CHAPTER 12

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

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INTRODUCTION

It is the best of times for the Canadian upstream oil and gas industry. As natural gas and crude oil prices have risen, the upstream petroleum industry—the exploration and production companies—has seen its profits and stock value increase dramatically (Polczer 2007). Domestic exploration is at unprecedented levels, and investment in conventional and non-conventional oil and gas production has reached new heights.

The issues facing the oil patch, however, 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 debates focus on the impact of the Kyoto Protocol, demands for greater environmental controls, overseas competition, market access, and increasing fiscal scrutiny, augmented by concerns over skilled labour shortages, Aboriginal land claims, regulatory reform, and growing consumer unrest with 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 industry to a mature staples industry, and perhaps even some aspects of a post-staples industry.

Although the current problems facing the oil patch are significant, they reflect an industry that has matured and found its place within an advanced industrial economy. No sudden break signalled the end of the traditional staples model of

development that characterized the post–Second World War 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. This realization has culminated in a technologically advanced, capital-intensive industry with secure and expanding markets.

THE CANADIAN OIL PATCH: FROM CONVENTIONAL TO UNCONVENTIONAL SOURCES OF ENERGY

Canadian oil production in 2006 amounted to 2.6 million barrels per day (mbl/d) or 3.8 percent of the world's total petroleum production. Of this total, approximately 1.4 mbl/d was in conventional oil and 1.2 mbl/d was in non-conventional production from the oil sands. Sixty-eight percent of production is located in Alberta. Over the last several years, the production of conventional crude has declined by about 5 percent. 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. An estimated 174 billion barrels (bbl) of crude are recoverable from the oil sands with today's technology, with estimates of 315 bbl 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. Taking these non-conventional sources into account, Canadian reserves compare very favourably with Saudi Arabian reserves, estimated at 261.1 bbl (Alberta Energy and Utilities Board 2004, 50–51). At the end of 2006, only 2 percent of established crude bitumen reserves had been produced.[1]

Since the mid-1970s, Canada's conventional reserves of crude oil have continued to decline. With reserves estimated at an ultimate potential of 19.7 bbl and annual production of 1.4 mbl/d in 2000, at current rates of production Alberta's supplies of conventional crude will run out sometime around 2060. But as the demand for oil increases in the next decade, Alberta's conventional reserves are likely to deplete long before this date. Although 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 then account for as much as 75 percent of Alberta's total oil supply.

Approximately $85 billion of investment has been announced for the oil sands since 1996. This investment is expected to double the current production of oil in Alberta and Saskatchewan. Moreover, at the current rate of depletion of 1.2 mbl/d, approximately 400 years of production remain in the tar sands. 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 Board 2004, 50–51). Although this amount is 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 the current estimates.

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 percent (Alberta Energy and Utilities Board 2004, 52). Natural gas reserve estimates do not include coalbed methane, which, according to the Alberta Energy and Utilities Board, 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 (and Canada) is determined in the global market and is measured in US dollars at the benchmark West Texas Intermediate (WTI) price level. Oil prices rose to more than US$85 per barrel in 2007. At these price levels, the oil and gas industry has an enormous impact on Alberta's economy. In 2006–7, the oil patch generated $12.3 billion in royalties, leases, and other taxes for the province, which was 32 percent of total provincial revenues. Approximately 275,000 individuals are directly and indirectly employed in the Alberta petroleum industry—about 20 percent of the provincial workforce. The Alberta oil and gas industry also contributes to Canada's trade surplus—especially with the United States (Canadian Association of Petroleum Producers 2004; Alberta Energy 2007, 13).[2]

Canada-wide, about 230,000 additional jobs have been created in both service sector and manufacturing employment to provide goods and services for the industry. 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. About 1.7 million barrels of crude oil per day, worth nearly $39 billion annually, were exported to the United States—most of it from Alberta. In 2006, natural gas production averaged 17.1 billion cubic feet per day (bcf/d) and generated about $27.5 billion in annual export revenues (Canada, National Energy Board 2007). Again, most natural gas exports originate in Alberta.

