination of the corporations which run the industry. They fall into two basic categories: integrated firms, and independents. Integrated firms have interests in all aspects of the industry--exploration, extraction or production and refining. Independents concentrate their interests in exploration and/or production. Since almost all oil refineries are foreign-controlled, the only integrated oil firms are non-Canadian. There is a far greater participation of Canadian interests in other segments of the oil industry, and a great many of the independents are Canadian. In the natural gas industry, there is a higher proportion of firms controlled in Canada which have processing interests. The corporation with the largest number of gas processing plants is PanCanadian Petroleums Ltd., a subsidiary of a company controlled by the Canadian Pacific Railway Company.

In more specific terms, there are over four hundred firms listed in the Financial Post Survey of Oils, 1973, many with a number of wholly or partly-owned subsidiaries and affiliates. However, the Financial Post lists only sixteen companies involved in oil refining at thirty-eight plants. The Post report also shows that only fifty-four firms are involved in gas processing at one hundred and seventy-six plants. Of the oil refineries, only one is operated by a Canadian-controlled company, while twenty-five are operated by nine American-controlled firms, and eight are operated by three firms controlled in Europe. The final four are operated by three British firms. In

terms of the natural gas industry, one hundred and sixteen plants are operated by thirty-one American-controlled firms. Thirty-nine gas processing plants are operated by eleven Canadian-controlled firms. Fifteen of the rest are operated by six European companies, and two are operated by separate British-controlled corporations.[36]

Of all of these firms, only four have sizeable interests in all aspects of the oil and gas industry. These are Imperial Oil, Shell Canada Ltd., Gulf Oil and Texaco Canada. These companies are the "Majors" of the Canadian oil and gas industry. "In 1969 they accounted for 35 per cent of all the oil produced and 70 per cent of all the refined petroleum products manufactured and sold in Canada.[37] All of these companies are subsidiaries of foreign corporations, three of which are American, and one European controlled.

The largest by far is Imperial Oil, which is 69.8 per cent owned by Standard Oil of New Jersey. The original company was Canadian, founded in London, Ontario, in 1880, by sixteen independent petroleum refiners who hoped to establish a viable industry which could compete on a par with the growing American companies. Competition was particularly fierce with the burgeoning Standard Oil Company which J. D. Rockefeller had promoted to a near monopoly position in the United States, and which already owned three Canadian firms by the late 1890's. When the Canadian owners of

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[36]The full breakdown of these statistics may be found in (Appendix II), pp. , Tables twenty-four and twenty-five.

[37]Gray, The Great . . . Patch, p. 257.

Imperial Oil were unable to find expansion capital from British or Canadian money markets, they were forced to sell to Standard, which bought controlling interest in 1898. The next year, the other three Canadian based firms controlled by Standard were incorporated into Imperial.

In the early years of the oil and gas industry, Imperial made several major discoveries. The Norman Wells, still the largest exploited oil field in the Northwest Territories was brought in in 1920, and a subsidiary of Imperial, the Royalite Oil Company made the first discovery of major recoverable gas deposits at Turner Valley, where Imperial itself largely financed the 1936 oil strikes.

However, the biggest find came in 1947 when Imperial brought in Leduc No. 1. Subsequently, investment in exploration and capital expenditures helped make Imperial the largest company in Canada. Ninety years after its founding

> it was . . . the largest of all firms in Canada in terms of total sales (almost $1.5 billion in 1968), fifth largest in assets ($1.4 billion) and fourth largest in earnings ($100 million). It accounted for 15 per cent of Canada's oil production and more than a quarter of the total sales of refined petroleum products.[38]

Even as a subsidiary, Imperial Oil has its own sphere of influence and ownership. Table Nine illustrates the example of Imperial as an industrial giant within Canada which is itself a subsidiary. All of the interests held by Imperial in Canada help to make it the twentieth largest oil company in the world.

With its assets and interests in so many regions and

[38]Gray, The Great . . . Patch, p. 258.

TABLE NINE

Subsidiaries and Affiliates of Imperial Oil

Name of Company	Percentage of Ownership
Adams, W. H., Ltd.	98.9
Allied Heat and Fuel Ltd.	100.0
Atlas Supply Co. (Canada) Ltd.	100.0
Bourque Bros. Ltee.	90.0
Building Products (Canada) Ltd.	100.0
Champlain Oil Products Ltd.	100.0
Devonian Natural Gas Co.	99.0
Hall Fuel (1965) Ltd.	99.2
Home Oil Distributers Ltd.	100.0
Imperial Oil Developments Ltd.	99.9
Imperial Oil Enterprises Ltd.	100.0
Imperial Pipe Line Co. Ltd.	100.0
Interprovincial Pipe Line Co.	33.3
Maple Leaf Petroleum Ltd.	99.4
Mongeau et Robert Cie Ltee.	99.8
Montreal Pipe Line Co. Ltd.	32.0
Nisku Products Pipe Line Co. Ltd.	99.4
Nottingham Gas Co. Ltd.	35.3
Oval Natural Gas Co. Ltd.	99.8
Poli-Twine Corp. Ltd.	100.0
Polybottle Ltd.	100.0
Rainbow Pipe Line Co. Ltd.	33.3
Redwater Water Disposal Co. Ltd.	44.9
Servacar Ltd.	70.0
St. Lawrence Tankers Ltd.	50.0
Syncrude Canada Ltd.	30.0
Tecumseh Gas Storage Ltd.	50.0
Winnipeg Pipe Line Co. Ltd.	100.0

Source: Statistics Canada, Inter-Corporate Ownership Statistics, 1969. pp.504-5

TABLE TEN

Subsidiaries and Affiliates of Shell Canada Ltd.

Name of Company	Percentage of Ownership
Anglo Canadian Oil Co. (1955) Ltd.	98.0
Beaver Service Centres Ltd.	98.5
City Gas Corp. Ltd.	100.0
Cohen and Sons Fuels Ltd.	100.0
Commercial Solids Pipe Line Co.	100.0
Deep Sea Tankers Ltd.	99.6
Laurentian Heating Inc.	80.0
Monarch Propane Ltd.	98.4
North Star Oil Ltd.	100.0
Peace River Oil Pipe Line Co. Ltd.	12.5
Peigan Oil (Canada) Ltd.	100.0
Shell Canadian Tankers (1964) Ltd.	100.0
Sun Canadian Pipe Line Co. Ltd.	45.0
Trans-Northern Pipe Line Co.	33.3
Young Drilling Co. Ltd.	99.5
Montreal Pipe Line Co. Ltd.	16.0

Source: Statistics Canada, Inter-Corporate Ownership Statistics, 1969. p.335.

TABLE ELEVEN

Subsidiaries and Affiliates of Gulf Oil Canada Ltd.

Name of Company	Percentage of Ownership
Alberta Gas Trunk Line Ltd.	11.1
Alberta Underground Storage Ltd.	40.0
B. A. Shawinigan Ltd.	100.0
British American Gas Utilities Ltd.	100.0
British American (Quebec) Ltd.	100.0
British American Tankers Ltd.	100.0
Canadian Helium Ltd.	33.3
Canadian Resins and Chemicals Ltd.	100.0
Cansulex Ltd.	36.3
College Bay Corp. Ltd.	100.0
Crystal Oil Ltd.	100.0
Daval Petroleum Ltd.	100.0
Flash Petroleums (1966) Ltd.	100.0
Gulf Alberta Pipe Line Co. Ltd.	100.0
Gulf Canada Home Comfort Ltd.	100.0
Gulf Oil Canada Operations Ltd.	100.0
Gulf Saskatchewan Pipe Line Ltd.	100.0
Ideal Petroleum (1959) Ltd.	100.0
McArthur Chemical Co. Ltd.	100.0
Montreal Pipe Line Co. Ltd.	16.0
National Petroleum Ltd.	100.0
Peace River Oil Pipe Line Co. Ltd.	12.5
Perkins Glue Co. of Canada Ltd.	100.0
Producers Pipe Lines Ltd.	20.5
Purity 99 Oil Ltd.	100.0
Redwater Water Disposal Co. of Canada Ltd.	15.9
Rimbey Pipe Line Co. Ltd.	40.0
Royalite Oil Co. Ltd.	98.0
Saskatoon Pipe Line Co. Ltd.	96.9
Sentinel Heating Service Ltd.	100.0

TABLE ELEVEN - Continued.

Shawinigan Chemicals Ltd.	100.0
St. Lawrence Fuel Inc.	100.0
Superior 77 Ltd.	100.0
Superior Propane Ltd.	100.0
Trans-Northern Pipe Line Co. Ltd.	33.3
Venport Tankers Ltd.	100.0
Western G. M. C. Truck Centre Ltd.	51.0
Western Tire and Auto Supply Ltd.	100.0

Source: Statistics Canada, Inter-Corporate Ownership Statistics, 1969. pp. 441-2.

TABLE TWELVE

Subsidiaries and Affiliates of Texaco Canada Ltd.

Name of Company	Percentage of Ownership
Federated Pipe Lines Ltd.	50.0
Great Eastern Oil Import Co. Ltd.	47.8
Heney, John and Son Ltd.	100.0
Independent Pipe Line Co. Ltd.	100.0
Prima Oil Co. Ltd.	100.0
Public Fuel Transmission Systems Ltd.	50.0
Montreal Pipe Line Co. Ltd.	16.0
Regent Refining (Canada) Ltd.	70.0
Rogers Elias Co. Ltd.	100.0
T. & L. Fuels Ltd.	100.0
Tex-Park Ltd.	50.0
Tolhurst Oil Ltd.	100.0
Tolhurst Petroleum Ltd.	100.0
Trans-Northern Pipe Line Co. Ltd.	33.3

Source: Statistics Canada, Inter-Corporate Ownership Statistics, 1969. p. 512.

economic facets of Canada, Imperial exemplifies the extent of ownership which may be obtained, within Canada, by subsidiaries of foreign corporations. Imperial alone accounts for fifteen per cent of all oil production in Canada, and over one quarter of all sales of refined petroleum products. With over 7,000 outlets, Imperial is Canada's largest retailer of petroleum products. It is also diversified, having interests in a range of goods from plastic bottles to boiler turbines.

Imperial, though the largest, is by no means the only major oil company in Canada. The second largest is Shell Oil Canada. Shell first entered the Canadian scene in 1912, building storage facilities for crude from the East Indies under the aegis of its wholly-owned subsidiary--Shell Oil Company of B.C. Some refining was begun in 1932 at Vancouver and Montreal, but Shell's American-based division undertook all exploration. Unable to find oil in quantity, and faced with the loss of its properties in the Far East after the second World War, Shell was forced to cut back many of its operations. Consequently, it was decided to cease operations in Canada, in favour of Venezuelan exploration. Leases dropped by Shell in 1946 covered the site of the Redwater field brought in two years later by Imperial.

In 1950, Shell was back in operation in Canada. Its premature abandonment of the field forced the company to make heavy capital outlays to become competitive with the other major firms. The company became active in petro-

chemicals in the east, marketing in the west, and in exploration, primarily offshore drilling. Shell purchased North Star Oil Ltd. in 1960, and North Star's subsidiary, Cree Oils of Canada, Ltd. Next, Shell purchased one of Canada's largest independents, Canadian Oil Companies Ltd., which had been founded in Petrolia, Ontario in 1901. Through these purchases, Shell Canada, Ltd. retrieved its position as one of the majors in Canada. The company is 87 per cent owned by Shell Petroleum N.V.[39] and its subsidiaries, and about 20 per cent of the shares are publicly held.

The third largest of the majors is also foreign controlled. It is based on the British American Oil Company, (B.A.), founded in 1906 in Toronto. This company was active in refining, pipelines, and exploration in the years prior to World War Two, and even maintained an American subsidiary. Just after the war, the Gulf Oil Corporation acquired about twenty per cent interest in B.A. Then Gulf "acquired control of B.A. in 1956 by selling its Canadian subsidiary, Canadian Gulf Oil Co. to B.A. for over eight million shares of B.A. Added to the shares Gulf already owned in B.A., this gave it complete control."[40] In a series of moves, the Gulf-controlled corporation began expansion with the purchase of control of American Explora-

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[39]Shell Petroleum N.V. is a company incorporated in the Netherlands. "N.V." stands for Naamoloze Vennootschap, which is Dutch for Limited Company.

[40]J. M. Freeman, Biggest Sellout in History - Foreign Ownership of Alberta's Oil and Gas Industry and the Oil Sands (Alberta New Democratic Party, 1966), p. 17.

tions Ltd. in 1962 (Purity Service Stations); Superior Propane Ltd. in 1962; and control of the Royalite Oil Company in 1964. By 1969, the company was 69 per cent owned by Gulf, and acknowledged the arrangement by changing its name to Gulf Oil Canada. The third takeover was completed.

The final company considered one of the majors is Texaco Canada Ltd. The origins of the present company date back to 1873 with the McColl and Anderson partnership in Toronto. A merger with Frontenac Oil Refineries Ltd. in 1927 created McColl-Frontenac Oil Company, which had Canadian and West Indies subsidiaries.

Unable to raise the capital needed for growth during the Depression, the company began selling shares to the Texas Oil Corporation, later known as Texaco, in 1936. By 1938, Texaco had acquired sufficient shares of the company to elect its own people to the board of directors. In 1948, Texaco became the majority stockholder, a position reached by purchases and exchanges of shares in a manner similar to the B.A. takeover. By 1969, Texaco of New York had acquired 68 per cent ownership of Texaco Canada, and full ownership of Texaco Explorations, a company with major oil reserves in Western Canada, and which operates much of the gas processing plants of Texaco Canada.[41]

The key factor upon which all of these takeovers

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[41] A further and more detailed account of the actions involved in the development of these four companies in Canada may be found in Gray, The Great . . . Patch, pp. 257-280, and in Freeman, op. cit., pp. 10-19.

hinged was money. Canadian companies have consistently been unable to raise sufficient capital for the growth and expansion which would keep them competitive. To remain in operation, their only alternative has been to sell to another oil company which would provide that capital. The multinational firms have usually had sufficiently diversified interests in enough countries that a lean period in one area would not cripple overall operations. Canadian companies, particularly during the Depression and prior to Leduc, did not have those buffers to fall back on. They could not raise the capital for expansion in a field which appeared to have high risks and little future potential.

It is for these reasons that the Canadian oil and gas industry has become dominated by non-Canadians. The potential for the growth of the industry at Athabasca, in the Arctic and through offshore drilling could be vast. The largely foreign-owned industry pays low taxation rates, and returns from land sales, leases and royalties are not great. The implications of these factors, and the possible approaches which can be taken to manage the industry and energy resources will be the topics of discussion of the rest of the paper. These issues, as will be shown, could be of incalculable importance for the future of Canada.

CHAPTER TWO

FORMATION OF A NATIONAL OIL POLICY - OIL AND GAS

The discussion and debate carried on by governments, the media, and interested individuals over the international energy "crisis" has given renewed impetus to the demand in Canada for a national energy policy. A wide variety of proposals have been made, ranging from free trade in energy resources, under the umbrella of a continental energy pact, to the nationalization of the oil and gas industry. Any proposed solution must take into consideration the diversity of rights, interests, and priorities of the government groups and individuals concerned in the ultimate disposition of energy resources.*

This chapter will concentrate on these diverse elements as they influence the formation of a national energy policy. Since this paper is focusing on oil and gas, the emphasis of this chapter will rest with those energy sources. It is critical to an understanding of the problem of energy resource management to accept that all energy resources must be considered as necessary components of such a national

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*The main sources of information for this chapter were Thomas Burton, Natural Resource Policy in Canada - Issues and Perspectives (Toronto: McClelland and Stewart, 1972); Canada, National Energy Board, Energy Supply and Demand and Export Demand for Canadian Energy, 1966 to 1990 (Ottawa: Queen's Printer, 1969); Department of External Affairs, International Perspectives, Autumn, 1972; Oilweek, Vol. 24, No. 1, January 19, 1973; The Windsor Star, January and February, 1973; and The Globe and Mail, January, 1973.

policy. Thus, the whole topic of energy resource management must be discussed, with emphasis, for the purposes of this paper, on oil and gas.

The first problem in understanding the overall issue of a national energy policy is determining what would constitute such a policy in Canada. The establishment of policy requires utilizing a decision-making process. Those determining policy must review the situation on which policy is to be made, select one or more options from the alternatives available on the basis of the objectives and priorities of the decision-makers. Then, they must determine the policy to be adopted, and develop programmes to carry out the policy.[1] There is a wide variety of decision-making models. One put forward by the Economic Council of Canada in its Eighth Annual Review, discussed the decision-making process as a three-level system. The report offered a simplified chart to explain the system of decision-making (Chart One). A complete system for the federal government

> would provide for inflows of information relating to the objectives, policies, and programmes of provincial and municipal governments, and foreign governments and organizations . . . as well as access to information from private groups.[2]

The key features of Chart One involve three centres of attention. First, there must be choices of alternatives

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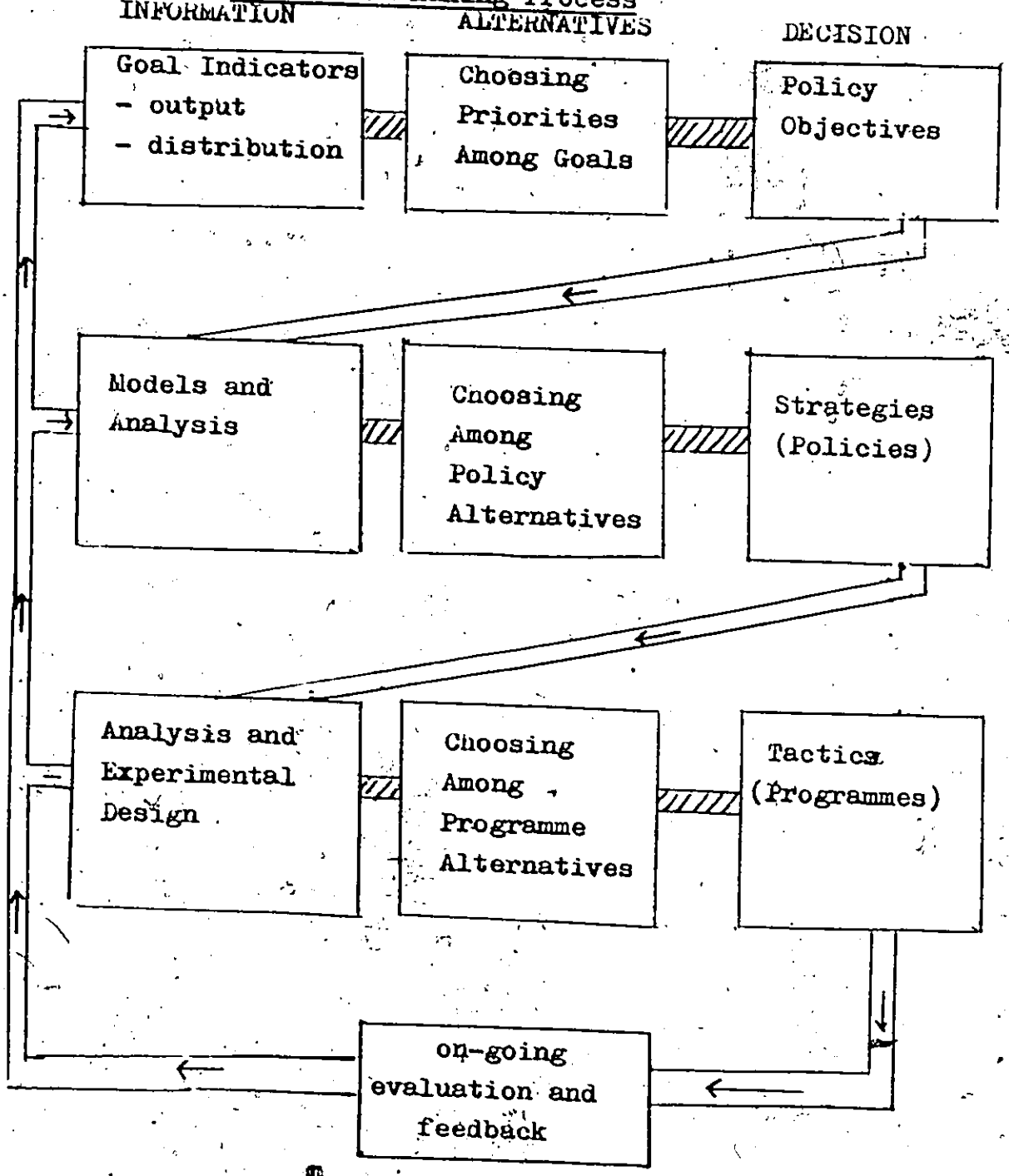
[1]Canada, Economic Council of Canada, Eighth Annual Review - Design for Decision-Making - An Application to Human Resources Policy (Ottawa: Information Canada, 1971), p. 63.

[2]Ibid., pp. 64-65.

CHART ONE

Selected Information Inputs into a Decision-Making Process



available at the levels of objectives, policies and programmes. Second, each level must have analytical information available to it, so that decisions made at each level can be based on the fullest degree of information relevant to each judgement. Third, a continual review and access to feedback must be available to all three levels so that reassessments and changes may be made, based on the implementations of each stage of the decision-making process.[3]

To begin an analysis of decision-making in energy resource management, a cautionary note must be made. National policy must be regarded, not as the sole prerogative of the federal government, but as a "set of common national goals and objectives for energy resources planning and management, for the country as a whole."[4] As in so many areas, the federal government has limited direct jurisdiction over energy resources. The role of the provincial governments and other groups is therefore of major importance.

