

The New Oil Order: The Post Staples Paradigm and the Canadian Upstream Oil and Gas Industry

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Introduction:

It is the best of times for the Canadian oil and gas industry. As natural gas and crude oil prices have risen, upstream petroleum companies have seen their profits and stock value increase dramatically(*Globe and Mail* 12 May 2003, B5; Scott Haggett, *Calgary Herald*, 13 March 2004, A1). Domestic exploration is at unprecedented levels and investment in conventional and non-conventional oil and gas production has reached unprecedented heights.

But the issues facing the oilpatch have changed dramatically from earlier years. Far from concerns about industrial expansion and transportation of ever larger amounts of energy to foreign markets which characterized the heyday of the industry, new concern about the impact of the Kyoto Protocol, demands for greater environmental controls, overseas competition, market access, and increasing fiscal scrutiny have been augmented by concerns over skilled labour shortages, aboriginal land claims, regulatory reform and growing consumer unrest at a high fuel costs. This new agenda indicates the start if not the completion of a shift in the Canadian oil and gas sector – a transition that can be described as development from a staples to a mature, and perhaps even some aspects of a post-staples, industry.

While the current set of problems facing the oilpatch are important they reflect an industry which has matured and found its place within an advanced industrial economy. There was no sudden break with the traditional staples model of development which characterized the post-World War II evolution of Canada's petroleum sector. Instead, the transition has taken decades, beginning with the realization in the 1960s that Canada and especially the western sedimentary basin contained a finite amount of conventional crude oil and natural gas reserves. It has culminated in a technologically advanced, capital intensive industry with secure and expanding markets.

The Canadian Oilpatch: From Conventional to Unconventional Sources of Energy

Canadian oil production in 2004 amounted to 3.08 million barrels per day or 3.8% per cent of the world's total petroleum production. Of this national total, 70 per cent of production is located in Alberta. Alberta produced 1.6 billion barrels (bbl) of conventional crude in 2003. Over the last several years the production of conventional crude has declined by about 5 per cent. But as the production of conventional crude oil has decreased, non-conventional production has increased. The western sedimentary basin has the largest oil sands resources in the world. It is estimated that approximately 174 bbl of crude are recoverable from the oil sands with today's technology with estimates of 315 billion barrels of potential resources.

Located in Alberta and Saskatchewan, oil production from raw bitumen – the oil sands and heavy oil – exceeded conventional oil production for the first time in 2001. In

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2003, Alberta produced 965,000 barrels per day from the oil sands. Canadian reserves compare very favourably with Saudi Arabian reserves estimated to be at 261.1 (bb) (Alberta Energy and Utilities Board, 2004, 50-51). At the end of 2003 only 2 per cent of established crude bitumen reserves had been produced. These figures have only recently been considered in totals of world reserves either by the International Energy Agency but are not part of the United States Department of Energy or the BP Amoco annual surveys of world supplies.

Since the mid 1970s there has been a continual decline in Canada's conventional reserves of crude oil. With reserves estimated at an ultimate potential at 19.7 (bb) and annual production of 893,000 barrels per day in 2000, at current rates of production Alberta's supplies of conventional crude will run out sometime around 2060. With any increasing demand for oil in the next decade, however, Alberta's conventional reserves are likely to deplete long before this date. While conventional oil production will continue to decline, the provincial energy regulatory agency, the Alberta Energy and Utilities Board (EUB) estimates that production of bitumen will triple by 2011. This figure would account for as much as 75 per cent of Alberta's total oil supply. Approximately \$65(cdn) billion of investment has been announced for the oil sands since 1996. This investment would double current production of oil in Alberta and Saskatchewan. Moreover, at the current rate of depletion of 605,000 (bdp) there are approximately 1431 years of production left in the tar sands. Although significant for domestic and North American production, the total ultimate reserves of heavy oil and the tar sands would extend current world consumption patterns less than a decade beyond current estimates. The future of the western sedimentary basin's oil and gas industry rests with the production of oil from bitumen reserves.(Alberta Energy and Utilities, 2004, 50-51).

Natural gas reserves in Alberta are estimated at 40 trillion cubic feet (tcf) of marketable reserves. New drilling has not replaced natural gas production since 1982, and in 2003 production outstripped additions by about 4 per cent (Alberta Energy and Utilities Board, 2004 52). Natural gas reserve estimates do not include coalbed methane, which the Alberta Energy and Utilities Board believes has the potential to add significantly to Canada's reserves. If this projection is correct gas supply could be revised upward by a considerable amount.

The price of a barrel of oil in Alberta is determined in the global market and is measured in United States dollars at the benchmark West Texas Intermediate (WTI) price level. Oil prices fluctuated between \$50 - \$70U.S. in 2005. At these prices the oil and gas industry has an enormous impact upon Alberta's economy. In 2003-04 the oilpatch generated \$8 billion in royalties and other taxes for the province. This was approximately 40 per cent of total provincial revenues. Estimated royalties from oil and gas for 2005 range from \$7 billion to \$10 billion. There are approximately 275,000 individuals directly employed in the Alberta petroleum industry – about 15 per cent of the provincial workforce. As well, the industry spent \$45 billion in Alberta in 2004. The Alberta oil and gas industry also contributes to Canada's trade surplus – especially with the United States (Canadian Association of Petroleum Producers, 2004, 1) ¹

There are approximately 215,000 individuals directly employed in the Canadian petroleum industry. Canada-wide about 231,000 additional jobs have been created to provide goods and services for the industry. This total includes both service sector and manufacturing employment. The Canadian oil and gas industry also contributes to Canada's trade surplus. Although exports of petroleum products – mainly to the United States – are partly offset by crude oil imports into the eastern provinces, Canada still produces more oil and gas than it consumes. Natural gas is the largest component of Canada's energy exports. In 2001 it accounted for 67 per cent of net energy exports or

\$24.6 billion (Cdn). Crude oil, natural gas liquids, and petroleum products accounted for 24 per cent or \$8.7 billion (Cdn) in 2001. (National Energy Board, 2002, 10).