Supply projections indicate that total Canadian conventional crude oil reserves will be substantially depleted by 2025. Non-conventional reserves, the Atlantic offshore area, and the North are now the focus of energy planning in Canada (for the latter two, see Clancy, chapter 13). 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, extraction of the reserves of heavy oil and the tar sands will allow the oil patch to maintain and expand current levels of production, investment, and employment. Since 1994, light crude production has increased in British Columbia and Saskatchewan, remained constant in Manitoba

and declined by approximately 4 percent a year in Alberta. Because Alberta accounts for 75 percent of total production of light crude, the combined effect on the western sedimentary basin has been a decrease in production of about 3 percent each 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 Delta/Beaufort Sea area and the Arctic Islands. Estimates for natural gas in the Mackenzie Delta/Beaufort Sea area are 9 tcf of discovered resources, 55 tcf of undiscovered potential in natural gas, and 161 million cubic metres of oil reserves. The Arctic islands and other areas are estimated to contain 15 tcf of discovered and an estimated 90 tcf of undiscovered resources of natural gas and 65 million cubic metres of oil reserves. The Scotian Shelf (Sable Island) has estimated reserves of 3 tcf and discovered reserves of 2 tcf of natural gas and 11 million cubic metres of oil reserves. The East Coast Frontier of the Grand Banks and Labrador contain 9 tcf of natural gas and 251 million cubic metres in oil reserves (Canada, National Energy Board 1999, 62–64).

THE EVOLUTION OF THE CANADIAN OIL AND GAS INDUSTRY

Although currently largely based in Alberta, the oil and gas industry likes to think of itself as being 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. A fourth 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 area and in 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 and other powers to the federal government, and Ottawa has used its authority to play a significant role in the oil patch. 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 oil patch through its regulatory agency, the National Energy Board, deregulation in the mid-1980s diminished its presence in the oil patch. However, the September 2002 announcement by Liberal Prime Minister Jean Chrétien that the Kyoto Protocol would be ratified and implemented signalled a renewed federal presence in the Canadian petroleum industry. Ottawa's efforts to re-regulate the oil and gas industry through an international environmental treaty caused a federal–provincial debate over jurisdiction of natural resources and the federal government's international treaty obligations. This time, however, Ottawa pursued a type of negotiative horizontal environmental regulation as opposed to the more traditional "command and control" economic regulation. Although the effects of this type of rule-making authority remain uncertain, federal–provincial conflict has continued (Doern 1999, 82–97).

The history of the industry can be divided into four different phases: the semi-colonial period, 1867–1930; the era of multinational domination, 1930–1969; the withdrawal of the multinationals and the Canadianization of the industry, 1969–1985; and the 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–US 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 challenged the free-market continentalism that had dominated the Canadian oil patch since the mid-1980s and signalled 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 sector in terms of its evolution but always with criteria from 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; Doern and Toner 1985), whereas 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). No study has 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

In 1850, the first registered oil company in North America was established in Woodstock, Ontario. Earth oil, as petroleum was then called, was used as an illuminant. By the 1870s, approximately 18 refineries were operating in Ontario. With the rise of the internal combustion engine and 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. However, 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 were characterized by federal control and neglect. Under section 109 of the *Constitution Act, 1867*, provincial governments were 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 in 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, chapter 1). After years of lobbying and protest over this semi-colonial status, the three 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 Royalties No. 1 well struck oil in 1936, it became the largest oil field 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. Modelled 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 1993, 125; Richards and Pratt 1979, 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 the Second World War, the Turner Valley well produced 30,000 barrels of oil per day. The secure and plentiful supply of gasoline from the field attracted the Commonwealth air crews to train in the Calgary area during the Second World War.

In the postwar period, however, the Turner Valley area 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 program in the western sedimentary basin. Then, on February 13, 1947, the Leduc No. 1 well was hit. Combined with the establishment of the Oil and Gas Conservation Board, the Leduc well created the conditions for the entry of multinational petroleum companies—mainly but not exclusively American corporations—into Alberta. For the next 20 years, the Social Credit government actively encouraged 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 four large, vertically integrated, multinational oil and gas companies: Shell, Imperial/Exxon, Gulf, and Texaco. These Canadian "sisters" were referred to as the "big four" and dominated the Canadian oil market, while also holding significant interests in the natural gas sector.

In the early 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 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 multinational parents, the big four provided their refineries in the Montreal area with cheap imported oil because there was very little incentive to sell expensive Alberta oil to consumers in Ontario and Quebec.