The provincial governments, under Section 109 of the British North America Act, were given full control over mineral resources found within their boundaries. At the time of Confederation, these rights belonged to Ontario, Quebec, Nova Scotia and New Brunswick. In 1871 British Columbia acquired this right, when it entered Confederation.

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[3]Canada, Economic Council of Canada, Eighth Annual Review - Design for Decision-Making - An Application to Human Resources Policy, p. 6.

[4]Thomas Burton, op. cit., p. 18.

In 1873, Prince Edward Island was also granted this jurisdiction on becoming a province. However, the federal government retained mineral rights in Manitoba, Saskatchewan and Alberta as they entered Confederation. It was not until 1930 that these provinces acquired the rights and powers enumerated in Section 109.

The full rights of the provinces over mineral resources are still restricted by certain other claims. The Hudson's Bay Company, which sold Rupert's Land to the federal government in 1869, retained some of its land and control, including control over sub-surface minerals, on 7.5 million acres of land, or about five per cent of its former territories. The Canadian Pacific Railway (C.P.R.), was granted twenty-five million acres of land as a right-of-way for the railway, and soon retained mineral rights on the land. Today, the C.P.R. has 9.5 million acres of land under oil and gas leases in Alberta alone. A final non-federal control lies in the hands of owners of land homesteaded and purchased prior to Confederation. Although the total of these free-hold lands under full private control is not extensive, it is another element curtailing jurisdiction by the federal government.

Control by Ottawa extends to all federal Crown lands, to the Yukon and the Northwest Territories. The land titles to Indian reserve lands, except in British Columbia, and to National Parks lands are also held by the federal government. The 1967 Advisory Opinion of the Supreme Court of Canada, on a referral case concerning ownership and jurisdiction

over the resources of the subsoil and seabed off the west coast, put by the Federal government, stated that ownership and jurisdiction over mineral resources lies with the federal government.[5]

Therefore, one must be aware that any policy has to take into consideration the fact that constitutional and legal jurisdiction over energy resources lies with two levels of government, two private groups (the Canadian Pacific Railway and the Hudson's Bay Company), as well as a number of individuals. To further complicate the issue of who is entitled to be a decision-maker, or have a part in the decision-making process, each government has established a number of departments, boards and agencies to handle energy resources within specified areas of control. Each provincial government has a department which deals with natural resources and some have more than one. Two also have separate Oil and Gas Conservation Boards.[6] A number of other departments exert influence over internal

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[5]For more detailed information, see H. C. Hodgson, Digest of Mineral Laws of Canada (Ottawa: Queen's Printer, 1967), pp. 1-4, and Jean-Luc Pepin, "The Federal Government and the Oil Industry" in J. D. Hilborn (ed.), Dusters and Gushers (Toronto: Pitt Publishing Company, 1968), pp. 93-98.

[6]As of 1968, relevant provincial departments were as follows: British Columbia, the Department of Mines and Petroleum Resources; Alberta, the Department of Mines and Minerals, the Alberta Energy Resources Board; Saskatchewan, the Department of Mineral Resources; Manitoba, the Department of Mineral and Natural Resources; Ontario, the Department of Mines, the Department of Energy and Resources Management, the Ontario Energy Board; Quebec, Department of Natural Resources; New Brunswick, Department of Natural Resources; Nova Scotia, Department of Mines; Prince Edward Island, Department of Industry and Natural Resources; Newfoundland, Department of Mines, Agriculture and Resources.

TABLE THIRTEEN

Production by Province, 1971

(in percentages)

Product	Northwest Territories	British Columbia	Alberta	Manitoba
crude oil	0.2	5.3	74.6	1.1
synthetic crude	-	-	100.0	-
condensate	-	12.2	87.7	-
pentanes plus	-	2.4	96.7	-
propane	-	1.9	94.8	-
butane	-	2.0	95.6	-
sulphur	-	-	98.5	-
natural gas	trace	13.0	82.8	-
liquid hydrocarbons* (barrels/day)	0.16	4.69	78.46	0.93

* liquid hydrocarbons are: crude, synthetic crude, condensate, pentanes plus, propane, butane

Source: Canadian Petroleum Association, 1971 Statistical Review. pp. 72-89

TABLE THIRTEEN – Continued

Saskatchewan	Ontario	Quebec	New Brunswick	Canada
18.6	0.2	–	trace	100.0
–	–	–	–	100.0
trace	–	–	–	99.9
0.8	–	–	–	99.9
3.3	–	–	–	100.0
2.4	–	–	–	100.0
1.9	–	–	–	99.0
3.4	0.6	trace	trace	99.8
15.56	0.16	trace	trace	99.96

provincial energy resource management decision-making, such as a Department of the Environment. All of these boards and departments enact numerous pieces of legislation dealing with such matters as leasing, land sales, royalties and drilling and mining regulations.

Beyond this, the federal government, as has been stated, has some jurisdiction within the provinces, as well as jurisdiction over the territories and offshore areas. Within this jurisdiction, it has set up boards and agencies of its own to enact legislation of the federal government for resource management. The departments and boards with direct control are the Department of Energy, Mines and Resources, the Department of Indian Affairs and Northern Development, the National Energy Board, the Atomic Energy Control Board, and the Dominion Coal Board. A number of other departments have some controls over energy development, including the Department of National Revenue, and the Department of Finance.

It is thus clear that the question of who makes energy resource management decisions at present is highly complex. It is a matter of concern for eleven governments, and many agencies within those governments. A national energy policy involves reconciling hundreds of Acts and regulations, as well as governments and individual groups with some control over energy resources.

The determination of a national energy policy must be made on the premise that such a policy is based upon "a need for a national set of goals and objectives as dis-

tinct from federal or provincial ones."[7] This need is grounded in the belief that the problem of managing energy resources is of national relevance. There are many arguments in favour of such a belief. Thomas Burton maintains that this belief is valid for three major reasons. The first is that the problems of resource use and environmental considerations are international in scope, and Canada should have one voice with other nations facing such problems. The second factor lies in the view that continued prosperity and economic growth is founded on the exploitation of natural, including energy, resources, and it is of national concern that these resources be managed so as to ensure continued overall growth for the whole country. The third point, made by Burton, is the belief that these questions deserve a national policy since we have already reached a stage where problems of resource management and environmental concerns transcend federal and provincial areas of control. They are becoming matters of national interest.[8]

The question of a national energy policy becomes even more critical with the realization that Canada is heavily dependent upon non-renewable energy resources--the fossil fuels of oil, natural gas, and coal--used in primary and secondary stages of energy creation. The National Energy Board gives some statistics on energy consumption rates,

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[7]Burton, op. cit., p. 18.

[8]Ibid., pp. 18-19.

actual and estimated, for 1966 and 1990, which illustrate the point.[9]

	% Energy Demand					
	Residential and Commercial		Industrial		Transportation*	
	1966	1990	1966	1990	1966	1990
Oil	53.4	34.6	27.0	24.8	99.0	100.0
Natural Gas	22.3	35.4	21.0	34.1	-	-
Coal	∿5.0	-	28.8	10.8	trace	-
Electricity	13.7	29.4	30.3	23.1	-	-

*This report did not take into account rapid transit systems which are projected for the future, or the subway systems of Montreal and Toronto.

In a further breakdown, the Board's report showed sources of electricity supplies in Canada to be as follows:[10]

	1966	1990
Hydro	82.0%	44.0%
Nuclear	-	32.0
Coal	10.0	17.0
Oil	2.0	3.0
Natural Gas	3.0	3.0
Industrial thermal	3.0	1.0

This table illustrates that of the electricity supply in 1966 fifteen per cent was met by non-renewable fossil fuels, and that, in 1990, twenty-three per cent of electricity in Canada would be furnished by those fuels.

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[9]Canada, National Energy Board, Energy Supply and Demand in Canada, 1966 to 1990, and Export Demand for Energy (Ottawa: Queen's Printer, 1969), pp. 23, 34, 43.

[10]Canada, National Energy Board, op. cit., p. 70.

TABLE FOURTEEN (A)

Canadian Production, Export, Import and Consumption, 1971

	Crude Oil and Equivalent barrels/day	Petroleum Products barrels/day	Natural Gas mcf/day
1. Production	1,584,171[a]	1,396,079	7,072,867
2. Export	750,811[b]	36,945	2,504,841
3. Import	669,109[c]	155,978	-
4. Consumption	1,502,469	1,515,112	4,568,026

[a] includes crude, condensate, pentanes plus, and propane/butane mixes

[b] export to the United States of crude and equivalent

[c] includes crude, condensate and pentanes plus

Source: Canadian Petroleum Association, 1971 Statistical Review. pp. 83, 100-103, 89.

TABLE FOURTEEN (B)

Percentages

	Crude Oil & Equivalents	Petroleum Products	Natural Gas
1. exports as a percentage of production	47.4	2.6	35.4
2. imports as a percentage of consumption	44.5	10.3	-
3. production as a percentage of consumption	105.4	92.1	154.8

Source: Table Fourteen (A)

This heavy dependence on non-renewable resources is not a severe problem while exploration continues to find new reserves equal to or in excess of those depleted annually. This was true of Canada until 1971, when extraction began to outstrip the discovery of new reserves of oil and gas. Other countries are in an even more tenuous position. "The rate of increase in the level of consumption of oil in the United States between 1967 and 1970 was, in each year, greater than the discovery of new reserves."[11] The United States is consuming energy reserves at a faster rate than they are being found.[12]

This raises another major factor to be considered in an examination of policy determinants. The main desire of the United States in acquiring Canadian energy supplies will be discussed in the next chapter, on continentalism. However, several relevant points should be made here. The United States appears to be depleting non-renewable energy reserves faster than they are being replaced by domestic discoveries. The country is already heavily dependent upon foreign supplies. "In 1970, the U.S. imported 25 per cent of its total oil needs. That will rise to an estimated 35 per cent in 1973, and to 45 per cent in 1975."[13] Venezuela,

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[11] Burton, op. cit., p. 58.

[12] This does not necessarily mean that such reserves cannot be found. Widespread speculation in the United States that oil companies are deliberately causing an artificial energy crisis by minimal exploration has already led to a Senate investigation of their activities and monopolistic practices.

[13] U.S. News and World Report, February 19, 1973, p. 31.

which supplied twenty-six per cent of the oil imported into the United States, and which ranks as its largest single supplier, is facing steadily decreasing production. Canada, the United States' second largest supplier at twenty-two per cent[14] has been marked as a reliable source to help supply the demands of the American energy market.

In its 1972 annual review, Oilweek gave figures which showed that Canadian exports of crude and pentanes plus increased from twenty per cent of production in 1960, to around fifty-five per cent of production in 1972. Exports are expected to rise to fifty-seven per cent of production in 1973.[15] In 1971, Canada exported 35.4 per cent of its production of natural gas to the United States as well.[16]

If the pressure to supply American markets came only from the United States, the question of American shortages might not have as much impact on Canadian supplies as it does now. However, the demands from the United States are supported by Canadian interests. Even the National Energy Board emphasises the importance of American needs when it makes its supply analysis

> based on an assessment of the United States petroleum demand and supply and the range of Canada's possible participation in supplying this demand, which constitutes the only apparent outlet for Canadian petroleum production in excess of what can be used in Canada.[17]

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[14] U.S. News and World Report, February 19, 1973, p. 44.

[15] Oilweek, Vol. 24, No. 1, Jan. 19, 1973, p. 12.

[16] Ibid.

[17] National Energy Board, op. cit., p. 47.

Given an oil and gas industry primarily owned by foreign interests, most of which are American, and the demands of the American market for energy resources, Canadians have adopted three different ways of looking at the issue of energy resource management. The first falls under Burton's heading, "technological man," exemplified by Jean-Luc Pépin. As Minister of Trade in 1970, he stated that, "It would be crazy to sit on it. In maybe 25 to 50 years, we'll be heating ourselves from the rays of the sun and we'll kick ourselves in the pants for not capitalizing on what we had when gas and oil were current commodities."[18]

The second position is one which might be held by those approaching the issue of energy management as "ecological man." Such an individual would maintain that the creation of the James Bay Hydro-electric Project, or the Mackenzie Valley Pipeline would create ecological havoc for people, wildlife and natural cycles which would cause irrevocable personal and environmental damage, not worth whatever financial or energy returns might be achieved. Ecological man would express needs for more cautionary approaches to large scale power, and energy resource transportation projects. He would demand far greater emphasis upon the quality of life as it might be affected by resource exploitation.

The third position is one which would be held by

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[18] The Globe and Mail, "Calculating U.S. need," September 14, 1970.

"chauvinistic man." Such a person would hold that if the resources lie in Canada, they should be used to supply Canadian needs, not foreign demands. "Chauvinistic man" is exemplified by the nationalists in the oil and gas debate. Some call for immediate nationalization of the oil and gas industry. Some advocate that all future oil and gas development be undertaken by a Crown Corporation. Some merely insist upon greater returns to Canadians through higher levels of taxation, and higher rates for land sales, leases, and royalties. These three schools of thought, and the groups which have adopted them, have an impact upon the determination of energy resource policy in Canada.

All of these factors may be analysed according to the outline set forth in Chart One. On the first level of the policy making system, that of setting policy objectives, goal indicators are utilized to deliver information on which goal priorities may be determined. In terms of energy resource management, goal output indicators would include National Energy Board, Statistics Canada and the Canadian Petroleum Association analyses of the present energy supply, demand, consumption, import and export rates, as well as projections for the future. Goal distribution indicators would include analyses and projections by the Alberta Oil and Gas Conservation Board, as well as other provincial indicies of consumption, supply and demand. Goal-distribution indicators should also include statistics on American supply and demand, as well as reports from groups like petroleum engineers, and Pollution Probe, Indians and Inuits

The latter groups could furnish information on the personal and environmental effects created by present and projected energy exploitation schemes.

From these goal indicators, a number of priorities can be determined. Such goals might include immediate economic returns, long-term economic returns, minimal environmental damage, and long and short term energy returns for Canadians, and maintenance of friendly relations with the United States. If the goal priorities chosen were short term economic returns and the maintenance of friendly relations with the United States, a policy objective of sales of all energy reserves surplus to projected Canadian demands might be selected.

If the goal priority of creating minimum ecological damage was chosen, a policy objective of foregoing schemes like the James Bay Project and the Mackenzie Valley Pipeline would be adopted. Instead, projects which involved the least degree of danger to the environment, and perhaps a move towards developing alternate sources of energy which would offer less environmental damage might be promoted. Even an emphasis upon greater use of natural gas, a low air pollutant, might be a scheme with more ecological safeguards.

Since there is such a high degree of American ownership of the oil and gas industry, and since there are ever-increasing demands from the United States on Canadian energy supplies, the question of the determination of a national energy policy may be viewed, in part, as a problem

of Canadian-American relations. For this reason, this paper will concentrate on examining energy resource management in terms of the three policy options proposed by the Department of External Affairs report, "Canada-U.S. Relations: Options for the Future." Published in a special edition of International Perspectives in October, 1972, the report pointed out the importance of the American relationship to Canada. It emphasised "the growing and widely felt concern [in Canada] about the extent of economic and cultural dependence upon the United States and the implications for Canadian independence."[19] After examining the historical trends in Canadian-American relations, the paper points out that today "the overriding issue in the Canadian-United States relationship for most Canadians is economic independence."[20]

From its analysis of the nature of the present relationship between Canada and the United States, three options for the future were offered:[21]

1. We can seek to maintain more or less our present relationship with the United States with a minimum of policy adjustments;

2. We can move deliberately toward closer integration with the United States;

3. We can pursue a comprehensive, long-term strategy to develop and strengthen the Canadian economy and other

[19]Canada, Department of External Affairs op. cit., p. 2.

[20]Ibid., p. 11.

[21]Ibid., p. 13.

aspects of our national life and in the process to reduce the present Canadian vulnerability.

In terms of Canadian-American relations, the options and their results, could be simplified as follows:

Option One - Maintaining the status quo -----→ closer integration
Option Two - Cooperation -----→ interaction -----→ assimilation
Option Three - Cooperation-Canada First -----→ dissociation -----→ increased Canadian independence

From these options, as they relate to possible energy policy, three main strategies might be adopted. Option One, to be discussed in this chapter, involves maintaining present patterns, with an emphasis upon pragmatic reactions to changing events, leaving the door open on other options if they become needed. Option Two, which involves a deliberate move towards closer integration with the United States, would involve the adopting of some form of continental energy pact, which will be discussed in Chapter Three. Option Three, which involves deliberate moves to decrease Canadian vulnerability in its relationship with the United States, could be adopted by the implementation of one or more of the nationalist proposals to be discussed in Chapter Four.

The first option was generally rejected in the position paper because there would be a risk that "in pursuing a purely pragmatic course, we may find ourselves drawn more closely into the U.S. orbit."[22] In terms of energy policy, however, this is precisely the policy being acted upon at

[22] Canada, Department of External Affairs, op. cit., p. 14.

present. In effect, Canada's lack of a comprehensive national energy policy is its policy. Unless a concerted effort is made to adopt an alternative policy, this policy by default will remain Canada's method of handling energy resources within Canada, and those going to the United States.

The policy paper of the Department of External Affairs pointed out the advantages of such a policy. First, it would not limit the adoption of another policy if the situation seemed to warrant a change. Second, if optimistic assumptions about American policy and trade relationships with the rest of the world are realized, Canada might be able to pursue this policy with considerable success for some time into the future.

The biggest problem Canada faces in pursuing Option One is that it is based upon the belief in a "special relationship" which grants Canada favoured treatment in the United States. A brief examination of Canada's relations with the United States in the field of energy resources, indicates that if Canada has a special relationship, it has not been well served by its special status.

As has been noted, Canada has sent an ever-increasing percentage of raw energy resources, primarily crude oil and natural gas, to the United States. Voluntary import quotas were adopted in the United States in 1955, and were replaced by mandatory controls which offered exemptions to any country exporting overland, by pipeline or rail. Canada, virtually the only country in a position to ship such

exports, was thus exempted from these controls. This exemption was removed in March, 1970, and a quota of 395,000 barrels a day of Canadian crude was imposed.[23]

The imposition of this quota occurred within a few months of two other energy events in the United States. One was the publication of the "Shultz Report" in February, 1970.[24] The other was the beginning of negotiations for a major sale of natural gas to the United States, started formally in September, 1970.

The public approach of the "pragmatic" Canadian government is worthy of note. In December, 1969, J. J. Greene, then Minister of Energy, Mines and Resources, delivered a speech in Washington, in which he advocated a continental energy pact so that "people will benefit, and both countries will benefit, irrespective of where the imaginary border goes."[25] In May, after the imposition of the quota, Greene delivered another speech in the United States, this time in Denver. After discussing Canadian attitudes toward the Vietnam war, race riots, and campus unrest, Greene moved on to discuss the quotas. He commented that "the Canadian public is interpreting this as a pressure play, to squeeze Canada into some form of energy deal which would not be to

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[23]The 1969 daily average exports to the U.S. of crude and pentanes plus had been 549,700 barrels a day.

[24]This report will be discussed in detail in Chapter Three.

[25]J. Laxer, "The Greene-ing of Canada" in A. Rotstein and G. Lax (ed.), Independence - The Canadian Challenge (Toronto: Committee for an Independent Canada, 1972), p. 139.

the Canadian advantage."[26] He further noted, referring to both gas and oil negotiations, that"Canadian gas would be available to supplement United States supplies only if our petroleum industry as a whole receives the incentives of progressive growth and assured stability of access to export markets for oil and gas liquids."[27]

The Denver speech was widely regarded in Canada as an adoption of a nationalist stance by the Canadian government. However, the second quote from the speech clearly indicates that the intent of the government was to acquire the greatest possible access to American markets for Canadian oil and gas supplies--the continentalist desire. Whatever the intent of the speech, the effect within the United States was minimal. The gas sale was completed without the oil quotas being lifted. Even the 13,000 man years of jobs, touted by Greene as an important benefit of the deal to Canadians actually meant only that 13,000 men would be employed for one year on construction of a pipeline to ship Canadian gas to the United States for the twenty years encompassed in the sale.

If such events were isolated, or even marked the end of an era, it might be possible to prove that this ad hoc response by the Canadian government would not be detrimental to Canada. More recent events have not illustrated

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[26] J. Laxer, "The Greene-ing of Canada" in A. Rotstein and G. Lax (ed.), Independence - The Canadian Challenge, p. 139.

[27] Ibid., p. 140.

much less willingness on the part of the Canadian government to adopt a policy increasing energy exports. Public remarks are contradictory and confusing.

On a radio "hotline" programme, "Cross Country Checkup," on February 4, 1973, the present Minister of Energy, Mines and Resources, Donald Macdonald commented on the issue of energy sales. He said that "Canada is not interested in pooling resources with the United States in a continental energy policy . . . Canada has reached a point where it may not export any more gas and may not in the future increase its oil exports."[28] Ironically, Macdonald had stated in the Commons, not a month before, that "At the present time we have no intention of imposing a form of regulation or export control . . . in short terms at least there is apparently no problem in continuing supplies for refinery feedstocks."[29]

All of these quotes pose a number of largely unanswerable questions. Are they a reflection on one story for Parliament and a different tale for mass consumption? Is it thus a matter of political expediency, to cover all possibilities by making these kinds of remarks? Are Macdonald's two comments a reflection of changing public reaction to growing American demands on Canadian energy supplies? Which of these two remarks represents the position of the federal government or of Macdonald? Indeed, do either?