Non-conventional reserves, the Atlantic Offshore and the North are now the focus of energy planning in Canada (the later two are discussed in Clancy's contribution to this volume). Although Canada's conventional reserves of oil and natural gas in the Western Sedimentary basin are in decline and are expected to be depleted within 40 years, heavy oil and the tar sands will allow the oilpatch to maintain and expand current levels of production, investment and employment. Supply projections indicate that total Canadian conventional crude oil reserves will be substantially depleted by 2025. Since 1994, light crude production has increased in British Columbia and Saskatchewan, remained constant in Manitoba and decline by approximately 4 per cent a year in Alberta. Because Alberta accounts for 75 per cent of total production of light crude the combined effect on the Western Sedimentary basin has been a decrease in production of about 3 per cent a year.

The other major reserves of oil and gas include the Northern Frontier, the Scotian Shelf and the East Coast Frontier. The Northern Frontier includes the Mackenzie/Beaufort and Arctic Islands. Estimates for natural gas in the Mackenzie/Beaufort are 9 tcf of discovered resources and 55 tcf of undiscovered potential in natural gas and 161 million cubic metres (m³). The Arctic islands and other areas are estimated to contain 15 tcf of discovered and 90 of undiscovered resources of natural gas and 65 (m³). The Scotian Shelf (Sable Island) has estimated reserves of 3 tcf and discovered reserves of 2 tcf of natural gas and 11 (m³) in oil. The East Coast Frontier of the Grand Banks and Labrador contain 9 tcf of natural gas and 251 (m³) in oil reserves (National Energy Board, 1999, 62-64).

The Evolution of the Canadian Oil and Gas Industry

The oil and gas industry likes to think of itself as national in scope. The theme of the Canadian Association of Petroleum Producers (CAPP) 2002 Annual General Meeting was the Canadian Industry. Three premiers attended the annual general meeting and dinner: Stephen Kakfwi of the Northwest Territories, Gordon Campbell of British Columbia, and Ralph Klein of Alberta. Premier John Hamm of Nova Scotia sent a video message. Each speaker described the oil and gas industry in Canada-wide terms. Nevertheless, the fact that the CAPP meeting was held in Calgary indicates the importance of Calgary and Alberta to the oil and gas industry in Canada. Despite an increase in production in the East Coast Offshore, Saskatchewan, British Columbia, and the north, Alberta still dominates the industry.

The history of Canada's oil and gas industry reveals a struggle between competing levels of government for control of the provincial petroleum industry. Under section 109 of the *Constitution Act 1867*, the provinces have jurisdictional authority over natural resources. But the Constitution also assigns jurisdiction over interprovincial and international trade as well as other powers to the federal government and Ottawa has used its authority to play a significant role in the oilpatch. The best known example of federal involvement in the oil and gas sector was the 1980 National Energy Program. Although Ottawa continued to play a significant role in the oilpatch through its regulatory agency, the National Energy Board, deregulation in the mid 1980s diminished its presence in the oilpatch. The announcement that the Kyoto Protocol will be ratified and implemented, however, signaled a renewed federal presence in the Alberta petroleum industry. Ottawa's efforts to re-regulate the oil and gas industry through an international environmental treaty has caused a federal-provincial debate over jurisdiction of natural resources and the federal government's international treaty obligations. This time,

however, Ottawa has pursued a type of horizontal environmental regulation as opposed to the more traditional sectoral regulation. While the effects of this type of rule making authority remain uncertain, it is clear that federal-provincial conflict will continue (Doern, 1999, 82-97).

The history of the industry can be divided in four different phases: the semi-colonial period of 1867-1930; the era of multinational domination, 1930-1969; the withdrawal of the multi-nationals and the Canadianization of the industry, 1969-1985; and a fourth, current, era in the evolution of Canada's oil and natural gas industry beginning with the switch to non-conventional oil recovery, the rise of natural gas as the dominant segment of the industry and the Canada-U.S. Free Trade Agreement which guaranteed a reliable market for Canada's oil and natural gas. The re-entry of the federal government into the provincial oil and gas industry through the Kyoto Protocol has challenged the free-market continentalism that has dominated the Canadian oilpatch since the mid 1980s and the beginning of a new phase of environmental regulation in the industry.

Several other studies of the oil and gas industry have examined the history of Canada's oil and gas industry in terms of its historical evolution but always by criteria outside the industry. For example, several assessments of Alberta's oil and gas sector have looked at the industry through the perspective of federal-provincial relations, (Richards and Pratt, 1979 and Doern and Toner, 1985) while others have viewed the industry as a battle between competing elites for control of the industry or as an appendage to the federal energy regulatory regime. (Stevenson, 1989). None have examined the industry as a distinct political-economic entity that both influences and is influenced by indigenous and exogenous factors in the near traditional pattern of staples production inherent in the evolution of many primary industries in Canada.