But 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. The Alberta producers received a compromise. The federal government erected an oil barrier at the Ottawa Valley line. Markets west of the line were reserved for Alberta oil, and those markets 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 to prevent the large, integrated multinationals 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, Alberta's reserves of natural gas had been determined to be sufficient to supply markets on the west coast and in central Canada. Three major pipelines were constructed during this period to ship these reserves to market. The largest was 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 and represented the first major federal incursion into the oil patch since the federal government had ceded control over natural resources to the Prairie provinces in 1930.

The Alberta Gas Trunk Line (AGTL) was the second major pipeline, 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 reassure consumers. Voting shares in the new provincial enterprise were distributed among Alberta's utilities, gas processors, export interests, and the government, whereas non-voting shares were made available to Alberta residents. Although the AGTL was funded by the province, control was vested in the hands of the natural gas processors and the utilities. Whereas 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 and an advantage over the federal government's renewed interest in Alberta's petroleum reserves (Breen 1993, 403–7; 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 US markets, this project met with federal, provincial, and American resistance (Breen 1993, 391). Despite numerous regulatory and political obstacles, however, approval was given for 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 Bay on the Alaskan north slope in 1968, many in the oil patch believed Canada's oil and gas future would be found in the Arctic region—the area of 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 and 1971. In the same period, Alberta's share of exploration dropped from three-quarters of the Canadian total to just more than half. By the early 1970s, the big four had come to the conclusion that no more large deposits of oil or gas—what the industry calls elephants—were 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 their explorations in Alberta in favour of other locations, the exploration side of the industry was left to the smaller multinationals and to a number of emerging Canadian-owned companies. Although Canadian companies had always been active in the Alberta industry, their numbers and size had been small. As the 1960s ended, 98 percent of the provincial oil and gas industry was foreign-controlled, mainly by American interests. This situation was the result of several factors. First, 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 encouraged foreign multinationals. Not only did Manning believe that the multinationals provided the easiest and quickest way to develop the province's petroleum reserves, but a residual populist resentment continued against central Canada within the ruling Social Credit Party. As a result, Manning 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 multinational oil and gas companies. Little room was left for small Canadian firms to get a start in the industry—that is, until the multinationals 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 levels that emphasized security of 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 increased its role in the pipeline business and became an active participant in the exploration and production side of the oil and gas industry. Dome, which began as a small start-up dependent on the majors for its survival, played a significant role in frontier exploration and in conventional oil and gas production in Alberta. Because of Dome's interest in the Beaufort Sea, its agenda complemented the federal government's efforts to increase domestic supplies of oil and gas while increasing Canadian control of the industry.

In August 1971, the Progressive Conservatives, 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. The Social Credit governments of Ernest 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. Manning saw his role as providing a stable political environment for the foreign-based industry. Lougheed, on the other hand, had a different attitude to big oil. He understood that the interests of the multinationals did not necessarily coincide with those of the province. Although 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 to do when the oil and gas ran out—when Alberta entered a post-staples state (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 from US$3.00 to US$3.40 that year. This price rise 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 keep down the cost of imported oil from South America and the Middle East. However, the oil- and gas-producing provinces, led by Alberta, resisted any incursion by the federal government into what they argued was exclusive provincial jurisdiction over natural resources.

The debate between the Alberta and federal governments over energy pricing shifted suddenly in October 1973, when an OPEC oil embargo was called in response to Western support for Israel in the Yom Kippur War. Several oil-producing Arab states cut off shipments of crude oil to the West. Suddenly the price of a barrel of crude oil shot up from approximately US$3 per barrel to more than US$12 per barrel. The oil shock of 1973 sent the multinationals 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 renewal of interest by the multinationals in the western sedimentary basin.