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[28] The Windsor Star, "No joint energy plan," February 5, 1973.

[29] The Windsor Star, "Fuel fears blamed on U.S." January 9, 1973.

On the assumption that actions speak louder than words one might take note of the fact that Canada continued its negotiations on the trade and sale of energy resources during the time period in which Macdonald made his two remarks. Negotiations continued on individual energy resource sales to the United States. The American interpretation of Canada's attitude was reflected in some comments made before the U.S. Senate Interior Committee, by G. A. Lincoln, Director of the Office of Emergency Preparedness. He stated that "in bilateral talks of recent years, the Canadians have apparently shown little inclination to discuss energy issues between our two countries within a common energy framework."[30] He further went on to say that "We had forthright and friendly discussions with Canada . . . and a fair degree of understanding."[31] All Americans appearing before the Committee appeared to feel that negotiations continued to go smoothly, and that, although a continental energy pact did not seem to be part of Canada's policy planning for the future, there was a high level of accord for specific energy sales.

One final comment on recent Canadian reactions to situations as they arise will further illustrate the trend to ensuring large sales of oil to the United States. Fuel shortages in the United States during the winter of 1972-1973 finally led to easing oil import quotas imposed in

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[30] The Globe and Mail, "Canada-U.S. hold secret energy talks on regular basis," January 12, 1973.

[31] Ibid., January 12, 1973.

March, 1970. In January, 1973, the quota was raised to 675,000 barrels of crude a day, and was later raised further. Rather more than a month after the Senate hearings were begun, the Canadian government, through the National Energy Board, announced that American export requests for Alberta crude would be reduced in March by 3.7 per cent.

A second look at the Board's decision reveals that it was not as much a response to nationalists as the headlines made it appear. The American request was for the export of oil in March at levels of more than one hundred thousand barrels a day over February levels. The National Energy Board, in fact, authorized an increase in exports at a level fifty thousand barrels a day more than the February levels. Any analysis of the situation, therefore, depends on which side of the energy fence the analyst sits. All of these factors lead to the tentative conclusion that the status quo policy is being maintained.

From all of these elements, a chart modelled on Chart One can be drawn up to illustrate Option One--maintaining the status quo. This chart, Chart Two, moves from the goal indicators previously discussed, through goal priorities to policy objectives emphasizing economic returns, safe Canadian supplies for Canadian markets, and markets in the United States for surplus. After analysing the scope of these policy objectives, policy alternatives, such as assuring the greatest benefits to consumers and to producers leads to a strategy of short term and long term sales of energy resources to the United States. Further analysis of

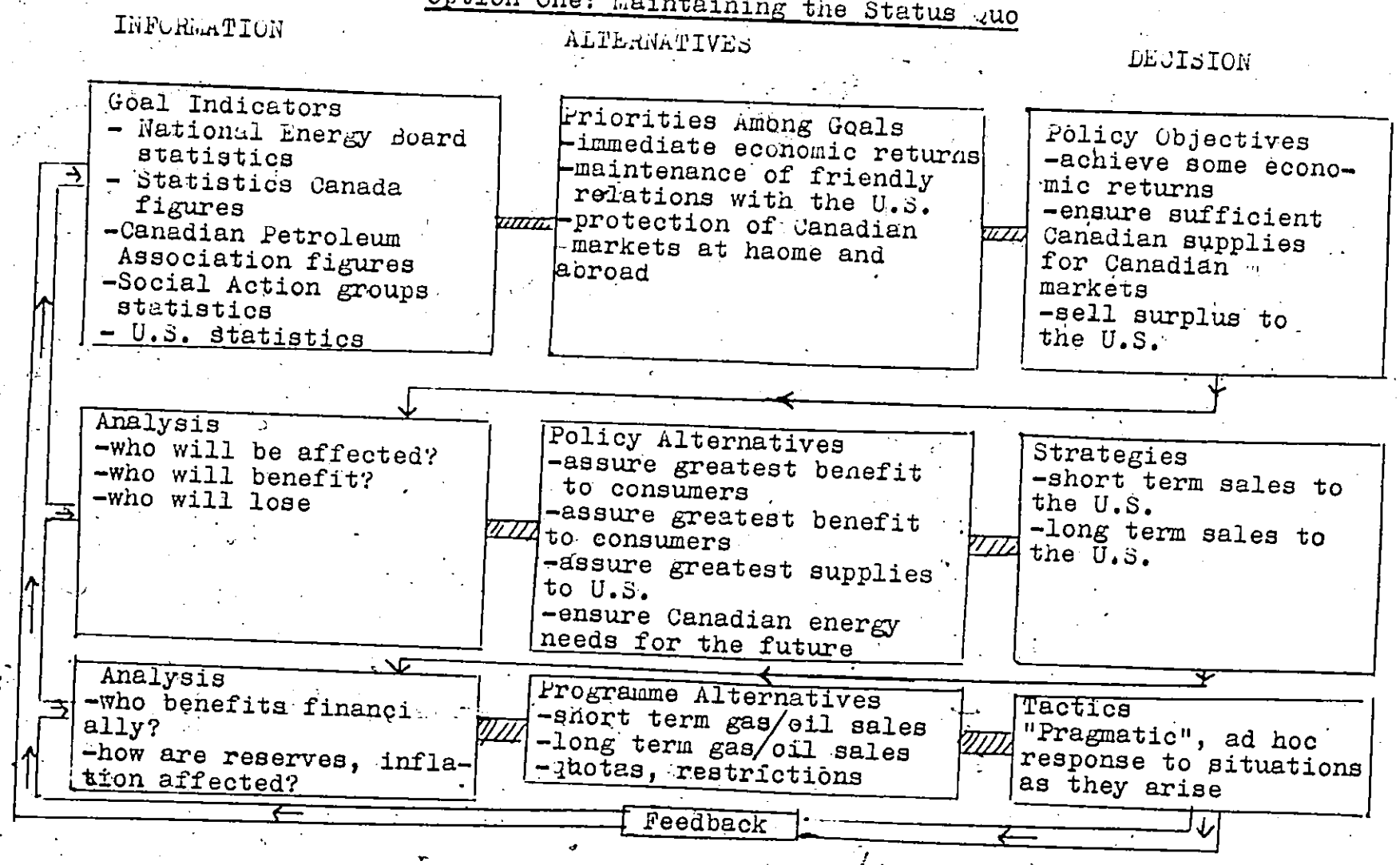
these strategies allows for the determination of programme alternatives. Such alternatives run from engaging only in short term gas and oil sales, only long term gas and oil sales to the imposition of export quotas. The tactic finally chosen, the line with Option One, would be one of using ad hoc responses to situations as they arise, leaving the door open on any tactical alternative. Throughout the model runs a constant stream of feedback, which can affect the whole model and any of the levels of the model. Many other factors may enter into any of the levels or categories. Chart Two is not meant to be all-inclusive, but is designed to show how Option One might become policy on the basis of the decision-making model.

A general overview of this chapter leads to several general conclusions, and points out some facts pertinent to the issue of determining energy policy. First, there is a wide variety of groups with legal rights over the disposition of energy resources, including eleven governments. These groups must be reconciled before any "national" policy for the benefit of all Canadians might be achieved.

Second, there are at least three separate sets of beliefs motivating those who show an interest in energy resource management. Technological man feels sure we can always obtain energy as we need it, and Canadian interests would best be served by selling all our surplus as it is requested. Ecological man feels sufficient concern has not been expressed for the personal and environmental damage resulting from moves to create as much energy as possible

CHART TWO

Option One: Maintaining the Status Quo



as soon as possible. He advocates a much higher level of planning and concern for social and environmental costs. Nationalistic Man believes that Canadians are not receiving sufficient returns from the exploitation of their country's energy resources. He would advocate much more government control and participation in resource management.

Third, since American needs are being met in part by Canadian supplies, and the United States is interested in the greatest possible access to Canadian supplies, the discussion of a national energy policy may be regarded as a study in Canadian-American relations. Therefore, the position paper of the Department of External Affairs on Canada: United States relations will be used as the basis for discussing policy options. The first option lies in maintaining the status quo. The second would be adopted by those espousing continental energy pact proposals. The third would be advocated by the nationalist.

The first of these options, maintaining the status quo, is in fact the one presently being followed by the Canadian government; a policy which has developed for lack of a policy. Option One as it applies to energy resource management, has led to increasing reliance by the United States on Canadian supplies. Such a policy, pursued over a long period of time, could amount to a defacto continental energy pact, and increased integration of the Canadian economy into that of the United States.

All of these elements point out the complexity of the problem of achieving a "national" energy policy for the

maximum benefit of Canada and Canadians. The next two chapters will discuss Option Two and Option Three as other alternatives in the search for the best final policy choice.

CHAPTER THREE

CONTINENTALISM

The second policy option outlined in the External Affairs Department's position paper on Canadian-American relations suggests that Canada might move deliberately towards closer integration with the United States. In terms of energy policy, this would mean the adoption of a Continental Energy Pact.

There is no single definition of what would constitute such a pact. A very broad definition would describe the deal as one of free trade in energy resources, across the Canadian-American border, with no tariff or quota restrictions. The pact could either be a comprehensive package dealing with all energy resources, or a series of arrangements, each one dealing with a specific resource, i.e. oil, gas, electricity, coal.

A Continental Energy Pact would benefit both countries and the people of both countries. It would ensure Canadian producers unlimited access to American markets, and assure a stable source of supply for the United States. In general economic terms, it would move Canada and the United States towards closer integration.

Before discussing the validity of these points, this paper will outline the reasons why the continentalist proposal developed. A brief historical outline reveals that

there has long been trade and cooperation between Canada and the United States in energy resources. Electricity is one example.

The first large hydro-electric plants in Canada were built on the Canadian side of Niagara Falls between 1901 and 1905. One of these was an American subsidiary, and the other two came under the control of the Ontario Hydro-Electric Power Commission (Ontario Hydro) in 1917 and 1927. Most of the initial output of these plants went to the United States under long-term bulk contracts. Ontario Hydro was created in 1903 to ensure provincial electrical energy needs would be met. To further protect the Canadian market the federal government enacted legislation to regulate gas and electricity exports and to require annual licences for approved exports.

Present electricity trade is carried on under a general equichange basis--equivalent exchanges. Electricity from eastern Canada comes from Québec, through Ontario; from Ontario; and from New Brunswick. This goes to New York and the New England States. In the west, exchanges are carried between all provinces and border states, primarily Montana and Washington. Canada is a net exporter of electricity importing at a rate of 73.1 per cent of exports, and the exchange rate has been steady, although the amounts exported represent a very small amount of the electricity generated by either Canada or the United States. The only restrictions appeared during the time the Americans entered World War Two, when the United States cut back on some

exports to ensure domestic supply for wartime production.[1]

Other cooperative energy sharing arrangements have been made. One example was the CANOL (for Canadian oil) project undertaken by both governments during the Second World War. It was undertaken when,

> In 1942, after the chaos of Pearl Harbour, President Roosevelt expressed concern about the vulnerability of a sea route to Alaska, and America sought a source of oil that could not be overrun (as the Dutch East Indies had been) or shelled (as the Carribean installations were).[2]

The fears which prompted the American government to institute a project of little benefit to the war effort underlined the emphasis upon safe sources of supply, which would become increasingly important to the United States in the next quarter century.

Gas and oil sales have also been carried out for many years. The first exports of natural gas from Canada to the United States were made in 1892[3] and burgeoned after World War Two, as did oil exports after Leduc. Export patterns indicate an ever increasing demand by Americans on Canadian reserves of oil and gas, and a continued willingness on the part of producers to meet those demands. It may well be that all that would be required to have a

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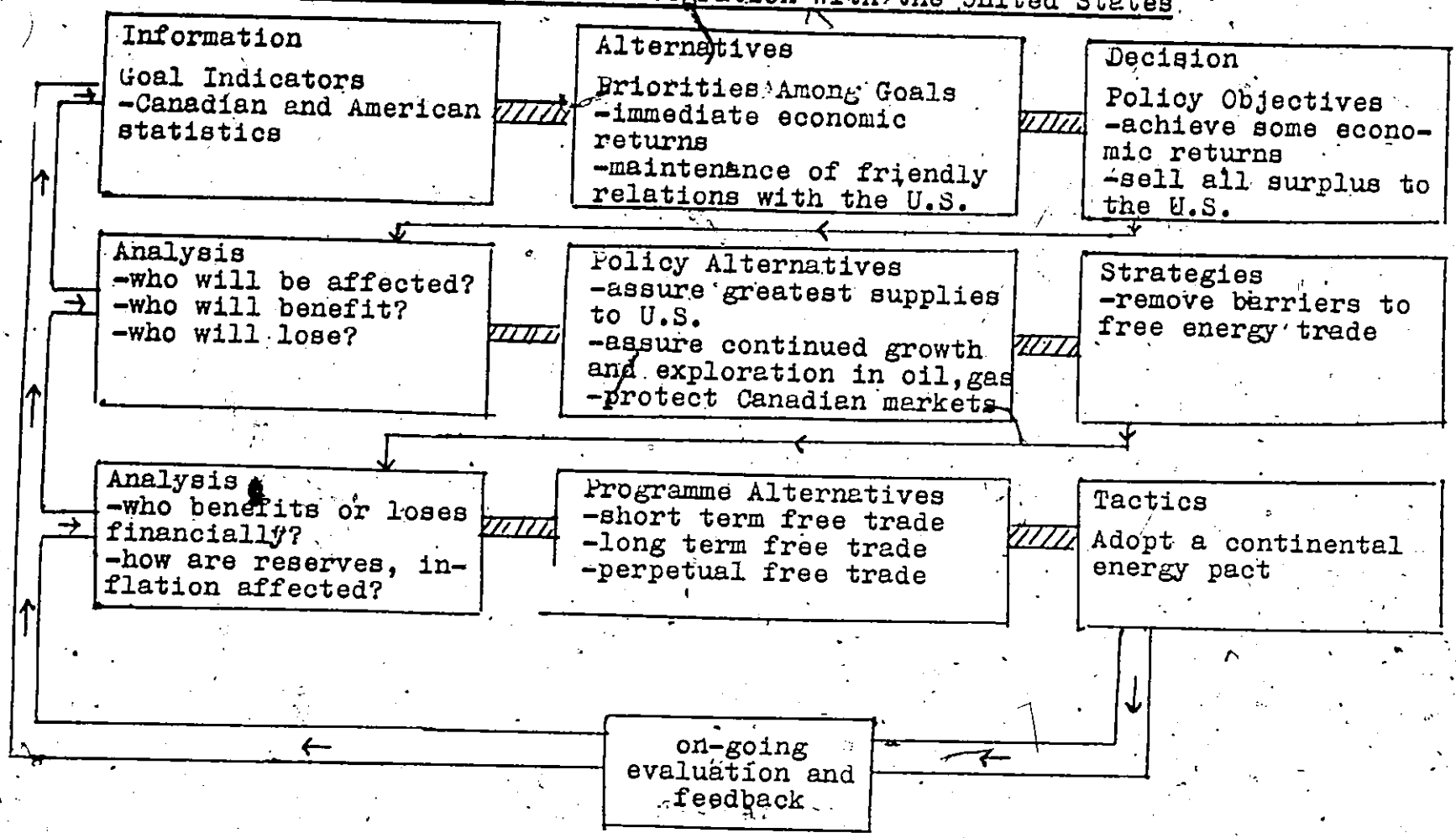
[1]For more details see J. T. Miller, Foreign Trade in Gas and Electricity in North America (New York: Praeger Publishers, 1970), pp. 1-48.

[2]J. Lotz, Northern Realities (Chicago: Follett, 1971), p. 55.

[3]Miller, op. cit., p. xvii.

CHART THREE

Option Two: Closer Integration with the United States



Continental Energy Pact would be merely to continue present oil and gas sale trends. However, that would leave out of the calculations the persistent and increasing pressure put on Canada for the adoption of such an arrangement formally.

Much of the pressure for this pact comes from the United States. Increasingly an importer of natural resources[4]--energy, mineral, and timber products, the American dependence on these resources has prompted an intense search for reliable sources of supply. U.S. President Truman authorized the establishment of a Minerals Policy Commission to investigate the whole issue. Its report was issued in 1952, under the title Resources for Freedom. Known as the Paley Report, it advocated interdependence between the United States and resource rich countries. The United States would receive raw materials and, in exchange, would sell manufactured goods to those countries made dependent by heavy American investment. American aims were summed up in this statement:

> The over-all objective of a National Materials Policy for the United States should be to ensure an adequate and dependable flow of materials at the lowest cost consistent with national security and with the welfare of friendly nations.[5]

American moves to take over sections of the Canadian economy, particularly resource industries, seems to fall in line with the recommendations of the Paley Report. There

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[4] "By 1956-60 the United States was importing over half of all its required metals." J. Laxer, The Energy Poker Game (Toronto: New Press, 1970, p. 25.

[5] Ibid., p. 26.

is no proof that the takeovers were undertaken at the instigation of the American federal government, to meet with the aims of the Report. The takeovers represent an interesting coincidence. Over ninety per cent of the oil refining in Canada is foreign-owned, and United States interests own "about eighty per cent of the oil and gas wells industry, eighty-five per cent of the primary metals smelting industry, sixty per cent of all mining enterprises and ninety per cent of the rubber industry."[6] The only major natural resource remaining under Canadian control is water, which is largely managed by provincial government-controlled public utilities companies and subsidiaries.

In terms of American shortages and Canadian supply, the Paley Report expressed the belief that, of the twenty-nine commodities already in short supply, Canada could probably supply most of the demand for twelve. "These were iron ore, nickel, tungsten, copper, lead, zinc, aluminum, titanium, fluospar, and asbestos."[7] The importance of Canada as a supplier to the United States of raw materials was clear in 1952, and has become increasingly more evident.

Some other factors have contributed to the desire for a secure Canadian market. The instability of Middle East oil supplies was underlined by the disruption of American

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[6]T. Burton, Natural Resource Policy in Canada (Toronto: McClelland and Stewart, 1972), p. 81.

[7]W. H. Pope, The Elephant and the Mouse - A Handbook on Regaining Control of Canada's Economy (Toronto: McClelland and Stewart, 1971), p. 32.

imports during the 1956 Suez crisis. Concern for American dependence upon foreign supplies of crude, and concern for political support of independent domestic oil interests, however expensive they might be, led to the imposition of voluntary import controls in 1955, from which Canada was exempt, and mandatory controls in 1959, from which Canada was again exempted. It is from this date that the most marked change in American import patterns in Canadian crude began:

> In 1955 Canadian crude had accounted for only 8.3 per cent of American imports with Venezuela at 51 per cent and the Middle East at 30.2 per cent. By 1967 the figures were Canada, 30.2 per cent; Venezuela, 39.6 per cent; and the Middle East, 13.7 per cent.[8]

The cuts in Venezuelan supplies occurred for two reasons. Their relative overall production has been diminishing, and their ability to provide crude has thus decreased. An earlier reason was the effort made by the Venezuelan government to impose a higher level of taxation on the American-owned oil companies. Between 1957 and 1966, the rate of capital investment in Venezuelan oil dropped eighty-five per cent.[9]

Another major factor lies in the Middle East. In the 1967 "Six Day War," United States supplies from the area were again threatened, underlining American fears of the vulnerability of their position while dependent upon those

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[8]J. Laxer, op. cit., p. 28.

[9]E. H. Shaffer, The Oil Import Programme of the United States - An Evaluation (New York: Praeger Publishers, 1968), p. 213.

supplies. The second problem for the Americans rests with the Organization of Petroleum Exporting Countries (O.P.E.C.), formed in Baghdad in 1960. It was set up by the governments of the oil exporting states of the Middle East and Venezuela to counter a series of price cuts implemented by the international oil companies. From its inception, O.P.E.C. has taken an increasingly hard line with the oil companies. Several months after its founding, a government-appointed director of the Arabian American Oil Company (Aramco), publicly accused the company of swindling the Arab states out of nearly three billion dollars. It was the first comment of its kind ever made by an Arab oil expert, and carried a great deal of weight in the Arab oil exporting states.

Next, Kuwait granted the first oil concession in the Middle East for ten years. Departing from the "fifty-fifty rule"[10] the concession, given to the Royal Dutch/Shell group, granted Kuwait a twenty per cent share in the operating company formed to exploit the oil, as well as full returns under the "fifty-fifty rule."[11]

The O.P.E.C. countries have never looked back from the 1960 founding of the organization. They have consistently pushed for bigger returns from the companies exploiting

[10]Under this rule "Payments to the host governments, including royalties, are made up by an income tax of 50 per cent of profits reckoned at posted prices on all oil sold." J. E. Hartshorn, Oil Companies and Governments - An Account of the Oil Industry in its Political Environment (London: Faber and Faber, 1962), p. 24.

[11]For more details see Hartshorn, op. cit., pp. 17-29.

the oil reserves of their countries. Formed when a glut of cheap oil on world markets cut deeply into their profits, the O.P.E.C. countries have succeeded in pushing up their own returns as well as world prices in oil. By 1973 they were receiving "55 per cent of the profits plus 2.5 per cent royalties plus an annual 2.5 per cent increase on posted oil prices to offset inflation until 1975. This amounts to about $10 billion a year."[12]

The Middle East States negotiate from strength, knowing that they produce about fifty-five per cent of the world's crude outside the U.S.S.R. and the United States; and further, that they have fifty-four per cent of the world's reserves, mostly in Saudi Arabia. The oil they produce has the added advantage of being relatively cheap.[13] These factors give a major role to the O.P.E.C. countries. They now produce eighty-seven per cent of the world's exports of oil, and will continue, into the forseeable future, to dominate the international oil scene.