The Colonial Period

The first registered oil company in North America was established in Woodstock, Ontario in 1850. Earth oil, as petroleum was then called, was used as an illuminant. By the 1870s there were approximately 18 refineries in Ontario. With the rise of the internal combustion engine – especially the decision of the Royal Navy to switch from coal to oil – the demand for petroleum in Canada increased dramatically. In the early 20th century Canada relied on imported oil for more than 90 percent of its needs. This dependency on imported oil led to a number of discoveries such as Turner Valley southwest of Calgary in 1914 and Norman Wells in the Northwest Territories in 1920. But the high cost and engineering difficulties of bringing oil and natural gas from the Canadian west and north to market, encouraged Canadian petroleum companies to rely on imports.

The early days of Canada's petroleum industry are characterized by federal control and neglect. Under sections 92 and 109 of the *Constitution Act* 1867 provincial governments are given control over natural resources, but between 1869 when Canada assumed control of the Hudson Bay lands in the prairie west and 1930 – 25 years after the creation of Alberta and Saskatchewan and the formalization of Manitoba's provincial boundaries – the federal government retained control over natural resources on the prairie provinces. The introduction of the *Dominion Lands Act* in 1872 provided the legal framework for federal control of natural resources in the Northwest Territories and in the provinces of Alberta, Saskatchewan and Manitoba after 1905. (Breen, 1993, ch.1). After years of lobbying and protest over this semi-colonial status, the prairie provinces were given control over their natural resources in 1930.

The Era of Multinational Domination

The rapid depletion of oil and gas reserves continued after jurisdiction over natural resources was transferred to the prairie provinces in 1930. In an attempt to curb the rapacious depletion of known reserves, the United Farmers of Alberta government established the Turner Valley Conservation Board in 1932. Because of fierce opposition from local producers the Turner Valley Board was disbanded within months. When the Turner Valley Royalites No.1 struck oil in 1936 it became the largest oilfield in the British Commonwealth. Finally in 1938 at the instigation of Imperial Oil and other major producers, the Social Credit government of William Aberhart created the Oil and Gas Conservation Board to regulate the industry. Modeled after conservation commissions in Oklahoma and Texas and in keeping with the radical agrarian ideology of the early Social Credit government, the Board was an attempt to end the competition between Imperial Oil and the small local producers. Each side recognized that some form of regulation was necessary if the life of the field was to be expanded and recovery rates and profits were to be maximized (Breen, 125 and Pratt and Richards,55-58).

After Aberhart's death in 1943, his successor Ernest Manning encouraged multinational companies to develop Alberta's petroleum reserves as quickly as possible. At its peak during World War II, the Turner Valley well produced 30,000 barrels of oil per day. The secure and plentiful supply of gasoline from the field was one reason the Commonwealth air crews trained in the Calgary area during the Second World War .

In the post-war period, however, Turner Valley was in decline and the future of Alberta's petroleum sector looked bleak. No new finds of commercial value had been discovered in several years And Imperial Oil, the Canadian subsidiary of Standard Oil of New Jersey, had decided to discontinue its exploration programme in the Western Sedimentary Basin. Then on 13 February 1947, the Leduc No.1 well was hit. Combined with the establishment of the Oil and Gas Conservation Board, the Leduc created the conditions for the entry of multinational petroleum companies – mainly but not exclusively American, corporations – into Alberta. For the next twenty years, the Social Credit government actively encourage the development of Alberta's oil and gas reserves through the multinationals at the expense of smaller Canadian firms.

The production side of Alberta's oil and gas industry in the 1950s and 1960s was dominated by the Canadian representatives of the "Seven Sisters," the large, vertically integrated, multi-national oil and gas companies. They included Royal Dutch/Shell, British Petroleum, Imperial/Exxon, Texaco, Gulf, Standard Oil of California, and Mobil. Four of these firms operated in Canada – Shell, Imperial/Exxon, Gulf and Texaco. These Canadian Sisters were referred to as the "Big Four" and dominated the Canadian oil market; while also having significant interests in the natural gas sector.

At the beginning of the 1950s Canadian oil and gas producers were lobbying the federal government to protect them from low priced foreign imports. The Diefenbaker government appointed Henry Borden to examine Canada's energy situation. The Borden Inquiry discovered a conflict between the multinational oil companies – the so-called seven sisters represented in Canada by Shell, Imperial/Exxon, Gulf and Texaco – and local producers. The Canadian subsidiaries of the big four were the biggest producers of Canadian oil and gas, but they had little interest in shipping Alberta crude to central and eastern Canada. Through their multi-national parents, the big four provided their

refineries in the Montreal area with cheap imported oil. There was very little incentive to sell expensive Alberta oil to consumers in Ontario and Quebec.

Alberta producers wanted secure markets. Because various restrictions kept them out of the United States, their only options were central and eastern Canada. The local companies wanted a more efficient pipeline than the existing Interprovincial line to Ontario and they wanted a tariff on imported oil. What the Alberta producers got was a compromise. The federal government erected an oil barrier at the Ottawa Valley line. Markets west of the line were reserved for Alberta oil while those east of the Ottawa river would continue to rely on inexpensive imported oil and gas. This National Oil Policy was introduced in 1960 at the same time as the Organization of Petroleum Exporting Countries (OPEC) was established in order to prevent the seven sisters from driving oil and gas prices any lower in major producing states, mainly in the middle east (Foster, 1979, 27-31).