In 1974, the federal government, seeking a better window on the oil and gas sector, and inspired by Canadian nationalists, created a state-owned oil company, Petro-Canada (PetroCan). Petro-Canada was resented by both oil patch veterans and the oil-producing provinces. With a self-image of rugged individualism and ferocious commitment to a free-market ideology, the oil patch veterans resented any state incursion as an unnecessary impediment to their God-given right to drill, produce, and market oil and natural gas (House 1980). Embarrassed by the minister of natural resources, Joe Greene, who, in the House of Commons in June 1971, had stated that Canada had a 923-year supply of oil and a 392-year supply of 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, the promotion of the lands under federal jurisdiction in the North and offshore), better information about the petroleum industry, security of supply, decreased dependence on the large multinational oil corporations (especially the big four), and increased revenues flowing to the federal treasury from the oil and gas sector (Fossum 1997). Although these goals were very similar to those of state-owned corporations in other countries, they were controversial in Canada (Fjell 2000).

The new federal oil and gas policy was resented by the Alberta government. Lougheed had committed his government to economic diversification through increased petroleum 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 over which level of government would set policy direction for the oil patch resulted in a lack of coherence. Instead of working toward maximization of revenues and recovery and planning for a post-oil economy, the federal government and the governments of the oil- and gas-producing provinces were in a continuous conflict over the 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 fundamentalists, whose 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 United States imposed economic sanctions, froze Iranian assets in the United States, and prohibited the import of Iranian oil into the United States. Oil and gas prices increased dramatically, rising from just less than US$20 a barrel to US$40 a barrel. Petroleum prices were expected to go much higher.

The response of the federal government was to increase state involvement in the provision of energy. As part of the National Energy Program (NEP), the federal government offered incentives for drilling in the Canada lands (the Arctic and the offshore areas 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 benefited from the federal initiatives, the NEP was strongly resented by the oil patch and the oil-producing provinces.

After a series of negotiations between the oil- and gas-producing provinces and the federal government, an agreement was reached concerning pricing and taxation. And, in 1982, Alberta and the other oil- and gas-producing provinces were able to secure an amendment to the existing constitutional division of powers that 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 area met with some success. Natural gas was discovered in the Beaufort Sea and in the Arctic islands; however, 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 area 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 area in the 1970s. These finds included the Panuke-Cohasset fields, which were put into production in 1992, and the Sable Island natural gas field, which came into production in 1999. In the late 1970s and early 1980s, oil was discovered in two Newfoundland offshore areas: in 1979 in the Hibernia field and in 1984 in the Terra Nova field. Hibernia began producing large volumes of oil in 1997, and Terra Nova started producing commercial quantities of oil in 2000. The Atlantic offshore area has estimated reserves of 159,634 million cubic metres 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 areas to the provinces. Ottawa 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 the 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 those resources.

The Era of Benign Neglect

Two events in the mid-1980s greatly affected the Canadian oil and gas industry. First, the election of a federal Progressive Conservative government in September 1984, under the leadership of Brian Mulroney, 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 resources to Newfoundland and Nova Scotia. After years of negotiations between the federal government and the Atlantic provinces, the Mulroney government in Ottawa signed the Atlantic Accord with the east coast provinces in 1985. The Atlantic Accord allowed Newfoundland and the Maritime provinces responsibility in developing their offshore oil and gas resources and a share in the revenues. Although the federal government retained ownership of the offshore resources, it reached an agreement with Newfoundland in 1985 over Hibernia and other offshore fields. The Canada–Newfoundland Offshore Petroleum Board was established in 1988 to administer the Hibernia and Terra Nova fields, and the Nova Scotia–Canada Offshore Petroleum Board was created at the same time to regulate the Nova Scotia offshore resources.[3]

The signing of the Western Accord with the western provinces in April 1985 dismantled the National Energy Program; however, the end of the NEP failed to revive the Canadian oil and gas industry. World energy prices collapsed in 1986. Oil sold for approximately US$12 per barrel, and natural gas fell to US$1 per million cubic feet (mcf). In the Alberta oil patch, thousands of workers were laid off, northern frontier exploration was halted, and the development of 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 shrank, and Alberta faced a series of budget deficits and rising unemployment in the oil and gas industry as thousands of workers were dismissed. Investment in Alberta's oil and gas industry had come to a halt.