In terms of the American market, the important role of the O.P.E.C. countries must be considered. The United States now imports about one-quarter of the petroleum it

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[12] The Globe and Mail, "Large 10-year increase forecast in world petroleum prices." March 14, 1973.

[13] To understand this factor, one might look at production in these over-simplified terms. A Kuwait oil well produces 10,000 barrels of oil a day; an Alberta oil well produces 150 barrels of oil a day; and a Texas well produces 10 barrels of oil daily. Even without the differences in wages that further raise North American costs, it is clear that the return from basic extraction is far higher in the Middle East than in North America. Thus, crude from the Middle East can be kept at lower prices.

consumes. Its energy needs are expected to double by 1985, at which time it has been estimated that America will have to import sixty-five per cent of the energy consumed in the United States.[14] Even if the most optimistic assessment of the potentials of the Alaska North Slope and offshore reserves are realized, they would not increase American reserves by more than about eight per cent. The development of the fast-breeder nuclear reactor, which, it was hoped, would contribute significantly to American supplies by the turn of the century, has not proceeded as well as expected. American gas supplies could be depleted by 1986; petroleum reserves could be depleted shortly after that. Environmentalists have seriously impeded the utilization of existing American energy supplies such as coal. They have also succeeded in halting or delaying pipeline construction and offshore exploration. For a country which consumes one third of the world's energy to serve the demands of six per cent of the world's population, these factors illustrate to some extent the seriousness of the situation in which the United States finds itself.

The basic American export picture shows present energy trade relationships. The O.P.E.C. countries supply the Americans with the bulk of their oil imports. Venezuela remains the United States largest single supplier of crude, contributing twenty-six per cent of imports in 1972. However, since production levels have suffered a relative

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[14] The Windsor Star, "The U.S. must find more oil," December 1, 1972.

decline, Venezuela now ranks a poor third in annual output, behind Saudi Arabia and Iran. The factor central to this paper is that Canada now ranks the second-largest single supplier of American imports. The growing reliance on Canadian supplies, up to twenty-two per cent of American import consumption in 1972, from 5.5 per cent of import consumption in 1955, show the rate of increase of emphasis upon Canadian crude.

In an overall context, therefore, one should bear in mind that these factors are important. The world export markets for crude are dominated by the O.P.E.C. suppliers, banded together to aggressively pursue a programme of acquiring high returns from oil production. The United States is entering a period where domestic supplies of energy resources are running out. Its dependence upon foreign supplies could increase from twenty-five to sixty-five per cent of consumption by 1985. Production capacity in Venezuela, once America's largest supplier, has declined and alternate sources must be found. In terms of the Canadian oil and gas industry, over half of the crude and pentanes produced in Canada are exported to the United States; this amounts to almost a quarter of American imports. The search for new, secure sources, which comprised the underlying theme of the Shultz Report (to be discussed now) is assuming a high level of immediacy in Washington.

Concern over the American domestic situation and the broad international picture prompted the authorization, by President Nixon, of a Cabinet task force, to make an analysis

of the petroleum supply and demand markets as they relate to the United States. In February, 1970, the task force issued its Report, The Oil Import Question - A Report on the Relationship of Oil Imports to the National Security, under the name of its Chairman, Secretary of Labour, George Shultz. The Report also included a minority report by three members of the committee, Secretary of Commerce, Maurice Stans, the Chairman of the Federal Power Commission, John Nassikas, and the Secretary of the Interior, Walter Hickel.

The emphasis of the Report rested on the issue of national security. The main objectives of the study were to "(a) Protect essential demand against foreign supply interruptions, . . . [and] (b) prevent severe weakening of our national economy."[15]

Acting under "the near phobic concern of the U.S. for an absolutely safe source of oil for national security,"[16] the Report recognized a number of possible risks which could threaten petroleum supplies to a dependent America. These were that:

(1) War might possibly increase our petroleum requirements beyond the ability or willingness of foreign sources to supply us.

(2) In a prolonged conventional war, the enemy might sink the tankers needed to import oil or to carry it to market from domestic production sources such as Alaska.

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[15]United States, Cabinet Task Force on Oil Import Control, George Shultz (Chairman), The Oil Import Question - A Report on the Relationship of Oil Imports to the National Security (Washington: U.S. Government Printing Office, 1970), p. 8.

[16]Burton, op. cit., p. 73.

(3) Local or regional revolution, hostilities or guerilla activities might physically interrupt foreign production or transportation.

(4) Exporting countries might be taken over by radical governments unwilling to do business with us or our allies.

(5) Communist countries might induce exporting countries to deny their oil to the West.

(6) A group of exporting countries might act in concert to deny their oil to us, as occurred briefly in the wake of the Arab-Israeli war in 1967.

(7) Exporting countries might take over the asset of American or European companies.

(8) Exporting countries might form an effective cartel raising oil prices substantially.[17]

Coupling this with the conviction that the United States would no longer be able to look at petroleum security in terms of self-sufficiency, but rather in terms of reliability of supplies from available sources, the Report briefly analysed major potential sources.

Canada was discussed first under this category. Examining four possible cases of future outputs at different price rates for 1980, the Committee made an analysis, outlined in Table Fifteen. The possibilities run from a production rate of over six million barrels of crude a day and exports of over five million barrels, to a production rate of three and a half million barrels a day and exports to the United States of one and a half million barrels. The figures range from the most optimistic to the most pessimistic production forecasts made by the National Energy

[17] Shultz, op. cit., p. 31.

Board, and the Alberta Oil and Gas Conservation Board. While commenting on the uncertainties of the Canadian estimates, the Report pointed out that through the systematic development of the Athabasca Tar Sands, "Continental self-sufficiency becomes a possibility."[18]

This continental emphasis was repeated throughout the Report. There were three general reasons for a Canadian crude preference. The first was that increased volumes of supply could be assured, particularly if crude from the Middle East and eastern hemisphere generally was put under intermediate or high tariffs. The second was that there was security of deliveries, since "The risk of political instability or animosity is generally conceded to be very low in Canada . . . [and] the risk of physical interruption or diversion of Canadian oil to other export markets in an emergency is also minimal."[19] The third was that there could be harmonized energy policies. Provided that Canadian vulnerability to an interruption of oil imports was minimized by the construction of a trans-Canadian oil pipeline,[20]

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[18]Shultz, op. cit., p. 45.

[19]Ibid., p. 94.

[20]The Americans have expressed two interests in a trans-Canada pipeline. The first is one of concern that Canada might be cut off from foreign supplies in an emergency and would divert supplies from the United States to Canadian east coast markets. The second interest in the pipeline is the hope that such a system would help supply the American east coast. However, this would depend on an expansion rather than extension of the line. Shipments through the main oil pipeline, the Interprovincial, are made at virtually full capacity. To ship to either the Canadian or American east coast, or both, capacity would have to be greatly increased.

TABLE FIFTEEN

Canadian Production, 1980

(million barrels/day)

Case[1]	U.S. price[2] ($/bbl)	Netback* Canadian price[3] ($ U.S.)	Output	Consumption	Export	Import
I	3.30	3.19	6.0+[4]	2.0	5.0+	1.0
II	3.00	2.89	6.0+[4]	2.0	5.0+	1.0
III	2.50	2.39	4.5[5]	2.0	3.0	0.5
IV	2.00	1.89	3.5[6]	2.0	1.5	0.0

[1] All four cases assume that there are no U.S. market restrictions on the sale of Canadian crude.

[2] For 30° sweet crude at the South Louisiana wellhead.

[3] At Edmonton, in U.S. dollars, assuming the existing tariff of 10.5 cents per barrel and a revised pipeline rate of 36 cents per barrel between Chicago and Edmonton; pipeline cost from the Gulf Coast to Chicago at 37 cents per barrel including a 14 cent gathering charge. The equivalent netback price in the Mackenzie Delta for delivery to Chicago would be some 75 cents lower, while the netback price for Atlantic offshore oil - likewise referenced to the East Coast - would be about 10

TABLE FIFTEEN - Continued

cents above that at Edmonton ...

All these prices are maximum netback prices. At present, Canadian oil actually sells for about 50 cents per barrel below the price of comparable U.S. crude in the Chicago market. This anomaly apparently results from intra-Canadian price competition with imports in the Ottawa River Valley and the fact that Canadian prices did not follow the 20 cent increase in U.S. oil last February. The price differential would not be expected to persist at lower U.S. prices; thus a drop in the South Louisiana wellhead price to $2.50 should produce a drop of no more than 30 cents in the price of Canadian oil.

[4] 1.0 MMb/d from tar sands, 2.5 from known areas, 2.0 from new areas and 0.5 NGL; Canadian source oil assumed to pre-empt one-half of Eastern Canadian market.

[5] No tar sands production, 2.5 MMb/d from known areas, 2.0 from new areas and 0.5 NGL; Canadian source oil assumed to pre-empt one-half of Eastern Canadian market.

[6] No tar sands production, 1.7 MMb/d from known areas, 1.3 from new areas, 0.5 NGL, and 100% penetration of Eastern Canadian market by Canadian crude.

* Netback pricing or a "basing-point system" is a method of calculating prices on the cost of shipping at standardized freight rates and insurance costs, from a specified location, the "basing point" to the point at which the commodity is delivered, regardless of the actual origin of the shipments. One such base point, used for many years, was the American Gulf Coast.

Source: United States, Cabinet Task Force on Oil Import Control, George Shultz (chairman), The Oil Import Question - A Report on the Relationship of Oil Imports to the National Security. p. 45.

preferrential arrangements could be made. These, however, would be "dependent upon the development of common or harmonized United States-Canadian policies with respect to pipeline and other modes of transportation, access to natural gas, and other related energy matters."[21]

The viability of such a continental energy scheme is mentioned repeatedly. The Report notes that, "in any computation, it is necessary to recognize that the economies of Canada and the United States are unusually closely intercoupled."[22] In more specific terms, the Report points out that "the economic infrastructure of the United States is and can be far more integrated with Canada and perhaps Mexico than with the economy of any other Latin American country; and the possibilities for mutually beneficial coordination of energy policies is greater."[23]

One other factor is of considerable interest in creating a preference for Canada as a supplier. This rests with a question of international balance of payments. There is particular difficulty when the United States buys large amounts of Middle East oil supplies.

> If the United States imports half its oil by 1980, the net drain will be $16 billion a year. By the end of the decade the Arab states would have accumulated $210 billion from their oil sales and even assuming a spectacular growth in their internal economies that would absorb $100 billion of that, the surplus would amount to $110 billion.[24]

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[22] Shultz, op. cit., p. 291.

[23] Ibid., p. 98.

[24] The Globe and Mail, (U.S. opts for short-term security with oil price controls decision," March 8, 1973.

These states have neither the population nor the land space to use up the bulk of the American dollars received for their crude. It would not be physically possible, under normal economic growth conditions to spend profits from oil. Also, there is no guarantee that the dollars the Arab states received would be spent to purchase American goods or services. It is also possible that some of the money could be spent in areas hardly in accord with American foreign policy objectives, as in the purchase of arms and war materials for the Arab fight against Israel.

Canada, as a source of supply, would be preferable, with good reason. In analysing the balance of payments effects of dealing with Canada, the Report emphasises that the drain on the American dollar is, in fact, very small. Discussing net outflows in the balance of payments context, the Report states that

> 71% of the dollars which U.S. companies brought into Canada in order to finance their expanded capacity returns to the United States in the same year . . . [and] for United States and Canadian-owned companies, 71% of the gross outflow on current accounts returns to the United States.[25]

In more simple terms seventy-one cents of every dollar spent by American interests in Canada returns to the United States within one year. The returns may be made in merchandise imports from parents or affiliates, dividends paid in the United States, and payments on American-secured bank loans, bonds and debentures.[26] This follows up the

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[25]Shultz, op. cit., p. 297.

[26]See Appendix I, pp.

set of criteria laid down by the authors of the report in finding source countries where "the net balance of payments outflow would be less than the purchase price of oil because

(1) many exporters are American firms whose profits represent a dollar inflow;

(2) all exporting companies purchase some American oilfield equipment;

(3) exporting companies spend a portion of their dollar earnings fairly promptly on American goods and services; and,

(4) exporting countries also spend a portion of their dollar earnings in third countries which then make increased purchases of American goods and services.[27]

This emphasis on Canada as a favourable and reliable source of supply, particularly in the context of a continental energy pact, was further underlined in the minority report. In its conclusion, it states that:

> The United States should work diligently with Canada to reach a continental energy policy that assures our mutual security. Such a policy should cover energy broadly, and should deal not only with oil, but natural gas, coal, and hydro-electric and nuclear sources. Pending agreement on such a policy, which may take several years to negotiate, Canada and the United States should develop an effective mechanism to permit an orderly growth of imports of oil and natural gas from Canada.[28]

Provided that Canada was to take a cooperative stand, the Report proposed opening up the American market to ever-increasing supplies of Canadian crude. "Beginning with a level of 615,000 barrels a day . . . Canadian crude would

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[27] Shultz, op. cit., p. 43.

[28] Ibid., p. 362.

be imported at a rate of 2 million barrels a day by 1975."[29] About two-thirds of Canadian production for 1975 is represented by the latter figure, while the 1980 projections found in Table Fifteen call for five-sixths of Canadian production to go to the United States, leaving Canada dependent on east coast imports for half the oil it would consume.

Before discussing the pros and cons of this policy, it must be pointed out that this Nixon administration report is by no means the only proposal calling for a continental energy pact. In 1965, one such paper, Canada and the United States - Principles for Partnership (the Merchant-Heeney Report) was published in Ottawa. The Canadian author, Arnold Heeney, was the successor to General A. G. L. McNaughton as the Chairman of the Canadian division of the International Joint Commission. The report advocated the adoption of a continental energy scheme for the mutual benefit of both countries. The report underlined the importance of ensuring the national integrity of both countries, and the guarantee that the pact as it was negotiated, did not make the resources of one country the "public utilities" of the other. The two authors pointed to successful energy projects such as sharing in electricity, and the "agreement for cooperative development of the water resources of the Columbia River Basin,"[30] as models of energy pact

[29] J. Laxer, "The Greene-ing of Canada," in A. Rotstein and G. Lax (eds.), Independence - The Canadian Challenge (Toronto: Committee for an Independent Canada, 1972), p. 144.

[30] A. Heeney and L. T. Merchant, Canada and the United States - Principles for Partnership (Ottawa: Queen's Printer, 1965), p. 38.

arrangements.

At least one other major group in Canada has long advocated closer interaction between the two countries on energy sharing. The oil and gas industry in Canada wants a cooperative energy policy, since the American market offers the industry a quick and handsome profit. Perhaps ironically, the most vehement advocates of continentalism, within the industry, are not the big multinationals, but are largely the Canadian independents. This is understandable if it is realized that the Canadian-owned segment of the industry is concentrated in exploration and extraction, while refining is almost totally carried out by foreign-owned corporations. Thus, the Canadians make their profits from the sale of crude at the wellhead. Their biggest source of potential profits, and their largest markets are in the United States. The independents want markets expanded, not cut off or restricted. The large multinationals, with millions invested in capital equipment in refineries, have at least some interest in ensuring a ready source of supply to meet the needs of those refineries. In refineries west of the Ottawa valley, as a marketing region for crude, Canadian production offers the only source of supply.

The industry as a whole, however, tends to a continentalist approach. One example will illustrate the general industry attitude. James A. Nielson is President of Husky Oil, an integrated (involved in exploration, extraction and refining) Canadian oil company, with American subsidiaries. He stated the belief that "a cooperative effort to

ensure the optimum development of all energy resources in Canada and the United States remains a desirable objective."[31] Nielson further felt that a continental energy pact had been misunderstood by the public as an attempt by Americans to get control of Canadian resources. Instead, he maintained, such a pact would help the United States out of its present energy difficulties while allowing for the development of resources, which could not be economically brought into production for the small domestic market. This policy would use massive oil sales to the United States to finance further development of the oil industry.

Some individuals have also entered into the discussion on the side of continentalism. One American, Senator Frank Moss of Utah, long advocated such a policy, in which he also included access to Canada's water supplies. Responding to the External Affairs Department's position paper on Canadian-American relations, Canadian economist Harry Johnson, a long-time advocate of closer economic integration, also supports a continentalist position. He firmly states that, "Option Two, deliberate closer integration with the United States is what Canada should do in its own economic interests."[32]

These are the main themes and supporters of a continental energy scheme. The remainder of this chapter will be concerned with a discussion of the beneficial and detri-

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[31] The Globe and Mail, "Joint Canada-U.S. effort thought still desirable on energy policies," February 28, 1973.

[32] Harry C. Johnson, "The Advantages of Integration," in: International Perspectives, January/February, 1973, p. 10.

mental effects which would result from the implementation of such a policy.

To begin with, the American government has made it quite clear that it is prepared to use harsh methods to achieve its oil supply desires. A threat by the Venezuelan government to take action to ensure greater internal returns from oil companies operating within Venezuela led to a significant cut-back in oil purchases. In the Canadian context, oil import quotas, which cut exports to the United States in half, were implemented by the Nixon administration after the publication of the Shultz report, and just prior to the start of formal negotiations on a major sale of Canadian gas to the United States. This move was widely interpreted as an effort to blackmail the Canadian government, but did not hinder the subsequent gas sale.

The present American government clearly favours a continental energy pact. Some of the reasons are of importance to Canadians considering this issue. The main premise is that a reliable source of oil is in the national interest of the United States. Nowhere does the Report state that a continental energy arrangement is in the best interests of Canada, for National security reasons. Instead, there is an assumption that what is good for America must be good for Canada.

The Report states that "our producing friends - Canada and Venezuela - may be affected detrimentally by import restrictions limiting their opportunities to sell in our

markets."[33] However, the Report does not consider that their friends may be affected detrimentally by a massive export drain on their oil supplies. The Report further states that

> The United States has, of course, a genuine interest in maintaining the viability of friendly and allied nations who lack adequate indigenous petroleum resources. At the same time one may question the fairness of burdening the U.S. consumers with the cost of restrictions maintained for the benefit of other countries.[34]

The United States will offer moral support to energy deficient countries, but will subsidize the energy demands of their friends and allies at their own expense. If Canadian oil supplies run out through massive drains to the United States, and this could happen more quickly under a continental scheme in which the United States is using five-sixths of production in Canada from 1980 onwards, there is no guarantee that the United States will help Canada find new supplies or alternate sources of supply.

Canada is preferred as a source over other nations because of the possibility that those other nations might limit American access to foreign oil supplies. The Report discusses such potential threats as nationalization, and the demand for higher royalties and higher taxation rates by exporting countries. Canadian "special status" is effective only while the Canadian government does not raise royalty and taxation rates, or nationalize all or part of

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[33] Shultz, op. cit., p. 6.

[34] Ibid., pp. 6-7.

the oil and gas industry. The Report maintains that Canada will not cut off oil supplies to the United States "in an emergency." Canada has special status only so long as its policies ensure continuous and increasing supplies of energy resources, particularly oil, to the United States.

In specific terms of nationalization in an area of such critical importance as oil, John Foster Dulles, during the 1956 Suez crisis, made the following comments:

> The United States should not acquiesce in the rights of nationalization that would affect any other facilities in our economic interests . . . and nationalization of this kind of an asset impressed with international interest goes far beyond compensation or shareholders alone, and should call for international intervention.[35]

Times may have changed since the Dulles speech. However, the Shultz Report clearly emphasizes the importance of oil to the national security of the United States, and a pronounced fear of any threat of nationalization. The possibility of American intervention for reasons which the United States considers in its own national security interests cannot entirely be dismissed.

The United States might be prepared to act in such a way in another country, outside immediate physical reach. How much more likely would America be to move against a country with which it shares over three thousand miles of undefended border? While still a very unlikely occurrence during present circumstances, consider the altered circum-

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[35]Laxer, The Energy Poker Game, p. 33.

stances of a formal continental energy pact. If the United States was to grow heavily dependent upon Canadian energy resources, with total free access, it would regard those resources as its own. Any attempt to limit or cut off such resources would be strenuously resisted by the United States. The adoption of a continental energy policy could well preclude any attempt by a future Canadian government to restrict the movement of Canadian oil into the United States, or an attempt to nationalize the oil and gas industry. It would tie continental demands for oil and gas to Canadian national economic policies, and even to domestic fiscal and monetary policies. One of the major problems inherent in the extension of continentalism into the Canadian energy sector is that it is virtually irreversible.

Another factor which makes Canada a nation of American interest in energy matters is the balance of payments aspect. The United States receives seventy-one cents of every investment dollar spent in Canada within one year. It has already been noted that most of the capital for expansion by American companies in Canada was acquired in Canada. Expansion by the oil and gas industry could mean increased investment in exploration and development, and in the purchase of more independent Canadian companies as subsidiaries of the foreign-owned multinationals. It has also been noted that the oil and gas industry exports over sixty-five per cent of its output to parents and affiliates, and makes almost eighty-five per cent of its imports from these firms.

These factors lead to several conclusions. In very

broad terms, the United States gets all of the crude that Canada can supply, surplus to immediate needs. The United States also gets a constant return of seventy-one cents on every investment dollar within one year. Increased sales would finance the expansion of the American-controlled oil and gas industry, enabling it to find, produce and export oil and gas more rapidly, in larger amounts. This expansion would further increase American control of the Canadian economy. The multinationals also benefit with increased production, sales, exports, and imports within themselves.