By the mid 1950s it was determined that Alberta's reserves of natural gas were sufficient to supply markets on the west coast and in central Canada. Three major pipelines were constructed in this period to ship these reserves to market. The largest is Trans Canada Pipelines (TCPL). Created by the federal government in the late 1950s, TCPL was designed to bring Alberta gas to markets in Central Canada. Although subsidized and partially constructed by the federal government, TCPL was a privately held corporation. Incorporation of TCPL indicated an interest by the federal government in Alberta's stock of natural gas and oil. This was the first major federal incursion into the oilpatch since it had ceded control over natural resources to the prairie provinces in 1930.

The Alberta Gas Trunk Line (AGTL) was incorporated by the province in 1954 to act as a common carrier for natural gas. Its purpose was to stabilize the price of natural gas and assure consumers. Voting shares in the new provincial enterprise were distributed among the Alberta's utilities, the gas processors, export interests, and the government, while non-voting shares were made available to Alberta residents. Although AGTL was funded by the province, control was vested in the hands of the natural gas processors and the utilities. While the public-private partnership reflected Ernest Manning's aversion to Crown corporations and his faith in the private sector, it allowed the province a window into the industry as well as an advantage over the federal government's renewed interest in Alberta's petroleum reserves. (Breen, 1993, 403-407 and Bregha, 1979).

The third major pipeline built in the 1950s was Frank McMahon's Westcoast Transmission. Designed to transport natural gas to the pacific coast of British Columbia and eventually to U.S. markets, the Westcoast project met with federal, provincial and American resistance (Breen, 1993, 391. Despite numerous regulatory and political obstacles, however, approval was given to the scheme in November 1955.

By the late 1960s conventional reserves were declining. The Big Four transnational oil companies were looking to areas outside the province for new reserves. With the enormous find of Prudhoe on the Alaskan north slope in 1968, many in the oilpatch believed Canada's oil and gas future would be found in the Arctic region – the Mackenzie Delta, the Beaufort Sea and the Arctic Islands. As a consequence, wildcat drilling in Alberta – exploration away from known reserves – dropped by 40 percent between 1969-71. In the same period, Alberta's share of exploration dropped from three quarters of the Canadian total to just over half. By the early 1970s the Big Four had come to the conclusion that there were no more large deposits of oil or gas – what the industry calls elephants – to be found in Alberta. Their focus was now on the frontier areas of the Arctic and overseas.

The Nationalization of Oil and Gas

In the late 1960s and early 1970s a number of circumstances combined to alter the structure of Canada's oil and gas industry. After the Big Four had decided to abandon the province for other locations, the exploration side of the business was left to the smaller multi-nationals as well as to a number of emerging Canadian-owned companies. Although there had always been Canadian companies in the Alberta oilpatch, their numbers and size had been small. As the 1960s ended, 98 per cent of the provincial oil and gas industry was foreign – mainly American – controlled. This was the result of several factors. The first was that the foreign firms had the capital and the expertise to develop the oil and gas reserves found in Canada. Second, the Alberta Social Credit government actively encourage foreign multinationals. Not only did Manning believe that the multi-nationals provided the easiest and quickest way to develop the province's petroleum reserves, there was still a residual populist resent against central Canada within the ruling Social Credit party. As a result, Manning actively discouraged Canadian corporations based in Ontario and Quebec while encouraging foreign owned capital to invest. The result had been a domination of the industry by a few large multi-national oil and gas companies. There was little room left for small Canadian firms to get a start in the industry. That is, until the multi-nationals began to pull back their operations in the 1960s.

Two Alberta-based oil and gas companies came to prominence in the late 1960s and early 1970s. Alberta Gas Trunk Line and Dome were the flagship Canadian oil and gas companies of an emerging domestic industry. They reflected a shift in policies both at the provincial and federal level that emphasized security supplies of oil and gas and a Canadian controlled industry – traditional concerns of a staples industry. As a private-public corporation created by the province, AGTL, under the leadership of Bob Blair, increased its role in the pipeline business and became an active participant in the exploration and production side of the oil and gas industry. Guided by Jack Gallagher and Robert Wright, Dome began as a small start-up dependent on the majors for its survival to play a significant role in frontier exploration and in conventional oil and gas production in Alberta. Because of its interest in the Beaufort Sea, Dome's agenda complimented the federal government's efforts to increases domestic supplies of oil and gas while at the same time increasing Canadian control of the industry.

The withdrawal of the multinational oil and gas companies from Alberta in the late 1960s paved the way for a political change in Alberta. In August 1971 the Progressive Conservative led by Peter Lougheed defeated the 36-year-old Social Credit government. One of the reasons for the Social Credit defeat was concern that Alberta was not receiving its fair share of oil and gas revenues. Manning and his successor Harry Strom had allowed the multinationals to exploit reserves as quickly as possible for a minimum return to the government in royalties and taxes. The Social Credit government placed minimum controls on the multinationals. Royalty rates were reviewed only once every ten year, the multi-nationals were consulted on any change to government policy, and Canadian investment was actively discouraged. Manning saw his role as providing a stable political environment for the foreign-based industry. Lougheed, on the other hand, was suspicious of big oil. He understood that the interests of the multinationals did not necessarily coincide with those of the province. While he was willing to offer incentives to smaller Canadian companies, he did not advocate a policy of rapid depletion of conventional reserves by the large foreign-based oil and gas companies. Lougheed's campaign focused on the problem of what do when the oil and gas ran out – on what a post-staples Alberta would be (Foster, 1979, 38-41).