In addition to the Western Accord, the Foreign Investment Review Agency (FIRA)—a product of the 1972–1974 Trudeau government's efforts to protect domestic industry from foreign control—was dismantled by the Mulroney government, and Canada was declared "open for business." The questions of Canada's ownership and its maintaining security of the supply were no longer concerns of federal energy policy—oil and natural gas were to be treated as any other commodity. Ottawa now relied on low prices and the market to supply Canadian demand for oil and gas. With the signing of the Canada–US Free Trade Agreement (FTA) in 1988 and its implementation in 1989, restrictions were placed 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. US 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 both the Mulroney government in Ottawa and the oil- and gas-producing provinces. The election of the Liberal party in 1993 did little to change the federal government's oil and natural gas policy. One of the first acts of the new government was the ratification of the North American Free Trade Agreement (NAFTA) in late 1993. NAFTA 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 almost completely integrated into the North American market. Although provincial royalty exemptions and tax expenditures continued to subsidize the oil patch, the period following the Canada–US Free Trade Agreement and NAFTA saw the end of attempts to insulate Canadian consumers from high oil and gas prices. 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 oil- and gas-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, for example, the government continued the policy of royalty holidays and various tax expenditures to encourage further exploration and production, especially in the oil sands. Also 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, with the result that extensive geophysical and well-drilling programs have been in place since 2000. As well, exploration and production activities began in 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.[4]

The New National Energy Program and the Kyoto Protocol

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 greenhouse gas (GHG) emissions. The Kyoto Protocol mandates the reduction of greenhouse gas emissions to below-1990 levels. GHGs are primarily carbon dioxide emissions (CO_2), methane, and nitrous oxide. Caused by the burning of carbon-based fuels, such as oil, natural gas, and coal, these emissions are agreed to be a major contributor to global warming.

Ratified in late 2002, the Kyoto Protocol bound Canada to a 6 percent reduction of 1990 emissions between 2008 and 2012. 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). Canada's implementation strategy was released in 2003 (Government of Canada 2003).

Through the Alberta, Newfoundland and Labrador, and Nova Scotia governments and several industry organizations, the Canadian oil and gas industry expressed its dislike of the agreement.[5] In September 2002, the Alberta government launched a $1.5 million advertising campaign designed to weaken public support for the agreement. Polling data indicated that the apocalyptic provincial advertising—with its warning that thousands of jobs could be lost and living standards could be lowered—was successful. A majority of Albertans soon opposed the ratification and implementation of the Kyoto Protocol (Chase and Mahoney 2002, 1).

The oil- and gas-producing provinces, various industry groups, and the federal government had all indicated that the Kyoto Protocol could not be implemented in its present form. Moreover, the US administration of George W. Bush had stated it would not ratify or implement the protocol. Any effort to require Canadian industry to reduce greenhouse gas emissions without the active participation of the United States would place 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 Protocol effort to reduce greenhouse gases (GHGs) and Alberta was particularly concerned with the protocol's possible effects. Although Alberta's conventional production of oil and natural gas would be affected

by the implementation of the 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 US$6 per barrel. Because Middle Eastern oil averaged a recovery cost of $6 per barrel, the costs of the Kyoto Protocol would decrease profits and discourage investment in the oil sands. In Alberta's oil patch, comparisons with the widely unpopular National Energy Program of 1980 abounded.

A few months before Prime Minister Jean Chrétien's announcement in Johannesburg that Canada would ratify the Kyoto 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 and chaired by Dick Cheney, who was both the American vice-president and a former chief executive officer of Halliburton Corp. (one of the largest oil and gas field service firms in the world)—called for secure supplies of oil and gas for the United States through such mechanisms as enhanced recovery, increasing domestic supplies, and global alliances (US, National Energy Policy Development Group 2001). Canada's deregulated energy sector had become the largest energy trading partner of the United States and its leading supplier of natural gas, oil, and electricity. In 2000, Canada supplied 14 percent of US 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 US 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.

Although major oil- and gas-producing provinces, such as Alberta, were quite content with the pre–Kyoto Protocol status quo and would have liked it to return, the federal government under the Liberals persisted in other measures designed to give it an increased influence over Canadian energy policy in the new post–Kyoto Protocol world. One such initiative was the North American Energy Working Group (NAEWG), 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 Chrétien, and Mexico's President Vicente Fox.

When the NAEWG was announced, however, Alberta called an emergency meeting of all 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 on February 18, 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"

(Alberta Energy 2005, 1). Along with efforts to raise awareness of western Canada as a safe and secure supplier of energy and to pursue harmonization of energy regulation, the Western Energy Alliance would, according to the February 18 news release, communicate "with their Federal counterpart regarding a commitment to meaningful provincial and territorial participation in international energy discussions and negotiations" (Alberta Energy 2005, 1).