What would then be the economic benefits to Canada? There would be immediate financial returns to the corporations, which would be reflected in corporate tax returns to the federal and provincial governments. There would be greater royalty returns because of the increase in production. These returns to Canada would rise in proportion to increased sales; provided always that Canada did not raise royalty or taxation rates nationalize the industry, or otherwise threaten the "national security" interests of the United States. While increased production would create some new jobs, it has already been pointed out that the resource sector is a very low-level employer, and the unemployment picture would not significantly brighten.

Indeed, it could become worse. The Americans, through the Shultz Report, have quite clearly stated their interest in raw energy resources. They are not interested in purchasing products manufactured in Canada from those resources. The manufacturing of products from raw materials would be

done in the United States, severely limiting the possibilities of using Canadian resources within Canada in manufacturing, to create new jobs and offer greater profits from sales and exports of those products. In addition to making Canada "a permanent resource hinterland of the United States . . . Canada will become a country that will always have a high level of unemployment built into its economic structure."[36]

One of the final comments to be made on the Shultz Report should be a brief examination of Table Fifteen. This Table illustrates production, export and import rates for 1980. It is consistent in only one figure. Canada will consume two million barrels of crude a day. This is regardless of the rate of production, the needs of the Canadian economy to expand, or the demands of a growing population. And, the United States will take all excess production.

One other comment should be made on specific continentalist proposals. The Merchant-Heeney Report advocates the adoption of a continental energy policy for the mutual benefit of both countries, as was achieved in the Columbia River Treaty. The Columbia River Treaty has been an energy and economic failure for Canada. There are no energy returns for Canada guaranteed by the Treaty. In fact, the terms of the Treaty specifically prohibit damming of the Fraser River to create hydro-electricity in British Columbia. Thousands of acres of land on the Canadian side were flooded to build storage dams in Canada which would prevent seasonal

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[36]Laxer, "The Greene-ing of Canada," in A. Rotstein and G. Lax (eds.), op. cit., p. 146.

flooding in the United States. Canada was to receive $274.8 million, with a further $70 million to be paid, for the construction by Canada of dams costing $410.6 million. The money, if invested in Canada at a 5½ per cent interest rate for a profit of $52 million, was invested in the United States at an interest rate of 4¼ per cent. None of the costs included escalator payments to counter the rise in costs due to inflation, or the costs to Canada from the permanent loss of resources, or for finding alternate sources of energy. The American section of the Columbia River Basin is under American control, while the Canadian side of the Basin is under joint Canadian-American control. The Treaty itself cannot be abrogated for sixty years upon ten years written notice, and even then Canada retains responsibility for flood control under threat of payment for damages.[37] If the Columbia River Treaty is to serve as an example of the benefits to Canada from a continental energy pact, it seems to be unthinkable that a Canadian government would advocate such a policy.

A number of final points should be made in specific terms of energy export and import. First, J. J. Greene said in discussing a continental energy pact, that "people will benefit, and both countries will benefit." If we assume only that trade patterns continue along present lines, some facts about present trends emerge. Canada exports

[37]For a more detailed account see L. Higgins, "The Alienation of Resources," in I. Lumsden (ed.), Close the 49th Parallel - The Americanization of Canada (Toronto: University of Toronto Press, 1970), pp. 224-240.

crude and equivalents,[38] natural gas and electricity to the United States. Canada imports coal and electricity from the United States. Exports of crude oil and equivalents in 1971 were 47.5 per cent of production, and exports of natural gas were 35.4 per cent of production.[39] In 1966, Canada exported 4,397 million kilowatt hours of electricity to the United States, while importing 3,218 million kilowatt hours.[40] Of the final energy resource, coal, Canada is an importer, getting 18,863,779 short tons from the United States, while its total exports to all countries were 4,391,571 short tons in 1970.[41] In terms of energy resource supplies, Canada only benefits in receipts of coal. Since coal is the least important of these four categories to Canadian consumption, and will decline further in relative importance by the end of the century, Canada is exporting those energy resources it needs most, and importing the ones it depends upon least.

In specific terms of oil and gas, Canada imports crude and equivalents at a level just below that of its exports of those products. All imports come from Venezuela and the

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[38]This includes crude, pentanes plus, and propane butane mixes.

[39]See Table Fourteen B. It should also be noted that Canada imported 44.5 per cent of crude and equivalent consumed in Canada that year.

[40]Canada, National Energy Board, Energy Supply and Demand in Canada and Export Demand for Canadian Energy, 1966 to 1990 (Ottawa: Queen's Printer, 1969), p. 154.

[41]Canada, Department of Energy, Mines and Resources, Canadian Minerals Yearbook, 1970 (Ottawa: Information Canada, 1972), p. 154.

Carribean, Africa and the Middle East. All exports go to the United States. Canada exported 26.62 million barrels of petroleum products from refineries in 1970, but imported 70.15 million barrels of refined petroleum products that year. Most of these imports come from Venezuela and the West Indies, while virtually all of the exports go to the United States.

All of these factors lead to one final conclusion. The adoption of a continental energy scheme, while undoubtedly in the best interests of the United States, would have a severely detrimental effect on Canada in both financial and energy terms. The disadvantages to Canada far outweigh the advantages from the implementation of such a concept.

This paper has already discussed, and rejected the adoption of an energy policy based on Option One or Option Two of the position paper on Canadian-American relations. The next chapter will deal with Option Three--cooperation with a primary focus on Canadian needs and demands. The alternatives, under the general heading, "nationalist," remain the only possible alternatives in energy policy making for Canada.

CHAPTER FOUR

NATIONALISM

The third policy option in Canadian-American relations proposed by the External Affairs Department was to "pursue a comprehensive, long-term strategy to develop and strengthen the Canadian economy and other aspects of our national life, and in the process to reduce the present Canadian vulnerability."

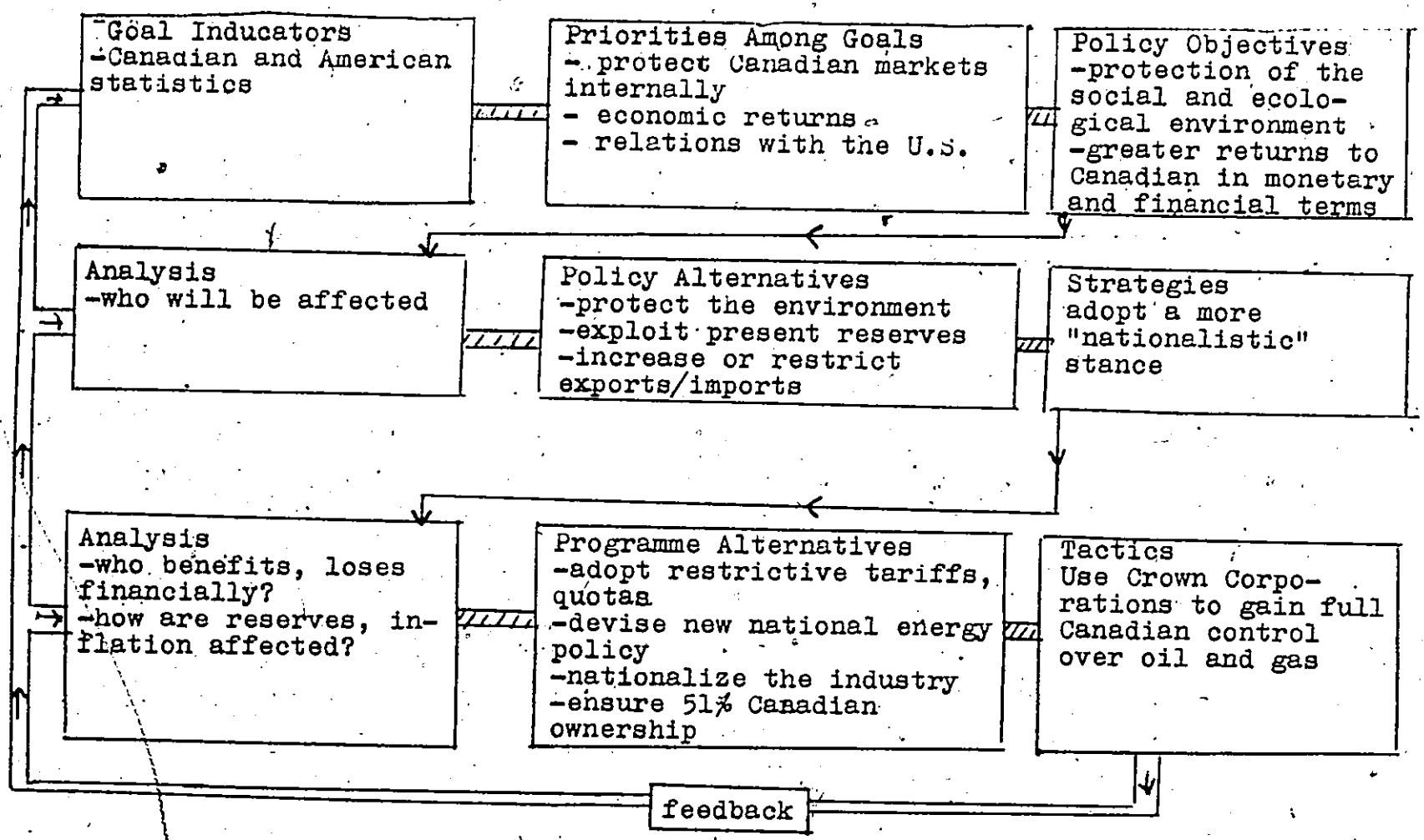
In terms of energy resource management, the adoption of Option Three would involve some move towards implementing a more nationalist stance in energy matters. The option, also called the "Canada First" option in this paper, would involve the implementation of a policy to ensure greater, lasting returns in Canada from the exploitation of Canadian energy resources.

Present energy policy consists of four elements. The first is the establishment of government departments and boards to handle energy resources. These have been noted in Chapter one, and include the Dominion Coal Board, established in 1947; the Atomic Energy Control Board, 1946; and the National Energy Board, 1959. All of these boards come under the jurisdiction of the Department of Energy, Mines and Resources.

The National Energy Board is of particular importance to this paper, since it is the only board concerned with oil

CHART FOUR

Option Three: Canada First



and gas.

> The Board is empowered to advise the Minister of Energy, Mines and Resources on matters over which the Parliament of Canada has jurisdiction relating to the exploration for production, recovery, transmission, transportation, sale purchase, etc., of energy and sources of energy within and outside of Canada.
>
> The Board has the authority to control the construction of interprovincial pipelines, for the transportation of hydrocarbons and international power lines, to fix tolls charged by the pipe line companies and to control the export and import of natural gas and the export of electricity.[1]

There are also a number of other Departments, including the Department of Indian Affairs and Northern Development and the Department of Finance, with direct and indirect control over energy resources.

The second of the elements of energy policy in Canada was the adoption of the National Oil Policy in 1961.[2] The subject of the announced policy

> was to seek cooperation of the oil industry in achieving a series of target levels of oil production, including natural gas, liquids, by the increased use of Canadian crude in markets west of the Ottawa Valley and by the expansion of export sales.[3]

The policy was adopted to ensure the viability of a Canadian

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[1]E. C. Hodgson, Digest of Mineral Laws of Canada (Ottawa: Queen's Printer, 1967), p. 8.

[2]The National Oil Policy was introduced to counter possible effects of the imposition of restrictive quotas on oil imports, and because of falling production rates by Canadian industry. Between 1954-1957, production fell from 72 per cent to 51 per cent of potential output. See A. R. Plotnick, "Canada's National Oil Policies: how are they working out?" Canadian Business, Vol. 37, No. 4, April, 1964, p. 52.

[3]J. L. Pepin, "The Federal Government and the Oil Industry," in J. D. Hilborn (ed.), Dusters and Gushers, (Toronto: Pitt Publishing Co., 1968), p. 97.

oil industry by providing it with exclusive access to refinery markets, particularly in Ontario, and by allowing the industry to increase sales to the United States to help meet American demands. The policy involves two regulations outlined in two Orders-in-Council. They required firms to report pertinent commercial transactions to the National Energy Board, and authorized the establishment of a fixed duty value on imported gasoline by the Minister of National Revenue. Underlying the whole policy is a belief in government industry cooperation, a "gentleman's agreement," to work to achieve the aims of the National Oil Policy.

The third element results from the implementation of that policy. The industry has consistently met target levels for shipments to refineries, and export sales, but the recent emphasis has been on maximizing exports to the United States. To ensure adequate crude supplies were sent to Ontario refineries, cut off from access to offshore shipment by the Policy, the federal government, through the National Energy Board, imposed export restrictions early in 1973.

Prime Minister Trudeau, in an interview with the industry trade paper, Oilweek, commented on the situation. He stated that:

> The controls were put on to deal with a short run situation during the winter just finished [1972-1973] but at the same time the National Energy Board (with concurrence of the Alberta Energy Resources Conservation Board) concluded that, over the long run, if we continued exports at a high level, we are going to have difficulty supplying the Canadian market, so the controls

will remain on."

This third factor is significant for two reasons. The first is that the government and governmental agencies have determined that Canada can no longer export unlimited energy supplies, but must impose restrictions to protect the domestic market. It is clear that the oil and gas industry, under its gentleman's agreement with the government chose to emphasize its role in exporting to the United States rather than supplying Canadian refineries west of Montreal at prices which are established only by domestic demands. These government actions point out that the National Oil Policy is no longer an adequate instrument for managing Canada's oil and gas resources.

This leads to the second significant factor in Trudeau's remarks. The failure of the National Oil Policy alone to effectively manage oil and gas resources necessitates the formulation and implementation of a new national oil policy, or in broader terms, of a national energy policy. With this in mind, Prime Minister Trudeau and Donald Macdonald called for a review of the whole issue of energy resources management. This would be undertaken in two parts. The first would be a series of talks between the federal and provincial governments, leading to a federal provincial conference on energy in late fall, 1973 or early in 1974. The second would be hearings held by the National Energy Board, open to all individuals and interested groups, where-

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"Oilweek, Vol. 24, No. 9, April 16, 1973, pp. 12-13.

by submissions on energy management, from a wide variety of public sources, could be made to the government.

As conceived by the government, there are four basic approaches to energy management open to public discussion. They are: (1) maximum energy development, (2) optimum environment consideration, (3) ultimate conservation option, and (4) continuing the kind of development conducted so far.[5]

Industry reaction to the call for public discussion of the issue of energy resource management was swift and to the point. G. Barry Kay, editor of Oilweek, commented

> that the public, which generally ranges from the rabid negativism of outspoken environmentalists through the gamut to the 'man-in-the-street,' who thinks it would be well to keep all Alberta gas and oil in the province, will be advising the government on matters ranging from oil export controls to ownership of East Coast offshore gas.[6]

To ensure that the industry was treated fairly in the hearings, Mr. Kay advocated a policy of attempting "to educate one of the world's least informed publics and a consumer press almost radical in opposition to its activities."[7] It is evident that the industry perceives the press and public as threatening forces, determined to limit northern development and stop the industry from selling abroad, without sound reasons. Acknowledging the industry's direct access to government, Mr. Kay still felt wary of the inputs of a public uninformed on the industry, and industry's actions and goals.

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[5] Oilweek, Vol. 24, No. 9, April 16, 1973, p. 12.

[6] Ibid., p. 3.

[7] Ibid.

The views and proposals of this "unenlightened" public will be the subject of this chapter. The groups and individuals, who are perceived by the oil and gas industry as forces disruptive to its prospects for prosperity, can be described under the general heading of the "nationalists."

While there are many options proposed by the nationalists, they are all concerned with acquiring greater returns for Canada from the exploitation of Canadian energy.

Environmentalists emphasise greater social and ecological benefits. Others are concerned with ensuring Canadian needs are, and always will be, met by domestic supplies. They form a loosely-knit opposition to the Canadian and American continentalists. It is the overall purpose of this paper to demonstrate that a nationalist approach to energy resource management is in the best interests of Canada and the Canadian people, and that nationalist options are a viable solution to the question of energy management.

The first factor to note is that there is no single nationalist proposal. Not only do different groups advocate different solutions, but many of the groups offer piecemeal solutions. The second factor to note is the effort taken by the Canadian government to publicly adopt a more nationalist stand on oil and gas management. In early 1973, the Canadian government insisted on emphasizing the independent role of Canada in energy negotiations in Washington. Mr. Macdonald, appearing before the Commons Resource

Committee on March 8, 1973, stated that current energy talks were stalemated because, "U.S. suggestions that Canada consult with Washington before Canadian oil policy is changed are unacceptable . . . The Canadian government does not intend to share its policy-making responsibility."[8] The Canadians also rejected two other proposals made by the Americans. The purpose of the negotiations was to have Canada supply additional oil to the American midwest, while the United States would undertake to supply Montreal and Canadian east coast refineries, if foreign oil imports were cut off or reduced. The first proposal rejected by Canadian officials was that Canada agree to supply to the United States a specific multiple of American oil shipments to Canadian eastern markets. The second American proposal, also rejected, was that Canada would pay for the maintenance of large unused capacity of pipelines from the west to the United States, which would be used only in an emergency. While these may seem like minor points in the whole context of energy policy determination, they do show that the government is publicly responding to the nationalist pressure to adopt a stand protecting Canadian interests.

The nationalist voices have been raised, primarily within the last ten years, to decry trends in energy arrangements between government and industry, and between Canada and the United States. As already noted, the National Oil Policy was adopted just over ten years ago. Public (non-

[8] The Windsor Star, "Minister stands firm on Canada-first policies," March 9, 1973.

industry) comments tended to follow two lines. One was in praise of Canadian actions, and received general acceptance.[9] The other was couched in such terms that it seemed easily dismissable as raving of the left-wing idiot fringe regardless of the validity of the arguments made. One such review was made by J. M. Freeman who referred to the Social Credit Premier of Alberta, Ernest Manning, as "Ernie Ben Manning, potentate of an American oil kingdom."[10]

The rise of concern in Canada, beginning in the mid-1960's, over the extent of control of the Canadian economy by the United States, led to a rise in concern over the whole question of energy management. Such concern was, in part, fostered by American attitudes toward Canadian resources. The proposal of the North American Water and Power Alliance (NAWAPA) scheme in 1964 is a key example. A plan to build a five hundred mile long reservoir down the Rocky Mountain Trench, and to drain northern fresh water supplies to the United States to meet American water needs, the NAWAPA scheme illustrated the belief, held by at least some Americans, that Canadian resources were theirs for the taking.[11]

The wide coverage of Kari Levitt's Silent Surrender

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[9]One example is the work of A. J. Plotnick, who wrote extensively for Canadian journals in the 1960's, and who wrote Petroleum: Canadian Markets and U.S. Trade Policy (Seattle: University of Washington Press, 1965).

[10]J. M. Freeman, Biggest Sellout in History - Foreign Ownership of Alberta's Oil and Gas Industry and the Oil Sands (Alberta New Democratic Party, 1966), p. 5.

[11]The proposal went so far as to come under investigation of the U.S. Senate, under the aegis of Senator Frank Moss of Utah, and his Special Subcommittee on Western Water Development.

in 1970 further underlined the control of Canada's economy by the United States, and the resulting danger to Canadian independence. Ms. Levitt noted a statement by Henry Fowler U. S. Secretary of the Treasury in 1965, in which he said that,

> the United States would assist the [American multinational] corporation in bringing pressure to bear on these [host] governments to 'forego voluntarily as a matter of national policy the exercise of extremes of nationalism, even though within the bounds of sovereignty.'[12]

Thus concern about the wide control of the economy by the United States, and the power of the American multinational corporation, particularly in terms of non-renewable energy resources, became an issue of increasing public debate in Canada.

The debate revolved around five separate nationalist policy proposals. They are: (1) maximum consideration for environmental safeguards; (2) 51 per cent Canadian ownership; (3) greater returns to Canada from the present industry organization; (4) Crown Corporations and government management of energy resources; and (5) immediate nationalization of the oil and gas industry.

However, before discussing these proposals in detail, this paper will examine the philosophical bases from which Canadians regard their economy, and which can largely influence the possibility of the adoption of some of the nationalist proposals. These beliefs were outlined in

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[12]Kari Levitt, Silent Surrender - The Multinational Corporation in Canada (Toronto: Macmillan, 1970), p. 101.

D. W. Carr's, Recovering Canada's Nationhood.* The author notes that the pervasive belief in these "economic truisms" have severely hampered a growth in Canadian national initiative. This has resulted in a widespread general belief that Canadians cannot manage the Canadian economy effectively themselves.

Carr's first theory is "the case of the persistent staple." This is a theory, developed in the 1930's, that the only potential for Canada's economy lies in developing raw materials and resources. This is an economic condition which is widely regarded by economists as the first stage in industrial development. The proponents of this theory, however, regard this as the first, last and only stage of Canada's development. The theory ignores the high level of industrialization in primary and secondary manufacturing which exists in Canada. The theory also points up Canadian "failures" to develop their economy by comparing Canadian development unfavourably to present American and European development.[13] It fails to note that the economy of a much younger nation cannot be compared at a par with nations whose industrial bases have existed for decades or centuries

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*D. W. Carr, Recovering Canada's Nationhood (Ottawa: Canada Publishing Co., 1971).