After negotiating a royalty increase on oil and price increases for natural gas, Lougheed asserted Alberta's position as the centre of Canada's petroleum industry. In 1972, the federal government began to exhibit a new interest in western Canadian petroleum. The price of a barrel of oil increased \$.40U.S. in 1972 from \$3U.S. Although this was an insignificant increase from a very low price compared to current rates, it was enough to startle the federal Liberal government of Pierre Trudeau. With world prices for oil and natural gas increasing, the federal government realized that it could keep down the price of Alberta crude much more easily than it could the cost of imported oil from South America and the Middle East. Lougheed resisted any incursion by the federal government into what he argued was exclusive provincial jurisdiction over natural resources.

The debate between the Alberta and federal governments over energy pricing had a sudden shift in October 1973 with the OPEC oil embargo called in response to Western, especially United States, support for Israel in the Yom Kippur War. OPEC cut-off shipments of crude oil to the West. Suddenly the price of a barrel of crude oil shot up from approximately \$3U.S. per barrel WTI to over \$12 per barrel WTI. The OPEC oil shock of 1973 sent the multi-nationals scrambling to find secure supplies of crude and natural gas. One obvious location was Alberta. The price jump in oil was an incentive for the return of the multinationals to the Alberta oilpatch.

In 1974 the federal government, feeling it needed a better window on the oil and gas sector, and inspired by Canadian nationalists, created a state-owned oil company, Petro-Canada. Petro-Can was resented by both oilpatch veterans and the provincial government. The oilpatch had a self-image of rugged individualism and any state incursion was resented as an unnecessary impediment on their God-given right to drill, produce and market oil and natural gas (House, 1980). Embarrassed by statements made by the minister of natural resources Joe Greene, in the House of Commons in June 1971 who had stated that Canada had a 923 year supply of oil and 392 for gas (Foster, 1979, 51). and caught by surprise by the OPEC embargo in October 1973, the federal government believed it necessary to create a national oil and gas company that would promote a variety of national goals. These goals included increased domestic ownership of the industry, development of reserves not located in the western provinces, that is to say, the promotion of the Canada Lands in the north and offshore, better information about the petroleum industry, security of supply, decrease dependence on the large multi-national oil corporations, especially the Big Four, and increase revenues flowing to the federal treasury from the oil and gas sector (John Erik Fossum, 1997). These goals were very similar to those of state-owned corporations in other countries but they were controversial in Canada (Fjell, 2000).

Federal incursions into the oil and gas sector were resented by the Alberta government. Lougheed had committed his government to economic diversification through increased oil and gas revenues. Any attempt to decrease these revenues or interfere in any way with Alberta's efforts to create a viable post-oil and gas economy were strongly resented. The ensuing struggle to set a policy direction for the oilpatch resulted in a lack a coherence. Instead, of working toward maximization of revenues and recovery and planning for a post-oil economy, the two levels of government were in a continuous conflict over the direction and control of the industry (Fossum, 1997, 10).

A second oil shock came with the 1979 Iranian Revolution. Although the overthrow of the Shah of Iran was widely welcomed by the Iranian people, the revolution was soon overtaken by Islamist fundamentalist who hatred of the West was profound. The Iranian revolutionaries simply stopped oil exports to the west. After the seizure of the United States Embassy and the taking of American hostages by state-sponsored protestors in Tehran in 1979, the U.S. imposed economic sanctions, froze Iranian assets

in the United States, and prohibited the import of Iranian oil into the U.S. Oil and gas prices increased dramatically rising from just under \$20U.S. a barrel to \$40U.S. There was the expectation that petroleum prices would go much higher.

The response of the federal government to the shock was to increase state involvement in the provision of energy. As part of a National Energy Program (NEP), the federal government offered incentives for drilling in the Canada lands (the Arctic and the offshore under federal jurisdiction), increased export taxes on oil and gas, and offered a variety of “off-oil” measures in an effort to conserve domestic oil and gas reserves while decreasing dependence on foreign energy supplies. Although a number of domestic companies benefitted from the federal initiatives, the NEP was strongly resented by the oilpatch and the oil producing provinces.

After a series of negotiations between the producing provinces and the federal government an agreement was reached concerning pricing and taxation. As well, Alberta and the other producing provinces were able to secure an amendment to the existing constitutional division of powers which strengthened provincial control over natural resources. But the constitutional amendments and negotiations with the federal government maintained the basic structure of the NEP.

During the NEP exploration and drilling in the Northwest Territories and the Atlantic Offshore met with some success. There were discoveries of natural gas in the Beaufort Sea and in the Arctic Islands. But high development costs and the distance from markets combined with concerns over Aboriginal land claims and the effect of development on the indigenous population have delayed exploitation of the northern reserves.

With the approval of the federal government, oil exploration in the Atlantic Offshore had begun with the first deep well off Prince Edward Island in 1943. Mobil was given a licence to drill off Sable Island in 1959 and began seismic testing in 1960. Natural gas and oil were found in the Nova Scotia Offshore in the 1970s. These finds included the Panuke-Cohasset fields which were put into production in 1992 and the Sable Island natural gas field came into production in 1999. In the late 1970s oil was discovered in the Newfoundland Offshore in 1979 in the Hibernia field and in 1984 in the Terra Nova field. Hibernia began producing large volumes of oil in 1997 while Terra Nova started producing commercial quantities of oil in 2000. The Atlantic Offshore has estimated reserves of 159,634 mm³ of crude oil and 67,083 million cubic metres of natural gas (Canadian Association of Petroleum Producers, 2000).

