

ENERGY IN THE AMERICAS: CRITICAL REFLECTIONS ON ENERGY AND HISTORY

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Optimism, Fear, and Free Trade: Canada's Winding Path to a Globalized Petroleum Industry, 1930–2005

Paul Chastko

The Canadian petroleum industry's integration into a globalized world petroleum industry seems self-evident in retrospect. After the twin shocks of the Great Depression and the Second World War, Imperial Oil's discovery of the substantial petroleum and natural gas reserves of the Western Canadian Sedimentary Basin (WCSB) confronted both the Canadian and Alberta governments with an existential question about how to best pursue development of a significant, but nonetheless regional, source of crude operating on the margins of a much larger global oil industry. In an era when governments across the Americas and the Middle East opted for nationalization of natural resources to spur industrial development, successive Canadian governments chose to develop petroleum reserves within the parameters of a market-based system, recognizing the economic and geographic obstacles to quick development, as well as the oil industry's mastery of the necessary technology, methods, and skills for rapid exploitation of the WCSB. The wisdom of that model remained basically unquestioned until the oil shocks of the 1970s, when fear, rather than optimism or self-confidence, prompted the federal government of

Pierre Elliott Trudeau to embark in a decidedly more nationalist direction, culminating with the National Energy Program in 1980. Only after the program failed did Canada resume its trajectory toward globalization by signing the Canada-US Free Trade Agreement.

The continental integration of the North American petroleum industry emerged in the late nineteenth and early twentieth centuries because of proximity, shared values, and similar institutions that facilitated the creation of regulatory, taxation, and royalty provisions. Early in the twentieth century, Canadian petroleum policies reflected elements of pragmatism because Canadian subsidiaries, like Imperial Oil (Standard Oil of New Jersey, now ExxonMobil) and McColl-Frontenac (Texaco), had markets and customers to service but were typically “crude short” (that is, with no substantial domestic source of supply.) Conversely, US-based parent companies had ready access to crude supplies but required markets and customers to service, creating a symbiotic relationship between the Canadian and US petroleum industries. Canadian companies focused their operations on downstream operations (transportation, refining, and marketing) of the crude oil produced by their US corporate parents. At the same time, Canadian companies did not completely abandon upstream (exploration and production) operations and adopted the same business strategies and corporate cultures of their parent companies, who also provided access to capital, technology, and industry knowledge.¹

Jurisdiction over natural resources in the Canadian context is shared between the provinces and the federal government. Section 109 of the British North America Act granted subsurface mineral rights to the individual provinces, but when Alberta and Saskatchewan entered confederation in 1905, the federal government retained jurisdiction over natural resources until 1930, partly out of the calculation that the two new provinces lacked the capital and population to effectively develop whatever natural resources existed. In 1929, Ottawa set the Crown royalty at 5 per cent of the sale price of oil for the first five years of production before raising it to 10 per cent thereafter. When control over natural resources transitioned from federal to provincial authority on 1 October 1930, the Alberta government assumed full responsibility for the development of resources. Provincial authorities maintained the federal royalty rate until

1935, when they began increasing it in stages; by 1 January 1940, the rate was 12.5 per cent.²

After failing to attract Canadian or British investors to build on the success of the second Turner Valley petroleum boom in the 1930s (the first Turner Valley era began in 1914 with discoveries of natural gas), the Province ended the system of imperial preferences and invited capital from anywhere in the world, namely the United States, to invest in Alberta's oil industry. The decision, argued Alberta's deputy minister for mines and resources, Hubert Somerville, ended discriminatory practices and opened Alberta's market to American capital and expertise. "As long as [they] were spending Canadian dollars in Canada and Alberta," noted Somerville, investors would enjoy "the same benefits as though you were a Canadian or a . . . British subject."³ By 1945, American investment comprised fully 95 per cent of the \$157 million in foreign direct investment in the Canadian oil industry.⁴