[13]The United States has existed, as a nation, twice as long as Canada, and European nations have been developing even longer. Their potential for industrial development has been greater merely because of the advantage of a longer growth period. Canada has had greater experience of high mass consumption than any nation other than the United States. Canada's expectations of the benefits which should accrue to a country from industrialization are thus geared to the American standard of output.

longer.

The second theory revolves around the "anachronism of geography," which holds that Canada's geographical makeup and great distances hinder Canadian development in relation to the United States. It ignores the technological advances of highways, railways, pipelines and airlines which have cut Canadian distances into manageable proportions, at relatively moderate costs. This theory also ignores the fact that Canadian transportation and communications systems run east-west, as does Canadian capital in an economy which has developed from coast to coast.

The third belief is in the "overpowering neighbour." This is the view that if Canada, by its actions, offends the United States, the Americans will somehow "Pounce on Canada." Carr points out that this theory is so widely held, particularly in government, that it has never been tested. In fact, the United States need never make an overt threat since Canadians consistently perceive the threat, and try to avoid anything like a confrontation. Carr quotes some comments by Abe Rotstein, before the Wahn Committee,[14] in which he said that, proponents of this theory "seem unaware that this philosophy is designed for a nation that has lost its will to preserve its sovereignty, that believes there are no means to resist foreign domina-

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[14]The Wahn Committee was a Committee chaired by Ian Wahn, for the Commons Standing Committee on External Affairs and National Defense, which examined a variety of aspects of Canada's relationships with the United States. Their report, The Eleventh Annual Report of the Standing Committee on External Affairs and National Defense was published in 1970.

tion."[15] Carr also notes some comments by John Holmes, who had seventeen years experience in External Affairs. Holmes said that, "Canada exists and will exist by sufferance of the United States."[16] Thus, this belief, reinforced by the attitudes and subsequent actions of Canadian government officials, continues. Based on a view of "United States greatness," this position fails to come to grips with an America which failed to subdue the independent actions of Cuba under Castro, or of North Vietnam; or to deal with the disruption of the American economy or the "American way of life" during the past decade.

The fourth belief examined by Carr is that of "the lack of Canadian abilities." This belief does not account for the real and ongoing accomplishments of Canadians and their developments in fields ranging from the Allouette satellite to advanced mini-submarines and snowmobiles. What may be more important, this belief rarely acknowledges the difficulties faced by Canadian entrepreneurs within their own country. Some foreign-owned multinationals receive immense tax breaks. Shell Canada, which took over Canadian Oil Companies in 1962, was paying no income taxes in 1965.[17] Carr, in a later section of his book, noted that

> more than half of the federal grants paid to industry in the three fiscal years 1965-66 to

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[15]Carr, op. cit., p. 25.

[16]Ibid., p. 26.

[17]Walter Gordon, A Choice for Canada - Independence or Colonial Status (Toronto: McClelland and Stewart, 1966), p. 82.

> 1968-69, totalling $358 million in all, was paid to firms owned by non-residents . . . Beyond these grants the Canadian federal government had made large contributions by loans and capital investments . . . to assist non-resident owned enterprises to get established.[18]

The theory also fails to note deliberate phasing out of research and development programmes in subsidiaries of foreign-owned corporations, as in the automotive industry.

Carr's final tradition theory is that of "inevitable integration." It is exemplified by Arnold Heeney, who said that "Year by year, American influence becomes more pervasive in every phase of Canadian life. Reason tells us that it cannot be otherwise."[19] While influential people in Canadian government and business maintain this theory, little effort will be made to "recover Canada's nationhood." In an industrialized, developed nation like Canada, there is no "reason" to assume that Canada must inevitably become part of the American empire. If Canadians shook off the influence of these traditional beliefs in their country's inability to act independently, Canada could reverse the continentalist trend.[20]

For the purposes of this paper, these beliefs should be borne in mind. Their influence on Canadian moves to ensure greater returns from the development of the Canadian economy, and in particular Canadian energy resources, can

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[18]Carr, op. cit., p. 53.

[19]Ibid., p. 31.

[20]For a detailed examination of these theories, see Carr, op. cit., pp. 15-33.

only be countered by beliefs which have a more realistic basis in both Canadian and American positions today.

The nationalists are already believers in a counter-philosophy. Their proposals reflect the rejection of a view that Canada cannot protect its own interests, or receive greater returns from the development of its natural resources. They have discussed the problem of resource management in general terms and in specifics. From all of the proposals put forward by the nationalists, five main themes emerge.

The first of these is an emphasis upon the social and environmental impact of resource exploitation. The agitation for greater care in these areas is found in both Canada and the United States. It reflects a concern for the nation and its people which outweighs either profit or concerns for massive energy return.

Three main headings can be seen under this proposal. The first is the desire to have energy projects which place first priority on the impact on the people in the region in which the project will be built. The James Bay Power Project is a prime example of agitation in defence of the people of the area. The Indian and Inuit people of the Ungava sought court injunctions to delay or halt construction on the project. Their claim was that construction would destroy lands on which they depend for the continuation of their way of life. "The native peoples say the project, which involves the damming of three rivers and the flooding of more than three thousand miles of timberland,

threatens their way of life and the ecology of their lands."[21] Further agitation among native peoples in the Territories led to court hearing on aboriginal rights. The hearing, begun in Yellowknife in the summer of 1973, was "an attempt by 7,000 treaty Indians of the Northwest Territories to formally declare a legal interest in 40,000 square miles of the resource-rich Mackenzie Valley."[22] These actions are designed to ensure a voice for the peoples of the area in resource development, and to guarantee them returns from resource exploitation.

Other groups emphasize the ecological and environmental damage which could result from ill-planned resource projects. Again, a good example is James Bay. Presentations were made to the James Bay injunction hearing by a number of interested parties. The engineering opponents to the project were exemplified by E. Shinnarland, president of a Toronto-based engineering firm. He said that he

> had never seen such a short time as 30 months between initial field work and full scale operations . . . [and that] because of planning

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[21] The Windsor Star, "Power project delay could hurt," March 21, 1973.

[22] Oilweek, Vol. 24, No. 24, July 30, 1973. The attitude of the lawyers for the federal government was first, that the presiding Judge, Northwest Territories Justice William Morrow, did not have the authority to hear the case. When proceedings continued, the government lawyers made their second move. They withdrew from the case, claiming that the treaty signed by the Mackenzie Valley Indians was legally binding, even though the claimants declared that the implications of the terms of the treaty were not understood by the Indians at the time that they signed. The decision handed down by Justice Morrow, early in September, 1973, was that the Indians were entitled to file claims on the land. The federal government indicated that this preliminary judgement would be appealed.

> schedules all dimensions of the powerhouse facilities in the first of four major dams planned would be irreversible by the end of 1973.[23]

In a later presentation, Dr. P. Dansereau, Director of the University of Quebec's ecological research centre felt "the James Bay hydroelectric-power project should be stopped because current technology is incapable of measuring or predicting what damage it will do to the regions ecology."[24] Similar environmental objections have been made about the Mackenzie Valley pipeline, the trans-Alaska pipeline-tanker route, and offshore drilling. The importance placed by the federal government on these considerations is reflected in its policy proposals. One of the themes suggested for public discussion leading to a final determination of a national energy policy is "optimum environmental consideration."

The third heading under this general proposal approaches the question from the position of energy conservation. The Pollution Probe handbook, edited by Donald Chant, emphasizes that, "for his own survival, man must realize that there are restraints on his own activities."[25] Approaching the problem with a view to technology combined with ecology, the Pollution Probe group, among other things has called for a planned population, use of smaller cars,

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[23] The Windsor Star, "James Bay project under attack," January 31, 1973.

[24] The Windsor Star, "Ecologist suggests halt to James Bay hydro project," March 7, 1973.

[25] D. A. Chant (ed.), Pollution Probe (Toronto: New Press, 1972), p. 218.

banning the internal combustion engine, and a reexamination of personal values to cut down on energy waste.

The second of the proposals made by the nationalists calls for 51 per cent ownership of the oil and gas industry. This kind of proposal has been made by groups like the Committee for an Independent Canada for some time. Walter Gordon in a speech prior to the publication by the federal government of Foreign Direct Investment in Canada (the Gray Report), spoke about such a policy. He said "The government . . . should announce clearly and forthrightly, that within a stated period of years, perhaps five (or even ten), all large Canadian companies must become 51 per cent owned by Canadians."[26] The Gordon proposal suggested that the repatriation of industries in Canada under foreign ownership or control might begin with corporations with assets of $500 million or more, and work down through smaller companies over a period of from ten to fifteen years.

This proposal, or similar ones, is often made in conjunction with several other schemes.[27] One is for government screening and restrictions on foreign takeovers. Another is for the boards of directors and senior officials of companies incorporated in Canada to be, in majority,

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[26]W. G. Gordon, "A Choice for Canada" in A. Rotstein and G. Lax (ed.), Independence - The Canadian Challenge (Toronto: Committee for an Independent Canada, 1972), p. 74.

[27]Donald Deacon, a Liberal member of the Ontario Legislature, called for 75 per cent Canadian ownership in fifteen years. D. Godfrey and M. Watkins (eds.), Gordon to Watkins to You - A Documentary: The Battle for Control of our Economy (Toronto: New Press, 1970), p. 194.

Canadian citizens.

The key element of these proposals is for private ownership of the economy. This leads to a question of whether changing American or other foreign owners for Canadians would make the industry more concerned with purely Canadian interests. The Gray Report, analysing different ways of acquiring Canadian control through joint ventures, majority control, 51 per cent ownership, and company directors control, continually repeats that such moves are largely "symbolic." When the Eleventh Annual Report of the Standing Committee on External Affairs and National Defense, The Wahn Report, was published, advocating 51 per cent ownership of all corporations in Canada, the Canadian business community was swift to deny the practicality of the proposal.

The experience of the oil and gas industry, particularly the Canadian independents, has clearly indicated that corporate interests in expansion and profits are more important than nationalist considerations. Many companies have both a majority of Canadian directors, and majority Canadian ownership. However, the industry, through its actions, has given no indication that it is more concerned with Canadian interests under Canadian control than under foreign control. There seems little reason to assume that a government move to put free enterprise control of energy industries into Canadian hands would result in management policies more beneficial to Canadian interests.

The third policy proposal concerns itself directly

with returns, without touching on either ownership or control. Returns would be energy and/or financial. Such a policy would prohibit any scheme comparable to the Columbia River Treaty, which gave no energy returns to Canada, and was a financial loss.

The major emphasis of this proposal, however, is financial returns. Table Seven showed that returns in the four western provinces from land sales, leases and royalties were only 5.7 per cent of production revenues in 1971. This ranged from a low of 2.1 per cent in British Columbia to a high of 36.0 per cent in Manitoba. In 1970, the federal and provincial taxation rate on oil and gas production companies was 2 per cent of revenues, and was 15 per cent on refinery companies. Depletion and other allowances may lower government returns even more. Mel Hurtig, commenting on this aspect of taxation, noted that the Hudson's Bay Oil and Gas Company "in 1968 on declared net earnings of $26,810,000 paid only . . . $20,000 in taxes. That amounts to a tax rate of .007 per cent."[28]

The O.P.E.C. countries charge a tax rate of fifty-five per cent of profits plus a further 2.5 per cent royalties, and charge an annual increase of 2.5 per cent on posted oil prices to offset inflation. The effective flat rate of royalties in Alberta natural gas is $16\frac{2}{3}$ per cent of the wellhead price, and is expected to rise to around

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[28]W. H. Pope, The Elephant and the Mouse - A Handbook on Regaining Control of Canada's Economy (Toronto: McClelland and Stewart, 1971), p. 74.

twenty-five per cent by the end of 1973. Since royalties in the O.P.E.C. countries have always been included in the general tax rate, the returns to the host countries are actually 57.5 per cent, not including the escalator clause.

Land leasing and sales also reflect the low rates prevalent in Canada. American oil companies paid $900 million for leases on the Alaska North Slope and $603 million for offshore drilling in the Santa Barbara Channel. In Canada "the cost of holding an oil permit for 12 years in either the (Canadian) north or offshore is only about $1 an acre . . . There are no other costs for holding acreage, apart from a $250 filing fee."[29] In a comparison of royalty rates, the American-based companies have an effective rate of 20 per cent on the North Slope and 16 per cent in offshore areas. The Canadian federal government charges a flat rate of five per cent for the first three years, and ten per cent thereafter.

Applying these rates to a specific situation, the Mackenzie Valley Pipeline is worthy of note. In its first three years of operations, the pipeline, with a capacity of 4.5 billion cubic feet of natural gas a day, transported at a wellhead price of 30 cents a thousand cubic feet, would yield $144 million to the Alaska government and only $36 million to the Canadian government.[30]

The question of leasing and rental policies has re-

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[29]The Globe and Mail, "Study cites oil firm lease ripoff," March 27, 1973.

[30]All these figures are from the article cited above.

cently come under considerable fire. Debate has grown up around

> the Canadian system of leasing which allows oil companies to bid for work permits on lands under federal jurisdiction . . . The costs of holding a work permit for 12 years is only $1 an acre. There is also a further 21 year lease renewal provided for.[31]

Although no new leases have been issued under these terms for over a year, around eighty per cent of the potential petroleum producing areas (827 million acres) under federal jurisdiction are controlled through the leases.

If oil is found, the leases allow for the federal government to claim half the oil, and impose royalties on the half retained by the industry. In an editorial in The Globe and Mail in early spring, 1973, it was noted that, "there have been hints--incredibly--that Canada's half might be left with the oil companies."[32]

While most nationalists interested in greater financial returns concentrate on these rates another question has arisen.

> The Alberta Energy Resources Conservation Board said last summer that Canadian gas was selling in the United States at prices 10 to 20 cents a thousand cubic feet too low, compared with alternative fuels. On the basis of 1972 exports of 1.01 trillion cubic feet of gas, the average underpricing would mean an annual loss to the Canadian economy of $151.5 million.[33]

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[31] The Windsor Star, "Arctic oil lease changes studied," March 22, 1973.

[32] The Globe and Mail, "The great giveaway," March 22, 1973.

[33] The Windsor Star, "Energy Board Frowns on higher gas prices," March 14, 1973.

The National Energy Board made no move to increase gas prices, and some comment was generated in Parliament when the Board was late in submitting a full report on the matter to the Cabinet. The Board maintained that it had been working with the industry to raise gas prices without causing a Canada-U.S. confrontation.[34] This is even more critical because gas pricing and exports revolve around long term sales. The major 1970 sale of 6.3 trillion feet of natural gas, about $2 billion worth, was to be made over fifteen to twenty years.

The nationalists concerned with this proposal call for higher returns from all sectors of the industry. Taxation returns, when deductions have been made, are so low that in some cases they are non-existent. Royalty and leasing rates are lower than in any other oil country in the world. The National Energy Board is authorizing the sale of under-priced gas to the United States. The real benefits appear to be going to the oil industry, whose revenues are up twenty-six per cent for the first half of 1973 and over 1972 income rates.[35] Government moves to guarantee higher returns are a nationalist alternative for resource management.

Another alternative, the fourth, is to develop the oil and gas industry, and energy resources in general, under Crown Corporations. One current example is PanArctic

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[34] The Windsor Star, "Energy Board Frowns on higher gas prices," March 14, 1973.

[35] Oilweek, Vol. 24, No. 23, July 23, 1973, p. 6.

Oils, forty-five per cent owned by the federal government. This company has leases on forty-six million acres of land in the Arctic Archipelago. The area is generally regarded by the industry as having the highest risk of any exploration region in Canada. Many companies, which had exploration leases in the islands, farmed them out to PanArctic for a return on any profits. This offers returns to private industry, without requiring much capital outlay.

The corporation was set up as an independent company. It was not established to play any role in a Canadian energy policy. Even more, the government's position on PanArctic has been to allow it to operate as a private business. This allows companies like Pan Canadian Petroleums to operate as if it had 33 per cent ownership rather than its actual 18 per cent ownership in the consortium. The prime concern of the government seems to be to find large, commercially recoverable deposits of oil and gas, in the shortest possible time, to justify the construction of a Mackenzie Valley pipeline. With this pipeline, the government hopes to cash in on the North Slope oil rush.[36]

The government has asked for no energy supply returns. There is no indication that PanArctic will ensure Canadian energy needs are met. Further, the Canadian taxpayer is heavily subsidizing this consortium, which has already committed a large portion of its returns to private industry.

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[36]P. Deutscher, "Panarctic Oils Ltd.: The Government and the Energy Business," in Canadian Forum, June/July, 1973, pp. 32-34.

There are several factors to be considered in the question of ownership by Crown Corporations. The example of PanArctic Oil seems to indicate that the major interest of the government is to ensure the growth of the industry and the discovery of new proven reserves. There is little indication that such growth will result in secure inexpensive supplies of oil and gas to Canada, or proportionally higher financial rewards, particularly after costs are deducted. The benefits from this kind of corporation may not really be of significant benefit to Canadians.

If the Crown Corporation is designed to exploit reserves in new areas, it must be noted that most lands deemed potential sites are already under lease to private industry. If the Crown Corporation is the instrument used to regain control of the oil and gas industry, then the example of supplying funds but leaving effective control in industry hands must be avoided.

In fact, a series of Crown Corporations might be developed. Eric Kierans, discussing mining in general, suggested setting up one Crown Corporation to carry out mining, and another to undertake exploration. Under such a proposal leases would be taken over by the Crown Corporation, when private industry's leases ran out. Eventually, the Crown Corporations, all the mining (or oil and gas industry), and all of the profits would accrue to the public.

The only alternative nationalist proposal would be to nationalize the oil and gas industry at one time. The proponents of this theory are a small but vocal group, many of

whom were active in the left-wing, "Waffle" arm of the New Democratic Party. Two of these spokesmen are James Laxer and Mel Watkins. Laxer has been particularly active in discussions of energy management, clearly favouring the nationalist solution. In The Energy Poker Game, he puts forward his "socialist" proposal.

> Only public ownership and public control of the resource industries can break us out of the pattern of dependency and comparative underdevelopment that has been endemic to Canada. Repatriation of the Canadian economy should begin at the door--the resource sector. Public ownership of the resource industries would place the key sector of our economy in the hands of the people. It would give Canadians the opportunity to master the skills necessary to run our economy and to develop it quantitatively in the interests of human well-being in Canada.[37]

This proposal can perhaps be best discussed by answering questions commonly proposed about such a solution. The first might be "How do you find people competent to run the industry?" A brief glance at the present industry shows that there are many able and skilled Canadians already active in energy resource industries, who could manage a government directed operation. There are many Universities in Canada with fine schools offering knowledge and training in a number of important areas, from petroleum engineering to geological and geophysical surveys, and business management. There already are people in Canada fully qualified to operate such a national corporation.

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[37] J. Laxer, The Energy Poker Game (Toronto: New Press, 1970), p. 48.

A second question would be, "How would you guarantee that a Crown Corporation would care more for Canada, and returns to Canadians than for profits?" The answer, of course, is that such a guarantee cannot be made. However, with resource management directed by a government whose primary aim is to stay in office, there is a better possibility for control of the oil and gas industry in the public interest, than if the industry is left in the hands of private businessmen. It is possible for the electorate to replace a Canadian government at least every five years, if the public feels the government is not acting in its best interests. There is no similar public control over private management.

A third common question is "How are you going to pay for such a takeover?" This can be answered in several ways. First, Canadians already pay for most of the takeovers of industry in Canada by foreign firms. There must, therefore, be sufficient funds in Canada to finance takeovers. As Kari Levitt pointed out in Silent Surrender:

> In 1964 . . . gross investment expenditures by American branch plants and subsidiaries in Canada were reported to be at least $2,557 million. Of this amount, however, only $126 million (5 per cent) originated directly from United States sources. Internal financing amounted to $2,008 (78 per cent), while a further $423 million (17 per cent), was mobilized by Canada's financial institutions.[38]

Table 22 (Appendix I) illustrates the specific case of the oil and gas industry, which, in 1970, received $24.6

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[38]K. Levitt, op. cit., p. 11.

million from the United States, primarily through loans and advances from parents and private interests. The industry received $75.1 million from private Canadian interests, primarily through long term debts. From the total new investment of $170.7 million, Canadian private concerns contributed 41.5 per cent in the oil and gas industry, exclusive of internal corporation financing, while only 14.4 per cent came directly from the United States. Table 22 also indicates that the mineral fuels industry had retained earnings in 1970 of $614 million. This would be the prime source of internal funding, and although this latter figure also includes the coal industry, it is clear that the oil and gas industry's potential for expansion is only financed in a minor way by new American funds.

The second way of answering this question is to say that takeovers may be undertaken by fixing a compensation rate, issuing notes in the amount of the rate to the private industry, and paying off the notes from profits. A third proposal might be to pay for the takeover, at least in part, through Canadian investment funds, as through the Canada Development Corporation. "Canadians have always tended to save money, and now have one of the highest rates of savings in the world."[39] A government publicity campaign, promoting benefits from investing in the Canada Development Corporation for the purposes of a takeover of the oil and gas industry,

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[39]Science Council of Canada, "Innovation in a Cold Climate: Impediments to Innovation," in A. Rotstein and G. Lax (ed.), op. cit., p. 123.

might channel some private funds into a plan to finance the takeover.

A fourth question might be, "Won't nationalizing the oil and gas industry cause a depression, or seriously lower Canada's standard of living?" The latter effect might be beneficial to Canada, cutting it free from the American standards of excessive demand for non-essential goods. However, there is no reason that the country would necessarily suffer financially. All of the profits would accrue to the public. No funds would go to foreign parent firms, and the reinvestment of profits could be made with an eye to long-term benefits for the country as a whole. With only reasonable success in the first years of operation the people of Canada could be far ahead of the position that they are now in vis-à-vis the oil and gas industry.