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 January 20, 2005, in Beijing. The announcement, from a provincial perspective, signalled 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), have expressed interest in investing in the Canadian oil and gas industry. 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 and the formation of the North American Energy Working Group and the Canada–China Energy Working Group signalled a re-entry by the federal government into the oil and gas industry. Unlike the 1980 National Energy Program, however, Ottawa was not seeking to "Canadianize" the industry, to secure oil and gas for domestic consumption and industrial advantage, or even to share in the profits generated by the oil patch. Instead, Ottawa was responding 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 was mixed. The large exploration and production companies were 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, were already "Kyoto-compliant" in their operations). These companies were also prepared to increase production in the oil sands to meet increasing demand for petroleum resources. But the small Canadian producers—those with production of less than 1,000 barrels of oil equivalent (boe) per day—did not have the knowledge, technology, or fiscal capability of meeting either the Kyoto Protocol requirements or the criteria for trade with China. Because the small producers were not capable of procuring the enormous financial resources necessary for oil sands exploration and production and because of the depletion of conventional stocks of crude oil and natural gas, many small producers have invested in sour gas and methane projects—both of which are 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.

The oil- and gas-producing provinces, however, gained a new ally on January 23, 2006, when Canadians elected a minority Conservative government. Led by Stephen J. Harper (a one-time member of Parliament for the right-wing populist Reform Party and a past president of the National Citizens Coalition, a far-right lobby group), the Conservatives campaigned on a platform of accountability and transparency in government. Although the party's position was vague on a number of issues, including energy, Conservatives were understood to be opposed to the Kyoto Protocol and to any federal intrusion into areas of provincial jurisdiction, including oil and gas and other energy sources. The Conservatives made it clear, however, that they were committed to a free market in energy. In a July 2006 speech to a meeting of the Canada–United Kingdom Chamber of Commerce in London, Harper stated that investors "have recognized Canada's emergence as a global energy powerhouse—the emerging 'energy superpower' our government intends to build." He also reminded his audience that Canada has the second-largest oil reserves in the world—the oil sands. Harper made it clear that Canada was "a stable, reliable, producer in a volatile, unpredictable world." Canada's energy policy, he stated, was based on the idea of the free exchange of "products based on competitive market principles, not self-serving monopolistic political strategies." Oil and gas, Harper declared, was a commodity like any other, subject to the discipline of the free market (Harper 2006, FP15).

Whereas the first Conservative budget, in 2006, contained no reference to energy or to Canada's commitments under the Kyoto Protocol, the political landscape changed again in early 2007. The new federal Liberal leader, Stéphane Dion, had run his leadership campaign on the theme of environmental protection. Suddenly the environment—and especially global warming—was the most important issue for Canadian voters. The 2007 Conservative budget reflected the public's sudden concern for the environment with a focus on global warming. In his budget speech of March 19, 2007, the minister of finance, Jim Flaherty, also described Canada as an "emerging energy superpower." Canada is well positioned, he stated, "to take advantage of our significant natural resources in new, innovative and environmentally friendly ways that will provide significant benefits to the economy." The budget provided more than $1.5 billion in the Canada ecoTrust for Clean Air and Climate Change to support major environmental projects with the provinces and territories. As well, the Conservatives committed to clean energy technologies, such as carbon capture and storage, and to the phased end of accelerated capital cost allowance for general oil sands investment by 2015. The budget also provided measures to promote efficient, cleaner fuels, including incentives for renewable biofuels; a program to scrap older, less efficient vehicles; and a public transit tax credit (Flaherty 2007).

The Conservative minister of natural resources, Gary Lunn, a lawyer with experience in the resource sector, has also stated on a number of occasions the Conservative theme that Canada is an emerging energy superpower. Lunn also echoed Prime Minister Stephen Harper's comments concerning the Kyoto Protocol: "Trying to pretend that we can achieve Kyoto, it's not real; it's not being honest with Canadians." Even the far less ambitious GHG reduction targets set by the Conservatives are not, he claimed, without a price. "Nobody should be fooled that there is no cost to this. There is an economic cost." The federal government has taken an interest in wind, solar, and biomass power, despite its estimates that in the foreseeable future renewable energy will amount to only 4 percent of the energy supply. Fossil fuels will continue to be, in the view of the Conservatives, the most important part of the Canadian energy mix (Lunn 2007a).