During the 1970s and 1980s the Trudeau government faced pressure to transfer the Offshore to the provinces. The federal government compromised by offering to pool revenues until the provinces no longer qualified for equalization payments. In 1982 Nova Scotia agreed to this arrangement. Newfoundland held out for better terms and challenged federal Offshore jurisdiction in court. References were made to both the Newfoundland Court of Appeal and the Supreme Court. The Supreme Court ruled that Newfoundland had no right to exploit the Offshore resources or to make laws affecting them.

The Era of Benign Neglect

Two events in the mid-1980s greatly affected the Canadian oil and gas industry. First, the election of a Progressive Conservative government under the leadership of Brian Mulroney in September 1984 altered the political situation. With a strong western and Atlantic contingent in the caucus and cabinet, the new Mulroney government was sympathetic to the demands of the western and Atlantic oil and gas producing provinces

to dismantle the NEP and to allow some provincial control over the Offshore to Newfoundland and Nova Scotia. After years of negotiations between the federal government and the Atlantic provinces, the Mulroney government in Ottawa signed an Atlantic Accord with the east coast provinces in 1985. The Atlantic Accord allowed Newfoundland and the Maritime provinces responsibility in the development of the Offshore and a share in the revenues. While retaining ownership of the Offshore, the federal government reached an agreement with Newfoundland in 1985 over Hibernia and other Offshore fields while the Canada-Newfoundland Offshore Petroleum Board was established in 1988 to administer the Hibernia and Terra Nova fields – the Canada-Newfoundland-Canada Offshore Petroleum Board and the Nova Scotia - Canada Offshore Petroleum Board.²

The signing of the Western Accord with the western provinces in April 1985 dismantled the National Energy Program. But the end of the NEP failed to revive the Canadian oil and gas industry. World energy prices collapsed in 1986. Oil sold for approximately \$12U.S. per barrel and natural gas fell to \$1U.S.(mcf). In the Alberta oilpatch thousands of workers were laid-off, northern frontier exploration was halted and the Atlantic Offshore was curtailed. The federal government's response to the decline in oil and gas prices was one of benign neglect. Provincial revenues shrunk and Alberta faced a series of budget deficits as thousands of workers were dismissed. Investment in Alberta's oil and gas industry had come to a halt.

While the Western Accord ended the federal government's active involvement in the petroleum industry, the Foreign Investment Review Agency (FIRA) – a product of the 1972-74 Trudeau government's efforts to protect domestic industry from foreign control – was also dismantled by the Mulroney government and Canada was declared "open for business." The questions of Canadian ownership and maintaining security of supply were no longer a concern of federal energy policy. Instead, Ottawa relied on low prices and the unfettered market to supply Canadian demand for inexpensive oil and gas. With the signing of the Canada-U.S. Free Trade Agreement (FTA) in 1988 and its implementation in 1989, restrictions were put in place on state intervention in the oil and gas sector. Simply put, under the terms of the FTA Canada could no longer give preference to Canadians. U.S. markets and businesses were to be treated the same as domestic consumers and companies. The subsidized price and other benefits given to Canadian producers and consumers through the NEP ended. This arrangement fit the ideological predisposition of the Mulroney government in Ottawa and the producing provinces. The new federal Liberal government's ratification of the North American Free Trade Agreement (NAFTA) in late 1993, further restricted the ability of the federal and provincial governments to determine pricing and secure the supply of oil and gas for domestic markets.

The oil and gas industry in Canada was now integrated into the North American markets. Although provincial royalty exemptions and tax expenditures continued to subsidize the oilpatch, the post-Canada-U.S. Free Trade Agreement and NAFTA era in the Canadian petroleum industry saw an end of attempts to insulate Canadian consumers from the vagaries of market forces. Federal government price controls had been removed from oil pricing and provincial efforts to use revenues from the industry to diversify the economy had come to an end. Always subject to the boom-and-bust cycle, the producing provinces and territories were now even more dependent on international markets. When prices for oil and gas rose, the provincial and territorial economies surged; when prices declined, oil and gas companies cut back on exploration and production with provincial and territorial revenues following the downward trend. In Alberta, the Klein government continued the policy of royalty holidays and various tax expenditures to encourage further exploration and production especially in the tar sands. Designed to encourage

exploration and production, the royalty structure in the Atlantic Offshore was very generous to the various petroleum companies. Exploration activity in the Mackenzie Delta and the Beaufort Sea resumed in the late 1990s. Extensive geophysical and well-drilling programs have been in place since 2000. As well, exploration and production activities began in the 2001 in the southern Northwest Territories near Fort Laird. The economic feasibility of these Northern projects was assured by an expanding pipeline system in northern Alberta and a projected shortage of natural gas in the North American markets.³

The New NEP and Kyoto

This scenario of a classic mature staples industry expanding to support increases in demand in international markets changed in December 1997 when the Government of Canada signed the Kyoto Protocol on atmospheric emissions. The Kyoto Accord mandates the reduction of greenhouse gas emissions (GHGs) to below levels found in 1990. GHGs are primarily carbon dioxide emissions (CO₂), methane and nitrous oxide. These gases are generally agreed to be a major contributor to global warming. Greenhouse gases are caused by the burning of carbon based fuels such as oil, natural gas, and coal. Ratified in late 2002, the Kyoto Protocol binds Canada to a 6 per cent reduction of 1990 emissions between 2008-12. The Protocol “stipulates that progress in achieving this reduction commitment will be measured through the use of a set of internationally agreed-to emissions and removals inventory methodologies and reporting guidelines” (Olsen et al. 2002, iii). The implementation strategy was released the same month. (Canada)

Through the Alberta, Newfoundland, and Nova Scotia governments and several industry organizations, the Canadian oil and gas industry has expressed its dislike of the agreement (Rodrigues, 2002). In September 2002, the Alberta government launched a \$1.5 million advertising campaign designed to weaken public support for the agreement. Polling data indicate that the apocalyptic provincial advertising with its warning that thousands of jobs may be lost and living standards lowered has been successful. A majority of Albertans soon opposed the ratification and implementation of the Kyoto Protocol (Chase and Mahoney, 2002, 1).