A final question reiterates a point made earlier by Oilweek. It would be "What makes you think the man-in-the-street is competent to manage energy resources?" Several comments might be made. First, there is no reason to suppose that the only people competent to manage the industry are already in the industry. Second, past and present trends indicate that the primary concern of the privately-controlled industry is the benefits to the industry, from energy exploitation. Canadians as a whole are at least interested in more Canadian-oriented returns in the form of adequate supplies for national needs at a reasonable cost. Canadians have no reason to be concerned with industry profits, since they receive a minor amount of

those profits. And private citizens would be excessively concerned if American demands siphoned off needed oil and gas for Canada, or led to exhorbitant price hikes.

The industry position that individuals and groups from outside the industry are incompetent to discuss management and disposition of energy resources is also debateable. Many groups outside the oil and gas industry have developed knowledge and skills in a variety of areas related to the management of energy resources. Engineering and ecological organizations are two such groups. The ordinary citizen, who does not have special competence in the complexities surrounding energy management, has interests in his own present and future welfare entitling him to voice an opinion and express priority preferences. Where the oil and gas industry was government managed, the individual Canadian would be accorded the right, at least in public, to express his opinions and have them heard.

All of the five nationalist proposals have adherents and opposition. Two, ensuring social and environmental safeguards, and guaranteeing greater returns from energy resource exploitation, are particularly important to most nationalists. One reason they are important is that they could be emphasised in any proposed national energy policy without seriously disrupting the present structure of the oil and gas industry. Serious efforts by government and the private sector to develop energy resources in a manner which protects Canadian social and ecological environments, and ensures greater returns to Canadians from energy production

are key concerns of most nationalists.

The main bone of contention lies in how to guarantee this protection, and these returns. Those who emphasize environmental protection, or energy or financial returns, are largely interested in the results rather than in the mechanics of acquiring the results. If effective legislation could be written and enacted, many supporters of these goals would be satisfied with government-industry cooperation.

Other nationalists fear that only using gentlemen's agreements would be ineffective. They desire more direct government actions to realize these goals. Here, again, there is a division on terms of the mechanics. The division lies in the degree of government involvement. Those interested in limited government involvement believe that legislation requiring majority Canadian ownership, leaving the industry in private hands, would suffice. While it has not been demonstrated that the Canadian segments of the oil and gas industry have acted more "nationalistically" than the foreign controlled sector, this does not necessarily mean that an entire industry controlled by Canadians would not be more concerned with returns to Canada. There could also be great psychological benefits from the knowledge that Canadians, who are largely aware of the extent of foreign control in their country, have in fact regained some of the control over their economic affairs. This proposal, unfortunately, offers no guarantees other than the maintenance of a free enterprise economy.

For some nationalists, the maintenance of free enterprise interests in the critical energy resource sector of the economy is less important than ensuring Canadian control through direct government intervention. While the option of establishing Crown Corporations and nationalizing the oil and gas industry have the same results in the long run, the difference in approach is of critical importance. Nationalization, though faster, cannot be regarded as a viable option for Canada at the present time. There is no Canadian national political party interested in using the tool of nationalization, or in proposing the use of such a method as an element of party positions put before the electorate. The use of Crown Corporations has already been accepted by political parties. This is a more viable alternative than nationalization at this time.

Government policies to this date have largely been geared to protecting and strengthening the foreign-controlled oil and gas industry. Depletion allowances, other tax-writeoffs, very low leasing, land sale and royalty rates, and export and foreign sale policies have all been designed to encourage the growth of the industry. Government policies resulting in expanding profits and markets have ensured high returns to the industry, but limited returns to the Canadian public.

Only direct government action limiting sales abroad in the early spring of 1973, guaranteed supplies to the domestic market. The demands of Canadian producers are quantitatively higher than ever before and industry actions

have indicated that only government intervention will protect the interests of the Canadian consumer. If demands on Canadian producers increase, as they show every indication of doing, further government action will be required.[40]

Such actions cannot be extensions of past policies. Crown Corporations, like Panartic Oils, have not indicated by their actions a primary interest in protecting or enriching the country at large. The search for markets for massive supplies of energy resources abroad, have resulted in the possibility of scarcity for domestic markets. Domestic markets must be protected; government intervention appears necessary to ensure such protection.

As Thomas Burton has maintained, energy resource management is very much a matter of national interest. It is the responsibility of the government to act in the national interest. Only the nationalist voices raised in the energy resource management debate emphasize the national interest, the welfare of the country and all Canadians, over private or non-Canadian interests. Only through implementing their aims, social and environmental protection and energy

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[40]Annual production rates, and the rate of export to the United States for oil and gas have been increasing rapidly since 1960. In 1960, exports to the United States totalled 114,300 barrels daily, out of a total Canadian production of 524,000 barrels a day (b/d). While final figures are not yet in, the estimated 1972 figures given in the Canadian oil and gas trade magazine, Oilweek, show that exports to the United States amounted to 936,000 b/d out of a total Canadian production of 1,690,000 b/d. Further projections for 1973 estimate American imports of 1,055,000 b/d from a total Canadian production of 1,850,000 b/d. These figures reflect a rise from around twenty per cent in 1960 to around fifty-five per cent in 1972 to an estimated fifty-seven per cent in 1973 in terms of the American share of Canadian production. Oilweek, Vol. 24, No. 1, January 19, 1973, p. 12.

and financial returns, can the national interest of Canada be guaranteed into the future.

CHAPTER FIVE

CONCLUSIONS

The determination of a national energy policy in Canada is a Gordion Knot of difficulties. It requires that an accord be reached between the federal government and ten provincial governments, each with its own interests and priorities. These governments must first agree that a "national" policy is necessary. Then they must present, discuss, analyse and select one or more policy options from the broad assortment offered by a variety of groups, each with its apparent own economic, philosophical or strategic axe to grind. It is apparent that the contradictory elements of at least some of the options mean that one or more groups will find their proposals largely rejected by any statement of a long range policy of the federal government.

A layman, examining this situation faces a number of problems in comprehending these difficulties. In the first place, most of the negotiations carried out on international energy matters, between Canada and the United States, take place behind closed doors. It is very difficult to assess the tenor of the discussions or positions taken, except through examinations of carefully worded public statements and after-the-fact analysis. It is possible to speculate on what the representatives of both sides are saying, but

rarely is anything discovered other than the general philosophy held by either government. Specific demands and bargaining points usually remain obscure.

The analyst also faces the problem of separating fact from emotional fiction or wishful thinking. To stress the points they are making, many commentators on the issue of energy resource management in government, industry and the private sector, use "facts" which support their own point of view, and language which clouds issues. There is an atmosphere full of innuendoes, threats and counterthreats, and it is often difficult to sift out the realities of the overall situation.

One is often left groping through the dark, or at least the dusk, in trying to determine the relevant facts, and assess the inputs which are being made into the development of this policy by those actively involved in the debate. Some broad policy options can be outlined, but these limitations sometimes necessitate the use of speculative analysis, which must be acknowledged. Within these limitations three general policy options can be determined.

The first option involves the maintenance of the status quo. Such an option can continue past actions by the government of Canada to encourage growth and expansion within the oil and gas industry, and to seek the widest access for Canadian supplies to American markets. Very recent trends, since the spring of 1973, indicate that there may be a move to adopt a policy more geared to serving Canadian needs than meeting American demands. However,

unless a concerted effort is made by the federal government to adopt a national energy policy which makes the interests of Canada and its peoples the first priority, a de facto Continental Energy Pact might well develop. American efforts to tie Canada into a long-term deal for hydro, gas and oil sales, if successful, would lead to a separate Canadian resource sector in name only.

The second option would be to formally adopt a Continental Energy Pact, which is the second policy proposal. There are many proponents of such a scheme including the Canadian and foreign-owned sectors of the oil and gas industry, and the American government. This pact, if adopted formally, or through ad hoc actions of the Canadian government, would certainly lead to closer economic integration, and weaken Canadian independence of action.

A number of possibilities would result from the adoption of continentalism in energy resources.

> The energy deal involves an essential attack on Canadian independence in two ways: first, as a source of supply for American strategic resources, we can never be allowed political freedom to deviate from any significant world policy; second, as American resource producing corporations within Canada tighten their grip on our economy, and build ever-widening ties with the United States, the manufacturing sector of our economy would be throttled as well.[1]

There are several very real results, however, which unerline the detrimental effects to Canada from the adoption of the continentalist policy. The financial returns are

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[1] J. Laxer, "The Greene-ing of Canada," in A. Rotstein and G. Lax (eds.), Independence - The Canadian Challenge (Toronto: Committee for an Independent Canada, 1972), p. 145.

low, as in most raw material trade. The United States is interested only in energy resources, and no interest has been expressed in manufactured products which give higher returns to Canada, if only through corporate taxes. The financial returns largely would accrue to the producing industry, which itself gives little financial returns to Canada. This policy is also geared to a flat rate of consumption of energy resources, while allowing for all excess production to be used in the United States. Although free trade means energy sharing both ways across the border, Canada has little need for American energy resources. The energy benefits go to the United States. The financial benefits go to the largely foreign-owned resource industry. Even within those realistic but narrow terms, there is no reason for Canada to adopt such a policy option if benefitting either the country or its peoples are the priorities of the Canadian government.

It is therefore clear that, in the best interests of Canada and the Canadian people, an alternative option must be chosen. A more nationalist stand must be espoused and incorporated into energy policy decision-making. In conjunction with this, traditional beliefs in the inability of Canadians to act independently to run their own economy must be rejected where they clearly do not coincide with Canadian economic realities.

Two aims should be emphasized by the Canadian government to ensure maximum benefits to the country. The social and ecological costs from energy exploitation must be care-

fully considered with a view to minimizing damage to the Canadian environment. Also, much greater efforts to ensure returns to Canada in terms of financial benefits and adequate energy supplies must be made a primary goal priority.

The adoption of a nationalist position on energy management, the third option, emphasizes these aims. The mechanics of guaranteeing the realization of these aims involves three proposed policies. The government could move to require majority Canadian ownership of the industry. However, there is little tangible indication that an exchange of foreign businessmen with Canadian businessmen would result in a shift of emphasis from industry returns to returns to the country as a whole.

Alternatively, the government would become directly involved in energy resource management. One method would involve nationalizing the oil and gas industry, bringing it wholly under government control at one time. The biggest barrier to the implementation of such a policy in real political terms, is that no political party formally adopts such a position or declares itself interested in nationalization.

Another method would be to establish a Crown Corporation, or several such corporations to directly manage all aspects of energy development, with a view to achieving the two major goals of the nationalists. Eventually, a de facto nationalization would result. There are a number of reasons why this alternative might be successfully implemented. It

would be politically possible. It has been done before, and examples of good and bad management already exist to set guidelines for future management policies. Also, carried out over time, these Crown Corporations would probably make less costly mistakes and would learn, by action, how to effectively manage a quantitatively expanding production capacity, as large segments of the energy resource industry came under government control.

The proposed hypothesis of this paper has been that nationalism has a viable role to play in energy resource management in Canada. It is only within the sphere of nationalist proposals, that a major emphasis on ensuring fair returns to Canada and its peoples from energy exploitation is made. By adopting the nationalist option in developing a national energy policy, the Canadian government can ensure these returns are made. With the combined aims of protecting the social and ecological environment of the country, and requiring returns in monetary supply terms, perhaps through the tool of effective Crown Corporations, such a policy can be made a reality into the future.

The adoption of the nationalist option is essential in energy management. If energy exploitation is to serve the country and its people, there is no better proposal for the ultimate realization of priority for the national interests. This question of who will benefit, will be answered by the adoption of a National Energy Policy. The nationalist solution is clearly the best option for Canada.

APPENDIX I

Source for Appendix I: Department of Industry, Trade and Commerce, Statistical Supplement to "Foreign-Owned Subsidiaries in Canada, 1964 to 1969.".

Table XVI. p. 18.
XVII. p. 33.
XVIII. p. 37.
XIX. p. 38.
XX. p. 44.
XXI. p. 60.
XXII. p. 60.
XXIII. pp. 62-3.

TABLE SIXTEEN

Proportion of Exports to Parents and Affiliates Abroad, and of Imports from Parents and Affiliates Abroad, All Reporting Corporations - 1968 to 1970

Industry	Imports to Parents and Affiliates a % of Exports			Imports from Parents and Affiliates as % of Total Imports		
	1968	1969	1970	1968	1969	1970
1. Mining and Primary Metals	66.5	30.0	61.6	70.2	77.2	78.3
2. Gas and Oil	64.8	67.3	65.7	85.4	88.6	84.3
3. Machinery and Metal Fabrication	90.9	90.5	90.9	78.1	79.8	79.6
4. Transportation Equipment	85.9	88.9	87.9	78.5	78.8	76.3
5. Electrical Products	37.8	39.1	39.8	64.1	72.4	68.0
6. Chemical Products	49.2	52.0	67.7	59.8	60.7	55.6
7. Food and Beverage	35.1	39.6	39.1	44.7	45.7	43.8
8. Pulp and Paper	52.2	50.6	47.1	26.1	23.3	30.4
9. Other Manufacturing	50.0	45.2	56.5	69.0	70.3	70.6
10. Wholesale Trade	29.0	38.0	33.3	89.1	85.3	83.8
11. Other Nonmanufacturing	60.0	78.6	70.0	16.4	32.6	42.9
Average	67.9	72.3	70.2	74.9	76.2	74.0

TABLE SEVENTEEN

Dividends Declared and Net Profits Earned, All Reporting Corporations - 1968 to 1970

Industry	Dividends Declared (1968)	Net Profits (1968)	Dividends Declared (1969)	Net Profits (1969)	Dividends Declared (1970)	Net Profits (1970)
1. Mining and Primary Metal	32	82	31	72	37	70
2. Gas and Oil	141	327	170	309	144	348
3. Machinery and Metal Fabrication	25	66	42	88	27	76
4. Transportation Equipment	20	166	16	172	65	46
5. Electrical Products	19	42	22	41	18	31
6. Chemical Products	45	76	43	77	37	72
7. Food and Beverage	24	60	14	65	29	76
8. Pulp and Paper	17	53	19	87	38	38
9. Other Manufacturing	42	65	22	71	25	8
10. Wholesale Trade	7	12	6	12	4	7
11. Other Nonmanufacturing	12	67	13	65	15	62
Total	348	1,016	398	1,059	438	834

TABLE EIGHTEEN

Summary of Current Non-Merchandizing Transactions - 1968 to 1970

(in million dollars)

	Receipts from Abroad			Payments Made Abroad			Payments Abroad as % of Total Income		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
1. Mining and Primary Metals	4	9	4	61	53	56	6.1	5.2	5.2
2. Gas and Oil	22	28	32	196	224	219	4.9	5.2	4.7
3. Machinery and Metal Fabrication	3	2	3	69	93	79	4.9	5.3	4.2
4. Transportation Equipment	26	23	26	198	160	218	3.5	2.5	3.9
5. Electrical Products	1	1	1	34	44	37	2.4	2.9	2.4
6. Chemical Products	7	6	5	73	69	63	4.9	4.2	3.7
7. Food and Beverage	2	3	2	43	35	50	2.4	1.8	2.4
8. Pulp and Paper	3	12	3	63	64	81	4.1	3.8	4.9
9. Other Manufacturing	4	7	8	58	42	49	4.0	2.7	3.1
10. Wholesale Trade	1	1	1	11	11	10	1.0	1.0	0.8
11. Other Nonmanufacturing	-	1	2	29	44	33	1.4	1.9	1.4
Totals, Averages	73	93	88	835	839	895	3.6	3.4	3.5

TABLE NINETEEN

Current Savings, All Reporting Corporations - 1968 to 1970

(in million dollars)

Industry	Current Retained Earnings			Depreciation, Similar Reserves			Current Savings		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
1. Mining and Primary Metals	50	41	33	80	78	84	130	119	117
2. Gas and Oil	186	139	204	264	271	314	450	410	518
3. Machinery and Metal Fabrication	40	46	49	99	98	106	139	144	155
4. Transportation Equipment	146	156	-18	177	166	170	325	322	152
5. Electrical Products	23	19	13	51	48	60	74	67	73
6. Chemical Products	32	34	35	72	79	84	104	113	119
7. Food and Beverage	36	51	47	36	36	39	72	87	86
8. Pulp and Paper	35	68	-	94	94	100	129	162	99
9. Other Manufacturing	24	49	-16	57	63	98	81	112	82
10. Wholesale Trade	5	6	3	11	11	7	16	17	11
11. Other Nonmanufacturing	56	52	46	34	37	45	90	89	91
Totals	633	661	369	975	981	1108	1608	1642	1503

TABLE TWENTY

Current Internal Transactions with Residents of U. S. and Other Foreign Countries, Oil and Gas Industry - 1968 to 1970

(in million dollars)

Transaction	1968		1969		1970	
	U. S.	Other	U. S.	Other	U. S.	Other
1. Export sales	436.4	72.0	509.4	60.0	564.5	60.6
2. Merchandise imports	113.6	385.9	195.5	398.2	193.9	404.0
3. Capital equipment imports	33.4	1.2	20.4	3.3	26.9	5.8
Total Imports	166.9	387.2	215.9	401.6	220.8	409.8
4. Balance on merchandise trade	269.5	-315.1	293.5	-341.5	369.6	-349.2
5. Other current receipts	3.6	18.7	4.0	22.8	6.8	25.5
6. Dividends paid	85.5	21.8	114.0	22.6	87.6	22.9
7. Other current payments	71.9	16.7	70.6	16.9	70.7	37.4
Total Current Payments	157.4	38.5	184.7	39.5	158.4	60.3
8. Balance on non-merchandise	-153.8	-19.8	-179.8	-16.7	-151.5	-34.8
9. Total receipts	440.1	90.7	541.3	82.8	591.3	82.6
10. Total payments	342.8	425.6	400.6	441.0	379.2	470.2
Current Accounts Balance	115.8	-334.9	113.7	-358.2	212.1	-384.0

TABLE TWENTY-ONE

Current Transactions with Parents and Affiliates Abroad in U. S. and Other Foreign Countries - 1968 to 1970

Transaction	1968		1969		1970	
	U. S.	Other	U. S.	Other	U. S.	Other
1. Export sales	287.6	41.6	355.2	26.0	398.5	25.3
2. Merchandise imports	102.6	371.6	159.7	386.9	160.8	370.5
3. Capital equipment imports	0.4	-	0.1	-	0.2	0.2
Total Imports	103.7	371.6	159.8	386.9	161.0	370.7
4. Balance on merchandise trade (international)	184.6	-330.0	195.5	-359.0	237.4	-345.3
5. Other current receipts from abroad	2.6	15.7	1.5	20.5	1.6	22.4
6. Dividends paid abroad	81.4	18.4	109.0	19.1	83.1	19.6
7. Other current payments abroad	44.8	16.1	32.3	11.7	34.3	34.1
Total Current Payments Abroad	126.2	34.5	141.3	30.7	117.4	53.6
8. Balance on current international nonmerchandise transactions	-123.5	-18.8	-139.8	-10.3	-115.9	-31.2
9. Total receipts from abroad	290.2	57.3	356.7	48.4	400.0	47.7
10. Total payments abroad	229.1	406.1	301.0	417.8	278.4	424.3
Current Accounts Balance	61.1	-348.2	55.7	-369.3	121.6	-376.6

TABLE TWENTY-TWO

Selected Sources of Funds from Residents of U. S. and Other Foreign Countries, from Canada and from All Countries, Oil and Gas Industry - 1970

(in million dollars)

Country	Bank Loans	Loans & Advances by Parents	Short Term Loans
U. S.	-11.5	13.5	-
Other Foreign Countries	9.0	9.4	-
Canada	-8.0	-5.7	26.8
All Countries	-10.5	17.2	26.8

TABLE TWENTY-TWO - Continued

Bonds & Debentures	Other Long Term Debt	Paid in Capital by Parents and Affiliates	Paid in Capital by Others	Total
-15.2	12.4	-2.7	28.2	24.6
-	55.3	6.5	-5.2	75.1
40.9	6.7	2.8	7.4	70.9
25.7	74.4	6.6	30.3	170.7

TABLE TWENTY-THREE

Total Sales, Exports to the U. S. and All Countries and to Parents and Affiliates in the U. S. and All Countries; Imports from the U. S. and All Countries, and from Parents and Affiliates - 1968 to 1970

(in million dollars)

Year	Total Sales	Export Sales		Total from Parents and Affiliates	
		Total to U.S.	Total to all countries	to U.S.	to all countries
1968	3,892	436	508	288	329
1969	4,111	509	569	355	383
1970	4,435	584	645	398	424
		Imports			
1968	2,264	167	554	103	475
1969	2,423	216	617	160	547
1970	2,560	221	631	161	532

APPENDIX II

TABLE TWENTY-FOUR

Capacities of Operating Refineries

(barrels/day)

Name of Company	Location	Capacity	Source of Crude
	Newfoundland		
Golden Eagle	Holyrood	13,000	Venezuela
	Nova Scotia		
Gulf Oil	Point Tupper	87,000	Venezuela, Mid-East, Nigeria
Imperial	Dartmouth	64,300	Venezuela
Texaco	Halifax	16,000	Venezuela, Mid-East
	New Brunswick		
Irving	St. John	50,000	Venezuela, Mid-East
	Quebec		
B.P.	Ville D'Anjou	75,000	Trinidad, Mid-East
Golden Eagle	St. Romauld	100,000	Venezuela, Libya
Gulf	Montreal East	75,000	Venezuela, Mid-East, Nigeria
Imperial	Montreal East	106,000	Venezuela
Petrofina	Pte. Aux Trembles	60,000	Venezuela, Mid-East

TABLE TWENTY-FOUR - Continued

Shell	Montreal East	100,000	Venezuela
Texaco	Montreal East	66,000	Venezuela, Mid-East
	Ontario		
B.P.	Oakville	38,000	Saskatchewan, Alberta
Gulf	Clarkson	61,500	Saskatchewan, Alberta
Imperial	Sarnia	126,800	Saskatchewan, Alberta Manitoba, Ontario
Shell	Oakville	40,000	Saskatchewan, Alberta
Shell	Sarnia	66,000	Saskatchewan, Alberta
Sun Oil	Sarnia	33,000	Saskatchewan, Alberta Manitoba
Texaco (Regent)	Port Credit	40.000	Saskatchewan, Alberta
	Manitoba		
Imperial	Winnipeg	22,000	Saskatchewan; Alberta Manitoba
Shell	St. Boniface	26,5000	Saskatchewan, Alberta

Consumers Coope-	Saskatchewan		
rative Refineries	Regina	32,5000	Saskatche-wan, Alberta
Northern Petro-leum	Kamsack	1,200	Saskatche-wan
Imperial	Regina	32,000	Saskatche-wan,Alberta
	Alberta		
Gulf	Edmonton	80,000	Alberta
Husky Oil	Lloydminster	7,5000	Alberta
Imperial	Calgary	20,000	Alberta
Imperial	Edmonton	39,000	Alberta
Shell	Bowden	5,000	Alberta
Texaco	Edmonton	20,000	Alberta
	British Columbia		
Chevron Canada	Burnaby	18,000	Alberta, British Columbia
Gulf	Port Moody	32,000	Alberta, British Columbia
Gulf	Kamloops	20,500	British Columbia
Imperial	Ioco	33,000	Alberta, British

			Columbia
Pacific Petroleums	Taylor	19,100	Alberta, British Columbia
Shell	Burnaby	20,500	Alberta, British Columbia
Union Oil	Prince George	8,000	British Columbia
	Northwest Territories		
Imperial	Norman Wells	2,800	Northwest Territories

- There is also a synthetic crude plant at the Athabasca Tar Sands.