While in opposition, the Conservatives had opposed the Kyoto Protocol for several reasons. First, many in the Conservative caucus, including the prime minister, had expressed skepticism that global warming was occurring and, if it were occurring, believed that human beings were not responsible for it. Second, the government had argued that the rejection by the Bush administration of the Kyoto Protocol made economically infeasible any effort by Canada to reduce greenhouse gas emissions. Meeting its commitments under the Kyoto Protocol would put Canada at a comparative economic disadvantage with its largest trading partner. Moreover, the oil- and gas-producing provinces of Newfoundland and Labrador, Saskatchewan, Alberta, and British Columbia believed they would suffer a disproportionate burden of the costs of reducing greenhouse gases if the Kyoto Protocol were implemented. These provincial governments were concerned that the added costs of greenhouse gas reduction would price non-conventional and offshore reserves out of the North American and world markets. Billions of dollars in planned investment could be lost and the future economic prosperity of the provinces could be threatened. In western oil- and gas-producing provinces, the Kyoto Protocol had been compared to the widely unpopular 1980 NEP.

In January 2007, Prime Minister Harper named John Baird minister of the environment to replace the inexperienced Rona Ambrose. Baird continued the federal government's opposition to the Kyoto Protocol while at the same time promising to produce a clean air policy. At the September 2007 Asia–Pacific Economic Cooperation (APEC) meetings in Australia, Harper announced that Canada would pursue a GHG-reduction plan based on the intensity of emissions rather than the absolute standards required by the Kyoto Protocol. According to Prime Minister Stephen Harper and his Australian counterpart, John Howard, Canada and Australia joined Russia, China, the United States, and India in agreeing that each country needed to make commitments to stop human activity from causing dangerous changes to the climate. Canada was criticized by some APEC members for setting GHG-reduction targets but doing little to achieve them. The Harper government

was also singled out for choosing 2005 as the benchmark year for its targets instead of 1990, when emissions were much lower. Harper blamed the previous Liberal government's economic policies for Canada's skyrocketing emissions, which were more than 30 percent higher than its Kyoto Protocol target (De Souza 2007).

At a United Nations meeting called in late September 2007 to save the Kyoto Protocol, Harper announced that Canada would join the Asia–Pacific Partnership—an alternative climate change pact. Created in 2006 by Australia, China, India, Japan, Korea, and the United States, the Asia–Pacific Partnership has been criticized for lacking the mandatory targets contained in Kyoto. The seven countries—including Canada—account for nearly half the world's greenhouse gas emissions.

Another component of federal policy is an increased emphasis on North American energy integration. Conservative energy strategy was articulated at a North American energy ministers' meeting in Victoria, British Columbia, in July 2007. The energy ministers from Canada, the United States, and Mexico emphasized the importance of collaboration on energy technologies and facilitating energy markets to enhance security. Lunn argued that the meeting opened the door to a sustainable, affordable, secure energy future for North America. The agreement on energy science and technology also set an example for co-operation in other areas. The energy ministers committed to explore further opportunities to use the integrated nature of the North American energy market to the benefit of all three nations (Lunn 2007b).

CONCLUSIONS: OIL AND 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 more than 10,000 barrels of oil equivalent per day—that 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 side are the small Canadian producers. They lack the resources to meet increasingly rigorous environmental, social, and market regulations. These corporations and individuals are dependent on the provinces for their survival. Any threat, such as increased regulation, becomes a federal–provincial issue.

The roles and responsibilities of the federal government—its international responsibilities and treaties, such as the Kyoto Protocol, the North American Energy Working Group, and the Canada–China Energy Working Group—are often in conflict with the interests of the oil- and gas-producing provinces that are dependent on petroleum revenues. But the Conservative government of Stephen Harper

has set out to change this relationship. Abandoning Canada's Kyoto Protocol commitments, the Conservative government has removed itself from an active role in the oil and gas industry. Market forces will guide energy supply and demand.