The producing provinces, the various industry groups and the federal government had all indicated that Kyoto could not be implemented in its present form. Moreover, the U.S. administration of George W. Bush had stated it would not ratify or implement it. Any effort to require Canadian industry to reduce greenhouse gas emissions without the active participation of the United States would put Canada at a comparative economic disadvantage with its largest trading partner. The domestic oil and gas industry believed it would suffer a disproportionate burden of the Kyoto effort to reduce greenhouse gases (GHGs). Alberta was particularly concerned with the possible effects of the Kyoto Protocol. While Alberta’s conventional production of oil and natural gas would be affected by the implementation of the Kyoto Protocol, the non-conventional oil reserves found in the tar sands and in heavy oil would suffer the greatest blow. The costs associated with reducing GHGs would fall disproportionately on the non-conventional supplies of oil raising recovery costs by as much as \$6US per barrel based on the industry standard of West Texas Intermediate (WTI) oil from the current \$18US. With Middle Eastern oil averaging a recovery cost of \$6 per barrel WTI, the costs of Kyoto would price Alberta non-conventional reserves out of the North American and world markets. Billions of dollars in planned investment could be lost and Alberta’s future economic

prosperity threatened. In Alberta's oilpatch comparisons with widely unpopular National Energy Program of 1980 abound.

A few weeks before Prime Minister Chretien's Johannesburg announcement that Canada would ratify the protocol, the situation in Canada's oil and gas sector had been very different. In May 2001, the Bush administration had released its *National Energy Policy*. The *Policy* – written by the National Energy Policy Advisory Group, chaired by the American Vice-President and former Chief Executive Officer of Haliburton Corp. one of the largest oil and gas field service firms in the world, Dick Cheney – called for secure supplies of oil and gas for the United States through such mechanisms as enhanced recovery, increasing domestic supplies and global alliances (National Energy Policy Development Group, 2001). Canada's deregulated energy sector had become the United States largest energy trading partner and leading supplier of natural gas, oil and electricity. In 2000 Canada supplied 14 percent of U.S. energy needs through an integrated network of pipelines and electricity lines. Canadian energy supplies – especially natural gas and oil – were not described as a foreign source of energy but as part of the U.S. domestic supply. American recognition of Canada's importance as a source of energy was seen as part of the evolution of an integrated North American energy sector.

While major producing provinces such as Alberta are quite content with the pre-Kyoto status quo and would like it to return, the federal government has persisted in other measures designed to give it an increased influence over Canadian energy policy in the new post-Kyoto world. One such initiative is the North American Energy Working Group (NAEWG). The NAEWG is a government-to-government body established to enhance the functioning of the North American energy market. Formation of the group was announced in 2001 by President Bush, Prime Minister Chretien and Mexican President Vicente Fox.

The NAEWG formally consists of one representative from Canada, the United States, and Mexico. Its goal is to provide information and coordinate policy in the three North American jurisdictions on energy related matters and to enhance continental energy trade within the context of sustainable development (North American Energy Working Group, 2002). The NAEWG mandate includes all forms of energy, and their transmission, distribution and consumption in North America. The three states are pledged to respect the domestic policies, divisions of jurisdictional authority and trade obligations of each country.

When the NAEWG was announced, however, Alberta called an emergency meeting of provincial ministers of energy. In response to these perceived federal incursions into provincial energy jurisdiction, the Western provincial and territorial energy ministers established the Western Energy Alliance. The inaugural meeting was held 18 February 2005 in Calgary. Announced at the Western Premiers' Conference in July 2004, the Western Energy Alliance was mandated to "promote the west as a secure and sustainable supplier to Canadians and North Americans." Along with efforts to raise awareness of western Canada as a safe and secure supplier of energy and pursue harmonization of energy regulation, the 18 February 2005 meeting communique stated that the Western Energy Alliance would, communicate "with their Federal counterpart regarding a commitment to meaningful provincial and territorial participation in international energy discussions and negotiations" (Alberta Energy, 2005).

Another bilateral agreement – the Canada-China Energy Working Group – was announced by the Prime Minister of Canada Paul Martin and the Premier of China on 20 January 2005 in Beijing. The current status of the Canada-China Energy Working Group is a press release from the Canadian Prime Minister's Office and several news stories in the Chinese media. The announcement did, however, signal a continuing willingness on

the part of the federal government to meddle in Canadian oil and gas production and trade. Two major Chinese oil and gas companies, Sinopec and PetroChina (both state corporations) are in the process of investing in Alberta's oil sands, Enbridge (a pipeline with a terminal in Prince Rupert) and Husky Oil. The consequences of Chinese investment in Canadian oil and gas could have serious effects on the Canada - United States relationship if the Americans view the Chinese interest in Canadian energy as a threat to their security.