Source: The Financial Post Survey of Oils, 1973. p. 32.

TABLE TWENTY-FIVE

Natural Gas Processing Plants in Canada

Fields Served	Operator	Begun
Northwest Territories		
Pointed Mountain	Amoco Canada	1972
British Columbia		
Beaver Lake	Amoco	1971
Boundary Lake	Gas Trunk Line of B.C.	1961
Boundary Lake	Imperial Oil	1964
Clarke Lake, Apache	Westcoast Transmissions	1965
Others (See note A)	Pacific Petroleums	1957
Alberta		
Acheson	PanCanadian Petroleum	1968
Acheson	Canadian Natural Gas Liquids	1954
Alderson (Suffield)	PanCanadian	1968
Alexander, Calmoo, Legal, Westlock	Canadian Industrial Gas and Oil	1958
Bassano	PanCanadian	1970
Bigoray	Amoco	1971
Bigstone	Amoco	1968
Black Butte, Aden	Canadian-Montana Gas	1961
Bonnie Glen, Glen Park, Wizard Lake	Texaco Exploration	1964
Boundary Lake South	Imperial	1961
Brazeau River	Hudson's Bay Oil and Gas	1969
Brazeau South	Tenneco	1970
Burnt Timber, Wildhorse Creek, Hunter Valley, Calling Lake	Shell Canada	1970
Carbon	Sun Oil	1969
	Canadian Western Natural	

TABLE TWENTY-FIVE - Continued

	Gas	
Caroline	Altana Exploration	1958
Caroline, Carrington, Harmattan East, Suidre, Carson Creek, Carson North	Mobil Oil	1967
Carstairs, Crossfield	Home Oil	1962
Carstairs, Elkton	B.P.O.G. Operations	1960
Cossford	Amerada	1965
Cessford	Canex Gas	1960
Cessford	Hudson's Bay	1958
Cessford	TGS Hydrocarbons	1958
Cessford North	Chevron Standard	1960
Cessford North	Fracana Oil and Gas	1960
Chigwell	Imperial	1965
Chigwell East	Tees Hydrocarbons	1961
Cochrane (locations*)	Alberta Natural Gas	1961
Coleman	Saratoga Processing	1970
Connorsville	King Resources	1961
Countess (2 plants)	PanCanadian	1964
Countess	Sun Oil	1970-2
Crossfield	Canadian Occidental	1960
Crossfield	King Resources	1961
East Crossfield	Amoco	1966
Edson	Hudson's Bay	1968
Ellerslie (locations*)	Dome Petroleum	1965
Empress (locations*)	Dome	1962
Empress (locations*)	Pacific Petroleum	1971
Enchant	Sun Oil	1964
Equity, Ghost Pine	Mobil Oil	1960
Ferrier	Amerada	1968
Ferrier	Atlantic Richfield	1969
Ferrier South	Seafort Petroleum	1967
Ferrybank	PanCanadian	1969
Figure Lake	Petrofina Canada	1972
		1971

TABLE TWENTY-FIVE - Continued

Ghost Pine, Rowley	Gulf Oil Canada	1967
Drumheller, Gilby.	Canadian Homestead	1964
Gilby (2 plants)	Hudson's Bay	1964-7
Gilby.	Gulf	1960
Gilby	Texaco Exploration	1960
Gilby	Total Petroleum	1963
Gilby, Medicine River	Atlantic Richfield	1972
Gilby North.	Chevron Standard	1963
Gold Creek	Atlantic Richfield	-
Greencourt	Petrofina	1970
Harmattan-Elkton	Canadian Superior	1966
Harmattan-Elkton, Harmattan East, Harmattan South	Home Oil	1965
Hartell	Sun Oil	1972
Homeglen-Rimbey, Westerose, Westerose South, Hussar	Tenneco	1959
Hussar, Countess	PanCanadian	1959
Hussar, Rosebud	PanCanadian	1960
Innisfall	Shell	1960
Judy Creek	Imperial	1968
Judy Creek, Swan Hills, Virginia Hills	Imperial	1963
Jumping Pound, Jumping Pound South, Sarcee	Shell	1951
Kaybob	Pacific Petroleum	1962
Kaybob South	Chevron Standard	1972
Kaybob South (2 plants)	Hudson's Bay	1970
Kaybob South, Fox Creek	Hudson's Bay	1962
Kessler	Canadian Industrial	1962
Keystone, Pembina	Canadian Asnland Exploration	1971
Lac La Biche	Sun Oil	1968
Leduc-Woodbend	Imperial	1950

TABLE TWENTY-FIVE - Continued

Lone Pine Creek	Hudson's Bay	1966
Marten Hills	Amoco	1969
Marten Hills South	Home Oil	1969
Mikwan North	Ceja Corporation	1971
Minnehik, Buck Lake	CanDel Oil	1961
Morinville, St. Albert-Big Lake, Campbell-Namao, Westlock, Nevis	Chevron Standard	1959
Nevis (See noteBO	Gulf	1956
Okotoks	Texas Gulf	1959
Olds	Amerada	1964
Oyen	Hudson's Bay	1959
Paddle River	Canada-Cities Service	1966
Parflesh	PanCanadian	1970
Pembina, Keystone	Canada-Cities Service	1966
Pembina (2 plants)	Amoco	1962-6
Pembina (9 plants)	Goliad Oil and Gas	1968
Pembina	Texaco Exploration	1958
Pincher Creek, Lookout Butte	Gulf	1957
Prevo	Kerr-McGee Corporations	1960
Princess	Chevron Standard	1959
Princess	Murphy Oil	1959
Provost	Chieftan Mac Gas	1959
Provost	Dalex Petroleums	1964
Provost	Dome	1957
Provost, Castor	Dome	1960
Quirk Creek	Imperial	1971
Rainbow Lake	Aquitaine	1968
Rainbow Lake	Imperial	1969
Rainier	PanCanadian	1970
Redwater	Imperial	1956
Retlaw	Home Oil	1964
Ricinus	Amoco	1972

TABLE TWENTY-FIVE - Continued

Savanna Creek	Saratoga Processing	1962
Sedilia	Canex Gas	1960
Sibbald	Sun Oil	1961
Simonette	Shell	1969
South Lone Pine Creek	Canadian Superior	1971
Strachan, Ricinus Creek	Aquitaine	1971
Strachan	Gulf	1971
Strathmore	PanCanadian	1964
Sturgeon Lake South	Hudson's Bay	1969
Swalwell	Gulf	1971
Sylvan Lake	Chevron Standard	1964
Sylvan Lake, Hespero, Lanaway, Medicine River	Hudson's Bay	1965
Three Hills Creek	Amoco	1960
Turner Valley	Western Decalta	1933
Ukalta	PanCanadian	1970
Verger	PanCanadian	1965
Virginia Hills	Shell	1971
Vulcan, Little Bow, Long Coulee	Dome	1968
Warwick	Provident Resources Management	1970
Waskahigan	Amoco	1970
Waterton, Castle River, Carbondale	Shell	1972
Wayne-Rosedale	PanCanadian	1961
Wayne-Rosedale	Tenneco	1959
Wayne-Rosedale	PanCanadian	1964
Wildcat Hills	Petrofina	1961
Willesden Green	Texaco Exploration	1965
Wilson Creek	Amerada	1967
Wimborne	Mobil	1965
Windfall, Pine Creek	Amoco	1959
Windfall, Pine Creek	Texas Gulf	

TABLE TWENTY-FIVE - Continued

Wintering Hills, Hussar, Sleu Lake	PanCanadian	1966
Wood River	Canex	1970
Worsley	Shell	1962
Saskatchewan		
Coleville (See note C)	Saskatchewan Power Corp.	1959
Dollard	Marathon Oil	1964
East Centaur, Centaur	Saskatchewan Power	1960
Milton	Saskatchewan Power	1963
Smiley	Smiley Gas Conservation	1967
Steelman (See note D)	Dome	1968
West Gull Lake	Mobil Oil	1968
Ontario		
Becher	Imperial	1965
Corunna	Imperial	1961
Sarnia	Dome	1970
Seckerton	Imperial	1961
Southwestern Ontario fields	Union Gas	1950

* These plants process pipeline gas.

Note A - Beg, Blueberry, Buick Creek, Fort St. John, Gundy, Kobos-Townsend, Halfway, Highway, Jedney-Bubbles, Laprise Creek, Montney, Nig Creek, Red Creek, Rigel, Snyder Creek, Stoddart.

Note B - Also Stettler, Fenn, Big Valley, Erskine, Hackett, Rich, Penn West, Clive, Alix.

Note C - Also Smiley, Milton, North Hoosier, Sibbald, Husky-Grattle, Dewar Lake, Calmano, Loverna, Golden Eagle, Hoosier.

Note D - Also Pinto, Northgate, Willmar, Alameda, Glen Ewen,

TABLE TWENTY-FIVE - Continued

Carnduff, Workman, Sherwoon, Elmore, Hastings, Nottingham, Alida.

Source: The Financial Post Survey of Oils, 1973. pp. 33-4.

TABLE TWENTY-SIX
Ownership of Refineries

Name of Company	Number of Refineries	Holding Company Name	Origin	%
1. Imperial Oil	9	Standard Oil of New Jersey (Exxon)	U.S.	69.8
2. Gulf Oil Canada	6	Gulf Oil Corporation	U.S.	69.8
3. Shell Canada Ltd.	6	Shell Investments Canada		
- Shell Investments		Shell Petroleum N.V.	Europe	100.0
4. Texaco Canada Ltd.	4	Deutsche Texaco Ltd.	U.S.	68.2
5. BP Refineries Canada Ltd.	2	BP Oil Ltd.	Canada	100.0
- BP Oil Ltd.		BP Canada (1969)	Canada	100.0
- BP Canada Ltd.		British Petroleum Co. Ltd.	U.K.	100.0
6. Golden Eagle Refining Co.	1	Ultramar Co. Ltd.	U.K.	100.0
7. Golden Eagle Canada	1	Ultramar Co. Ltd.	U.K.	100.0
8. Husky Oil	1	Nielson Enterprises	U.S.	16.6
9. Petrofina Canada Ltd.	1	Petrofina S.A.	Europe	50.0
10. Irving Refinery Canada	1	K.C. Irving Ltd.	Canada	49.0
		(and) Standard Oil (B.C.)	Canada	51.0
- Standard Oil (B.C.)		Standard Oil of California	U.S.	100.0
11. Chevron Canada Ltd.	1	Standard Oil of California	U.S.	100.0
12. Sun Oil Co. Ltd.	1	Sun Oil Company	U.S.	99.9

TABLE TWENTY-SIX - Continued

- Sun Oil Company		Glenmede Trust	U.S.		
13. Consumers Cooperative Refineries Ltd.	1	Federated Cooperatives Ltd.	Canada	100.0	
14. Pacific Petroleums Ltd.	1	Phillips Petroleum International Investments Ltd.	U.S.	46.9	
15. Union Oil Co. of Canada	1	Union Oil Co. of California	U.S.	66.9	
16. Northern Petroleums	1	Consolidated Hydrocarbons Ltd.	Canada	100.0	
- Consolidated Hydrocarbons		Canadian Hydrocarbons Ltd.	Canada	100.0	
- Canadian Hydrocarbons		Elwill Development Ltd.	Canada	55.7	
- Elwill Development Ltd.		Elican Development Ltd.	Canada	46.0	
- Elican Development Ltd.		Likra Ltd.	Canada	41.0	
- Likra Ltd.		Elektrische-Licht und Krafterlager A.G.	Europe	100.0	

Source: The Financial Post Survey of Oils, 1973., and, Statistics Canada, Inter-Corporate Ownership Statistics, 1969.

TABLE TWENTY-SEVEN

Ownership of Gas Processing Plants

Name of Company	Number of Plants	Holding Company Name	Origin	%
1. PanCanadian Petroleum - Canadian Pacific Investments	16	Canadian Pacific Investments Ltd.	Canada	69.3
		Canadian Pacific Railway Co.	Canada	90.8
2. Amoco Ltd.	13	Syandard Oil of California	U.S.	66.7
3. Hudson's Bay Oil and Gas	13	Continental Oil Company	U.S.	65.7
4. Imperial Oil	12	Standard Oil of New Jersey (Exxon)	U.S.	69.8
5. Goliad Oil and Gas Co.	10	H. W. Bass Corporation	U.S.	13.6
6. Chevron Standard Ltd.	7	Standard Oil of California	U.S.	100.0
7. Dome Petroleums Ltd.	7	Dome Mines Ltd.	Canada	15.7
8. Shell Canada Ltd. - Shell Investments Ltd.	7	Shell Investments Ltd.	Canada	82.3
		Shell Petroleum N.V.	Europe	100.0
9. Gulf Oil Canada Ltd.	7	Gulf Oil Corporation	U.S.	66.6
10. Sun Oil Company Ltd. - Sun Oil Company	6	Sun Oil Company	U.S.	99.9
		Glenmede Trust	U.S.	16.3
11. Mobil Oil Canada Ltd.	5	Mobil Oil Corporation (head office, New York)	U.S.	100.0
12. Amerada Hess Corp.	4		U.S.	-

13. Home Oil	4		
- Cygnus Corporation		Cygnus Corporation	Canada 38.9
14. Texaco Exploration	4	Rabsco Investments Ltd.	Canada 29.8
		Texaco Inc.	U.S. 100.0
15. Atlantic Richfield (Canada)	3	Atlantic Richfield Company	U.S. 65.2
16. Canex Gaz Ltd.	3	Canadian Export Gas and Oil Ltd.	Canada 100.0
- Canadian Export Gas & Oil		Newmont Mining	U.S. 18.8
17. Canadian Industrial Oil and Gas Ltd.	3	Northern and Central Gas Corp.	Canada 65.7
- Northern and Central Gas		Power Corp. of Canada Ltd.	Canada 12.4
- Power Corp. of Canada		Warnock Hersey International Ltd.	Canada 33.1
18. Canadian Superior Oil Ltd.	3	Superior Oil Company	U.S. 53.6
19. Pacific Petroleums Ltd.	3	Phillips Petroleum International Investments Ltd.	U.S. 48.0
		Petrofins S.A.	Europe 65.3
20. Petrofina Canada Ltd.	3	-	Canada -
21. Saskatchewan Power Corp.	3	Tenneco Corp.	U.S. 100.0
22. Tenneco Oil and Minerals	3	Societe Nationale des Petroles D'Aquitaine	Europe 82.4
23. Aquitaine Co. of Canada	2	-	U.S. -
		Westcoast Transmission Company	Canada 100.0
24. King Resources Company	2	Pacific Petroleums Ltd.	Canada 22.4
25. Saratoga Processing Co.	2	Phillips Petroleum International Investment Company	U.S. 48.0
- Westcoast Transmission		Cities Service Oil Company	U.S. 100.0
- Pacific Petroleums		-	U.S. -
26. Canada-Cities Service Ltd.	2		
27. Texas Gulf Sulphur	2		

28. Alberta Natural Gas Co.	1	Pacific Gas Transmission Company	U.S.	66.7
29. Altana Exploration Co.	1	Montata Power Company	U.S.	99.7
30. B.P.O.G. Operations Ltd.	1	BP Canada (1969) Ltd.	Canada	69.5
- BP Canada (1969) Ltd.		BP Canadian Holdings Ltd.	Canada	65.6
- BP Canadian Holdings		British Petroleum Co. Ltd.	U.K.	100.0
31. Canadian Ashland Explorations Company	1	Ashland Oil Canada Ltd.	Canada	100.0
32. CanDel Oil Ltd.	1	St. Joe Minerals Corporation	U.S.	93.6
33. Canadian Homestead Oils	1	Castle Oil and Gas Ltd.	Canada	15.1
- Castle Oil and Gas		Canadian Hydrocarbons Ltd.	Canada	83.5
- Canadian Hydrocarbons		Elwill Development Co. Ltd.	Canada	55.7
- Elwill Development Co.		Elican Development Company	Canada	46.0
- Elican Development Co.		Likra Ltd.	Canada	41.7
- Likra Ltd.		Elektrische-Licht Und Kraftenlager A.G.	Europe	100.0
34. Canadian Montana Gas	1	Montana Power Corp.	U.S.	99.9
35. Canadian Natural Gas Liquids	1	Canadian Hydrocarbons Ltd.	Canada	-
- Canadian Hydrocarbons		Elwill Development Co.	Canada	55.7
- Elwill Development Co.		Elican Development Co.	Canada	46.0
- Elican Development Co.		Likra Ltd.	Canada	41.7
- Likra Ltd.		Elektrische-Licht Und Kraftenlager A.G.	Europe	100.0
36. Canadian Occidental Petro-				

leum Ltd.	1	Occidental Overseas Capital Ltd.	U.S.	82.0
37. Canadian Western Natural Gas Ltd.	1	International Utilities Corp.	Canada	87.7
38. Ceja Corporation	1	-	N.A.	-
39. Chieftan Mac Gas	1	TGS Hydrocarbons Ltd.	Canada	70.7
- TGS Hydrocarbons		Texas Gulf Sulphur Company	U.S.	100.0
40. Fracana Oil and Gas Ltd.	1	Fracana Development Corp. Ltd.	Canada	40.0
41. Dalex Petroleums Ltd.	1	Acroll Oil and Gas Ltd.	Canada	100.0
42. Gas Trunk Line of B.C.	1	Westcoast Transmissions Co.	Canada	100.0
- Westcoast Transmissions		Pacific Petroleums Ltd.	Canada	22.4
- Pacific Petroleums		Phillips Petroleum International Investments Ltd.	U.S.	48.0
43. Kerr-McGee Corporation	1	-	U.S.	-
44. Marathon Oil	1	-	N.A.	-
45. Murphy Oil Co. Ltd.	1	Murphy Oil Corporation	U.S.	88.6
46. Provident Resources Management	1	A.A. Welsh & Company	U.S.	37.9
47. Seafort Petroleum	1	Distillers Corp.-Seagrams Ltd.	Canada	100.0
- Distillers-Seagrams		Seco Investments	Canada	38.5
- Seco Investments		Cemp Investments Ltd.	Canada	100.0
48. Smiley Gas Conservation	1	-	N.A.	-
49. Tees Hydrocarbons Ltd.	1	-	N.A.	-
50. Total Petroleum (N.A.)	1	-	Europe	-

51. TGS Hydrocarbons Ltd.	1	Texas Gulf Sulphur Company	U.S.	100.0
52. Union Gas of Canada Ltd.	1	-	Canada	100.0
53. Westcoast Transmissions - Pacific Petroleums	1	Pacific Petroleums Ltd.	Canada	22.4
		Phillips Petroleum International Investments Ltd.	U.S.	48.0
54. Western Decalta Petroleum - Interlink Investments	1	Interlink Investments Ltd.	Canada	45.0
		Central Mining Finance	U.K.	100.0

Under the heading "Orogin", "N.A." signifies that information was not available.

Source: The Financial Post Survey of Oils, 1973. and Statistics Canada, Inter-Corporate Ownership Statistics, 1969.

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