Numerous informal cross-border linkages tightened connections as the free flow of capital, technology, ideas, people, and publications facilitated the evolution of the younger Canadian industry.⁵ To stimulate exploration using new technologies and methods, particularly geophysics, the Province expanded lease sizes two times between 1937 and 1941 from 1,920 to 50,000 and then to 600,000 acres (in three blocks of 200,000 acres each).⁶ But in 1942, during the wartime emergency, Ottawa assumed control of the province's oil fields in Turner Valley and the Abasand oil sands plant in Fort McMurray. Under the auspices of Wartime Oils Ltd., over the objections of provincial regulators, the federal government drilled twenty-one additional wells in Turner Valley. Production peaked at 9.7 million barrels in 1942 and steadily declined thereafter, in large measure because the wasteful and prolific flaring of the natural gas cap in the 1930s depressurized the field, making it impossible to recover crude oil. Only 100 to 150 million of the estimated 750 million barrels contained in the Turner Valley field were produced.⁷ Meanwhile, federal control over the Abasand facility excluded provincial researchers and experts from operations and led to venomous accusations that Ottawa deliberately sabotaged the facility when a fire destroyed it in 1943.

With few domestic sources of petroleum—total Canadian crude production in 1946 was 7.6 million barrels against 77 million barrels

of demand—Canada remained dependent on imports of crude and refined products at an annual cost of half a billion dollars.⁸ Prospects for increasing oil production in Western Canada remained bleak. California Standard (Chevron) discovered some small fields in southern Alberta and some heavy oil around Lloydminster, but the oil was either of such low quality or insufficient volume to inhibit commercial development. “You couldn’t do anything with it,” recalled Imperial Oil’s Doug Layer. “You couldn’t produce it because you’d just lose money every time you turned around.”⁹

Developments in the global industry, however, soon transformed the province from a marginal producer of crude and natural gas for local markets into a major destination for international business and capital. The gradual improvement and evolution of geology and geophysics in oil exploration helped transform exploration from an art into a science and led to dramatic increases in the world’s proven reserves from 62 billion barrels to 534 billion barrels. All told, the size of the global industry increased by a factor of nine.¹⁰

Technological change and innovation combined with changing local and national conditions to create a unique set of circumstances. Canadian economic and trade policies were largely influenced by both the need for markets and a near total dependence on two trade partners—the United Kingdom and the United States—to buy Canadian exports. However, British demand for Canadian imports collapsed following the war, contributing to a \$500 million trade deficit as Canadian imports from the United States continued to climb. The growing trade deficit and currency crisis—Canada’s shortage of US dollars to pay for additional imports—threatened the stability of the entire economy.¹¹ Fortunately for Canadians, policy-makers and business leaders alike were determined to avoid the mistakes of the 1930s and embraced the US-led liberal world order established at the end of the war and marked by multilateral institutions and organizations like the Bretton Woods system, which established the convertibility of currencies, the World Bank, and the International Monetary Fund. Collectively, joining the multilateral order reflected the optimism that liberal free trade and the market would lead to prosperity and peace. Moreover, Canada’s decision to reduce trade barriers with the United States as part of the first “round” of negotiations on the General

Agreement on Tariffs and Trade (GATT) in 1947 opened a number of sectors to increased bilateral trade and strengthened economic relations in the process.¹²

Stated simply, politicians, businesses, and consumers made choices, based in part on history, institutions, and values. Unlike several Latin American examples discussed in this volume, where the export of crude was essential to national economic prosperity, the need to rapidly develop the Canadian petroleum industry was offset by the presence of a large manufacturing and industrial base in Eastern Canada and export markets geared to the United States. Arguably, the burden of driving the postwar Canadian economy lay with auto manufacturing. With comparatively little at stake in terms of national economic priorities, Canadian authorities could—and did—rely on the private sector to guide development by creating favourable conditions for international investment. With an eye toward kick-starting oil exploration, the Alberta government re-examined its regulatory regime beginning with attempts to attract the attention of the majors—and their exploration dollars—by reducing the leasehold requirements. Moreover, the Province established clear and predictable royalty and taxation regimes to provide certainty and predictability.¹³ Meanwhile, the federal government offered generous tax incentives that allowed companies to write off up to 40 per cent of losses for exploratory wells and up to 50 per cent of costs for “deep difficult” tests, in addition to waiving import duties on certain drilling equipment brought from the United States. Combined with US tax incentives that encouraged US companies to explore for international supplies, all that remained was to discover a prolific field.