The current federal energy and environmental initiatives are fundamentally different from the 1980 National Energy Policy and the multilateral environmental commitments of the Chrétien and Martin Liberal governments. The Conservatives have embraced North American energy integration and have announced Canada will not meet its commitments under the Kyoto Protocol. The result is a new dynamic among the continental strategy of the US Bush administration, the oil- and gas-producing provinces, the federal government, and the upstream oil and gas industry. Oil and gas are no longer viewed as strategic commodities to be regulated by the federal government. Instead, they are viewed as any other commodity, to be bought and sold in the free market, with little or no recognized strategic value. The result has been a federal retreat from environmental regulation and unrestrained development of oil and gas reserves. Yet a fundamental contradiction exists in the policies of the Harper government. Although large Canadian upstream oil and gas companies compete in global markets, they still rely on provincial and federal governments to protect them through international agreements, such as the Kyoto Protocol. Conservative rhetoric may proclaim a free market, but the industry still depends on the federal state for protection from an increasingly competitive and global environment. Despite the tensions in federal energy policy, signals indicate a post-staples petroleum industry is taking shape.

NOTES

1. These figures have only recently been considered by the International Energy Agency when calculating the totals of world reserves but are still not part of the annual surveys of world supplies prepared by the United States Department of Energy or BP Amoco.
2. The May 2001 United States National Energy Policy 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 US markets.
3. Although these two administrative tribunals were successful in promoting the development and regulation of the Atlantic offshore areas, they have not been as successful in settling disputes between the Atlantic oil- and gas-producing provinces and the federal government or between the provinces. For example, an offshore boundary dispute exists between Nova Scotia and Newfoundland and Labrador, and the provinces have numerous complaints that they 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 equalizati payments from the two provinces in proportion to the offshore petroleum royalti collected. Through its "Campaign for Fairness," Nova Scotia has waged a consiste battle with the federal government to have petroleum royalties excluded from t calculation of equalization payments. So far, the federal government has resist Nova Scotia's request.

4. Several oil- and gas-producers groups have announced feasibility studies on a maj natural gas pipeline from the Mackenzie Delta. Unlike the earlier attempt to constru a northern pipeline, this proposal has the support of the Northwest Territori government and Aboriginal communities. A consortium of oil and gas compani with interests in the Alaskan north slope has announced a proposal to bring natur gas to North American markets through a pipeline along the Arctic coast—t north slope—of Alaska, and a third group has proposed a natural gas pipeline alor the Alaska Highway. The Bush administration and the US Congress have propose loan guarantees and other non-cash measures worth US$20 billion as incentiv for the construction of the Arctic shore and Alaska Highway lines (Brethour 200 B7; Haggett 2003, D2).
5. Personal interview with Stephen Rodrigues, research manager, Canadian Associa tion of Petroleum Producers, Calgary, September 12, 2002.

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CHAPTER 13

Offshore Petroleum Politics: A Changing Frontier in a Global System

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Offshore oil and gas developments are among the new "unconventional" energy sources (see Brownsey, chapter 12) that have emerged in Canada over the last two decades as oil prices have risen and conventional domestic sources have declined. In the new millennium, activities in the offshore petroleum industry are unsettled, to say the least.

On the Atlantic coast, where investment has been mounting since 1995, petroleum operators and governments are negotiating regulatory change through an energy round table. On the Pacific coast, where a long-standing moratorium persists, corporate rights holders have made it clear that they will not return to offshore activity until federal and provincial authorities have resolved, to the satisfaction of all major stakeholders, First Nations title claims and jurisdictional overlaps. In the Arctic, a series of 1990s Aboriginal rights settlements opened the way for expanded resource project planning that included the offshore shelf. However, the settlements also raised questions of how the myriad planning and management authorities—federal, territorial, and Aboriginal—would interact in regulating major project initiatives.

In this chapter, the offshore petroleum sector is explored from a series of different perspectives. It is best understood as an emerging mature staple resource domain poised between local, national, and international forces. Because the petroleum industry operates on three coasts and under multiple state authorities, local conditions present significant variables; however, offshore petroleum is also very much a global domain. Although this sector's commercial roots are on the US Gulf coast, where Texas independents underwrote early exploration in the late 1940s, the international oil giants and their subsidiaries soon rose to prominence. By the