The ratification of the Kyoto Protocol, the North-American Energy Working Group and the Canada-China Energy Working Group signal a re-entry by the Federal government into the oil and gas industry. Unlike the 1980 National Energy Plan, however, Ottawa is not seeking to Canadianize the industry, secure oil and gas for domestic consumption and industrial advantage, or even share in the profits generated by the oilpatch. Instead, it has responded to various internal and external pressures for the mitigation of GHGs, trade relations and a world demand for Canada's petroleum resources.

The industry reaction to these initiatives has been mixed. The large exploration and production companies are capable of dealing with mandatory GHG reduction through technological innovation and already available practices – several of the larger companies such as Royal Dutch/ Shell and BP are already Kyoto compliant in the operations. They are also prepared to increase production in the oil sands to meet increasing demand for petroleum resources. But the small Canadian producer – production under 1,000 barrel of oil equivalent per day (boe) – does not have the knowledge, technology, or fiscal capability of meeting Kyoto requirements or trade with China. As well, the small producers have been excluded from the oil sands. They are not capable of procuring the enormous financial resources necessary for this type of non-conventional exploration and production. The depletion of conventional stocks of crude oil and natural gas have pushed many small producers into sour gas and methane development – both highly regulated, socially controversial and expensive. As a result, small producers, through the Small Explorers and Producers Association of Canada – a 400 plus member lobby association – have turned to the provincial governments for help. With close political connections with several governments in western Canada, the provinces have used this support to express their opposition to Kyoto and other federal initiatives in areas they consider to be exclusive provincial jurisdiction.

Conclusions: Oil & Gas as Mature Staples Industries at the Edge

The Canadian oil and gas industry is in a period of change. But what kind of change is not clear. The industry is divided between large and small producers and is being pulled in two competing and contradictory directions. On the one side are the large producers – those corporations producing over 10,000 barrels of oil equivalent per day – which are fully integrated into the global market. They have the technology, knowledge and financial resources to engage in an internationally competitive industry and develop unconventional sources of energy. On the other are the small Canadian producers. They lack the resources to meet increasingly rigorous environmental, social and market regulations. These corporations and individuals are dependent upon the provinces for their survival. Any threat to them such as increased regulation through the Kyoto Protocol becomes a federal-provincial issue.

The multilateralist inclinations of the federal government – its support for the Kyoto Protocol, the North American Energy Working Group, and the Canada-China Energy Working Group – conflict with the interests of the producing provinces who are dependent on petroleum revenues. Abandoning its interventionist policies of the 1970s

and 1980s, and its benign neglect of the industry in the 1990s, Ottawa has instead now adopted pro-active energy-related environmental and trade policies.

The current federal trade and environmental initiatives are, however, fundamentally different from the 1980 NEP. While the National Energy Programme was a nationalist enterprise designed to counter the continentalist pull of U.S. markets and multinational petroleum companies, Canadian ratification and implementation of the Kyoto Protocol is a multilateral approach to the problem of climate change and energy demand which are global rather than regional in scope. The result is a new dynamic between the continental strategy of the Bush administration and the producing provinces, on the one hand, and the post-staples agenda of the federal government.

The Canadian oil and gas industry is in a state of flux. The Iraq War, American continental energy policy, and the Prime Minister's announcement on ratification and implementation of Kyoto, and the energy trade initiatives have contributed to a climate of confrontation in the Canadian oilpatch that has not been seen for a generation. Even though the producing provinces are enjoying the benefits of high oil and natural gas prices, they remain fearful of increased federal intervention in this most lucrative of industries. Any attempt by the federal government to re-establish a presence in the oilpatch is met with skepticism, if not outright hostility. This reaction reflects the divisions within the industry between the small and large producers or between a traditional staples industry and the globalized, technology driven international oil and gas business of today.

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ENDNOTES

¹ The May 2001 United States National Energy Policy has stimulated American interest in Alberta's oil sands as a safe and secure source for oil and other petroleum products. The continuing integration of the North American energy markets especially in the oil and gas sector is an important factor in the future viability of Alberta's oil sands and heavy oil development. Simply put, Alberta's oil and gas industry depends on increasing production of non-conventional sources of oil and natural gas and access to U.S. markets.

² While these two administrative tribunals were successful in promoting the development and regulation of the Atlantic Offshore, they have not been as successful in settling disputes between the Atlantic producing provinces and the federal government or between the provinces. There has been, for example, an Offshore boundary dispute between Nova Scotia and Newfoundland as well as numerous complaints that the provinces have been subject to unfair penalties in their revenue sharing agreements with the federal government. Under existing royalty sharing agreements, the federal government has deducted equalization payments from the two provinces in proportion to the Offshore petroleum royalties collected. Through its "Campaign for Fairness," Nova Scotia has waged a consistent battle with the federal government to have petroleum royalties excluded from the calculation of equalization payments. So far, the federal government has resisted Nova Scotia's request.

³ Several producers groups have announced feasibility studies on a major natural gas pipeline from the Mackenzie Delta. Unlike the earlier attempt to construct a northern pipeline this proposal has the support of the Northwest territories government and the Aboriginal community. A consortium of oil and gas companies with interests in the Alaskan north slope have announced a proposal to bring natural gas to North American markets through a pipeline along the arctic coast – the North Slope – of Alaska and a third group has proposed a natural gas pipeline along the Alaska Highway. The Bush administration and the U.S. Congress have proposed loan guarantees and other non-cash measure worth \$20(US) billion as incentives for the construction of Arctic shore and the Alaska Highway lines (Brethour, 2003, B7 and Haggett, 2003, D2)