In 1945, a group of Imperial Oil’s management and technical people joined Jersey Standard advisers in Toronto to plot the company’s next move. Between 1917 and 1946, Imperial Oil spent \$23.2 million in exploration and drilled 133 consecutive dry holes in southern Alberta and Saskatchewan. More distressingly, discoveries of natural gas were more prolific and brought with them unwelcome assumption of further financial burdens to cap the well since the market for natural gas was already saturated. These additional—and unwanted—expenditures already prompted Shell Oil to indefinitely shelve exploration plans in the province.¹⁴ As Imperial Oil geologist Doug Layer recalled, the company also

launched one final oil exploration effort, “with the chance that maybe this would be the time we might be lucky and find oil.” Beginning in 1946, Imperial’s seismic crews from Carter Oil—a wholly American subsidiary of Jersey Standard—shifted attention from southern to central Alberta between Edmonton and Leduc. Although the geophysical techniques were still somewhat primitive, they revealed a promising anomaly. Despite the fact that the interpretation of the anomaly was wrong, Imperial went ahead and drilled at Leduc No. 1. Ultimately, the well produced 318,000 barrels of oil until it was abandoned in 1974.¹⁵ The discovery of petroleum at Leduc in February 1947, along with the additions from the more voluminous Redwater field a year later, transformed Alberta into a crucial, but nonetheless regional rather than global, energy source. As the WCSB produced the first of more than 259 million barrels of oil and 415 trillion cubic feet of natural gas, business and political leaders faced a series of important, and long-lasting, choices regarding Alberta’s integration into the supply, operations, and infrastructure network of the international petroleum industry that remained fundamentally intact for the next seven decades.¹⁶

The boom presented both the federal and provincial government with an existential question: How to best develop provincial oil resources? Given the recent experience of state control during the war, the matter hardly seemed predestined. In February 1948, Imperial Oil—whose parent company, Standard Oil of New Jersey, faced the prospect of oil nationalization in other producing countries in the Americas, such as Brazil and Venezuela—began a broad public relations campaign designed to emphasize to the Canadian public how the company’s success at Leduc reflected years of risk and investment undertaken in the public interest, and to inform both the public and its employees about the danger posed by “socialistic policies” that might result in a stronger role for the state in natural resource development.¹⁷

Perhaps Imperial need not have worried, as geography, economics, and politics argued against adopting either the Mexican, Brazilian, or Venezuelan model of national development, but the fact that they did suggests at the least that global developments helped shape some of the public discourse. Regardless, there remained potent political and economic arguments against the recourse to nationalist policies in oil. The pro-business,

small-government ethos of Premier Ernest Manning's Social Credit government at the provincial level and the cool pragmatism of American-born C. D. Howe in the federal cabinets of Mackenzie King and Louis St. Laurent ensured the Canadian experience would differ from that of Latin America and hew more closely to the United States' postwar pursuit of market-driven capitalism and free trade liberalization.¹⁸ Scarcity of investment capital and a lack of adequate industry skills and technology also provided a moment of pause. Leduc stood at the crossroads of the modern petroleum industry and the transition of exploration from an art to a science. The operation of rotary rig technology capable of drilling faster and deeper wells than traditional cable tool rigs required skill and sophistication that were lacking in Canada. Transportation costs to ship Alberta crude to the nation's largest refinery in Sarnia, Ontario, were \$3.24 a barrel—when world crude prices were \$3.55—argued against the pursuit of a national policy. Furthermore, the industry lacked a transportation system capable of moving crude in volume to refining facilities and markets. With only 672 kilometres (418 miles) of pipeline in the nation as a whole, and only a small line from Turner Valley to Calgary, Alberta crude moved by legacy infrastructure (road and rail) to service regional markets. Furthermore, refining facilities on the Prairies were only capable of handling small volumes (less than 10,000 barrels per day) and producing kerosene and some motor gasoline fractions. Creating a national industry would require massive investment of scarce capital, result in economic inefficiencies, displace cheaper offshore crude from Eastern Canadian markets, and higher transportation costs east of Winnipeg would result in lower profits.¹⁹

The federal government implemented more tangible policies to catalyze the industry by facilitating the transfer of global capital, skills, and technology. Leduc's dramatic discovery placed pressure on the province's labour force as demand for skilled oil field workers and equipment spiked—especially for drill rigs and their crews as the number of wells drilled in the province spiked from 126 in 1946 to over 1,000 in 1950.²⁰ Canadian and American companies alike turned to the United States to provide labour and equipment. If rigs could not be built in Canada because of material shortages, the federal government allowed the components that could not be manufactured in Canada to be brought into the country

duty-free.²¹ The Canadian Department of Immigration allowed American workers into the country on temporary work permits but implemented certain restriction and regulations, including stipulations that US rig operators would have to transfer skills by providing technical training to Canadians and that US rig workers could not take another job without federal government approval. The net result was that by May 1949, 28 US companies were drilling in Alberta with 112 rigs, but only 105 US workers operated in the province (all on temporary six-month work permits) compared to 2,103 Canadian roughnecks.²² Furthermore, American-based Multinational Oil Companies (MNOCs) and their affiliates, like Imperial and British-American, quickly repatriated most of their Canadian personnel from Latin America and the United States, facilitating the transfer of industry knowledge. US drilling, engineering, and seismic crews brought their experiences with the Mid-Continent and Texas fields to Alberta. As Canadian mining engineer Charlie Dunkley later noted, “the type of American these companies transferred up were highly educated, they were all, mostly all technical men so they had either an engineering or geological or legal training.”²³ By the mid-1950s, Alberta was second only to Texas in seismic surveying, and this influx of industry experience reduced the time to completion from two to three months in 1947 to between thirty-five and forty-five days in 1948. Canadian and American investors pumped \$2.115 billion into the Canadian oil patch—\$855 million for capital projects and \$1.26 billion in exploration and development—resulting in twelve new producing fields totalling 2.2 billion barrels of oil by 1953, cementing Alberta’s status as a major petroleum producer.²⁴

With Alberta under Social Credit rule until the early 1970s, relations between provincial officials and industry developed along more informal, “handshake at a barbecue” lines subject to little legislative oversight. Most provincial oil and gas rules and regulations emerged as Orders in Council from the Premier’s Office. Industry organizations like the Western Canadian Petroleum Association (later the Canadian Petroleum Association, a precursor to the Canadian Association of Petroleum Producers) enjoyed access to key ministers and influence over legislation.²⁵ Nathan Tanner, the provincial minister of lands and mines until September 1952, surprised his deputy minister, Hubert Somerville, one day by asking industry representatives to produce their own draft of

legislation while the minister's own draft remained tucked away. When industry representatives could not agree between themselves on the wording of the legislation under discussion, Tanner intervened and presented his draft as a compromise, presenting the Province as a partner in development and honest broker between competing corporate ambitions.²⁶

Canadian oil's pursuit of markets necessarily involved the federal government. In a speech before the Alberta Chamber of Mines and Resources in early January 1951, Manning speculated daily production might reach 170,000 barrels provided the Province could find a suitable market.²⁷ Later that year, over 737 producing wells operated within the province, forcing provincial policy-makers to balance the immediate demands of a booming economy while ensuring long-term prosperity by securing market share and attracting investment capital to sustain the economic boom and distribute the benefits to Albertans. The oil boom reversed Alberta's population decline as the province added 600,000 new people and created 22,000 direct new jobs by 1956. Daily crude exports to the United States grew from approximately 900 barrels in 1951 to 40,600 barrels by 1955, earning the Province an estimated \$7 million in revenues. To address the problem of growing production but limited market reach, Alberta government adopted a prorationing scheme in 1950 to ensure that all producers, both large and small, "shared the pain" of a limited export market.²⁸

Given Canada's small population and the sheer distance separating producers from the main population centres and domestic markets in Eastern Canada, looking toward the United States simply made economic sense. The construction of a continental pipeline network linking Alberta to US markets began in 1950 with the 1,812-kilometre (1,126-mile) Interprovincial (now Enbridge) Pipeline linking Alberta to the Ottawa Valley; the 1,156-kilometre (718-mile) Trans Mountain Pipeline followed in 1953. The two oil pipelines benefited greatly from US investment capital and dramatically enhanced the attractiveness and reach of Canadian crude.²⁹ Indeed, the Trans Mountain Pipeline linking Alberta producers to the West Coast could hardly be justified by the small volume of oil consumed in the Vancouver market, estimated at 46,000 barrels per day in 1950. However, including the nearby US cities of Seattle, Portland, and Spokane increased the size of the market to 250,000 barrels per day and made the project economically viable. Canadian assumptions about the

further integration of the Canadian and US markets dovetailed with those of Washington, such that, by the 1950s, both governments informally considered North America a coherent economic unit. While the Petroleum Administration for Defense (PAD) generally concerned itself with Middle Eastern oil, it also encouraged policies to enhance hemispheric supplies. Considering that the Pacific Northwest in PAD V was then the only major oil-consuming region of the United States not serviced by a pipeline—the region relied on tanker shipments of refined products from California—the PAD facilitated pipeline construction by aiding with the acquisition of scarce steel resources.³⁰

The combination of proven reserves, similar language, laws, institutions, and values highlighted the attractiveness of the Canadian market as a destination for US oil companies and investment capital and allowed the composition of the Canadian oil industry to mimic that of the United States. Carl Nickle, the publisher of *Nickle's Daily Oil Bulletin*, estimated that roughly 260 independent companies as well as every major multinational oil company rushed to Alberta.³¹ Like in the United States, a handful of majors conducted upstream (exploration and production) and downstream (transportation, refining, and marketing) operations from coast-to-coast. The proliferation of independents—smaller companies focused on the upstream—has imbued the Canadian and US oil industries with a dynamic, entrepreneurial mindset that stimulates innovation and experimentation. With smaller reserves to develop compared to the MNOCs, independents typically spend more time and energy ensuring their reserves are produced in a timely fashion to generate cash flow. Moreover, independents operate in a highly competitive environment, and are therefore more willing to take risks to drill wildcat wells or search for more cost-effective ways of doing business.

Dome Exploration (Western) Limited, headed by John (“Jack”) Patrick Gallagher, illustrates the intersection between public policy, private-sector development, and transnational benefits. In 1950, the trustees of the Massachusetts Institute of Technology, as well as the trustees of Harvard and Princeton Universities, decided to invest in the Canadian oil industry. US tax laws allowed American and investors to write off losses incurred anywhere else in the world against their gross income, making Canada an attractive investment opportunity. Ottawa encouraged such perceptions

when, on 14 December 1951, the federal government removed all restrictions on funds entering or leaving the country.³² Furthermore, between 1947 and 1972, Canadian tax laws encouraged the growth of Canada's petroleum producers by allowing companies to deduct provincial royalties, as well as exploration and development expenses, from gross revenue. Companies could either pay income tax on the remaining amount or take an additional depletion allowance of 33.3 per cent before paying taxes. As Dome Petroleum's Charlie Dunkley explained, "as long as you were putting everything that you made back into the business you didn't have to pay tax."³³ Overall US foreign direct investment (FDI) in Canadian oil and gas nearly doubled from \$636 million in 1951 to \$1.13 billion dollars in 1953. In the two decades between 1954 and 1974, US FDI in the Canadian industry reached \$81.57 billion.³⁴

Despite continued spending on exploration and steadily increasing proven reserves from the WCSB, by 1955 daily production leveled off to approximately 40,600 barrels per day because of limited market reach. Part of the difficulty stemmed from the election of November 1952, which gave the Republican Party control of both the Congress and the White House. Dwight D. Eisenhower's inauguration brought new priorities in trade and national security issues, particularly a willingness to establish protectionist measures on oil imports, which now accounted for 20 per cent of domestic US consumption. With higher costs of production relative to other crude suppliers—especially the Middle East—Alberta oil remained a price taker rather than a price setter, dependent as it was on a market established by other sources of crude. Between 1953 and 1955, Alberta's shut-in capacity averaged approximately 30 per cent because it was too expensive to displace other sources from the market. The 1956 Suez Crisis doubled Alberta's daily production from 40,600 barrels to 94,000 barrels, with most of the supplies headed via the Trans Mountain Pipeline to California's refineries.³⁵ At the end of 1957, with only 1.5 per cent of the world's proven reserves, Canada was responsible for 3 per cent of global production.³⁶ Industry spending (exploration, development, operations, and royalties) in Alberta reached a record \$622 million in 1957 before contracting back to \$592.2 million in 1958.³⁷

The rapid, but nonetheless temporary, expansion of Alberta production and additions to proven reserves in 1956–7 resulted in an oil glut

Average Price Alberta Oil versus World Prices (\$/bbl), 1947-1961



Figure 8.1 Average Price Alberta Oil versus World Prices (\$/bbl), 1947-1961

on the Prairies, abruptly bringing industry growth to a sudden stop as export markets contracted 66 per cent in 1958. Drilling in the Alberta peaked at 1,856 wells in 1956 before contracting to 1,450 wells in 1957.³⁸ Industry exploration and development budgets that increased to \$495.2 million in 1957 shrank to \$455.7 million in 1958 and stayed below 1957 levels until 1961. World crude prices temporarily rose from approximately \$2.82 barrel in 1956 to \$3.07 in January 1957 before returning below \$2.97 barrel by 1959. As figure 8.1 illustrates, higher production and transportation costs gave Alberta's oil its defining characteristic as a more expensive crude relative to world prices; between 1948 and 1950, the price of Alberta oil remained nearly 34 per cent higher than world crude prices.³⁹ But the succession of Middle Eastern crises—Iran in 1953, Suez in 1956, and Iraq in 1958—highlighted the political and military volatility of the Middle East, and starkly underlined the dangers of instability. While Canadian oil served as the marginal barrel—the most expensive barrel of oil to produce in order to replace current inventories—US military and economic

planners regarded oil imports from Canada as safe and reliable because of the country's integration into the US transportation and refining network. But the national security argument cut both ways during the Eisenhower years as US independent producers frequently invoked "national security" to restrict oil imports, including those from Canada.⁴⁰

One 1958 State Department policy planning paper listed numerous reasons to exempt Canadian oil from a mandatory program. Pipeline deliveries of Canadian crude to the Pacific Northwest and Mid-continent regions were safer and more reliable than tanker shipments of offshore crude; import restrictions would be contrary to joint Canadian-US plans to share resources in the event of war. US imports were also sufficiently large that they would continue to stimulate further petroleum exploration and development in Canada, indirectly enhancing American security. If the United States restricted imports of Canadian oil, the Canadian industry would search out other markets—perhaps developing the Canadian industry along national (east–west) lines and displacing Venezuelan crude from Eastern Canadian markets. Finally, import restrictions might undermine global perceptions about American commitments to free trade and the open door. Taken together, these arguments pointed to the conclusion that preferential treatment for Canadian oil "is of such importance to the foreign economic policy of the United States that it should be justified personally to representatives of affected countries and to the GATT by the President."⁴¹

Faced with mounting pressure from Alberta's own independent oil producers, Premier Manning lobbied the new federal Conservative government of John Diefenbaker for relief and, at the behest of Alberta's independent producers, proposed the adoption of a national (east–west) energy strategy with the extension of the Interprovincial Pipeline to Montreal refineries. If approved, the new pipeline would displace offshore crude imports from Eastern Canadian markets, much to the consternation of the Canadian affiliates of US-based companies with international sources of production.⁴² On 3 February 1958, a Royal Commission headed by Robert Borden began hearings in Calgary about Canada's oil and gas industry, energy exports, and the potential responsibilities of a soon-to-be created National Energy Board (NEB). Three years later, in 1961, the Diefenbaker government implemented the National Oil Policy (NOP).

The NOP created the NEB with advisory and regulatory powers over the Canadian oil industry. Moreover, the policy divided Canada's domestic market at the Ottawa Valley. Alberta oil would service expanded "natural" markets—the territory west of the Ottawa Valley and into the portions of the Western and Midwestern United States—while markets east of the Ottawa valley would rely on foreign imports from the United States, Venezuela, and the Middle East. Over the next decade, Alberta's crude production doubled from 519,000 barrels per day in 1960 to over 1.1 million barrels per day in 1969. The success of the NOP remained inextricably linked to increased consumption in the United States. Canadian exports grew an average of 20 per cent per year and passed 1 million daily barrels by 1972 despite an (ineffective) informal agreement to limit annual growth of Canadian exports to 5 per cent.⁴³ The fundamental assumptions underpinning the NOP—low world crude prices, increasing additions to proven reserves, excess production in Alberta, and continued access to the US export market—all came to an end in the early 1970s with the onset of the energy crisis, and an increasingly assertive brand of Canadian nationalism created new problems and challenges for the Canadian petroleum industry. Over the course of the 1970s, federal energy policies increasingly became more assertive and ignored the cross-border ties underpinning the Canadian industry, as well as its dependence on access to international markets and investment capital.⁴⁴

Canadian energy policy shifted because of complex domestic and international issues that included questions about US economic and political leadership in the wake of the Vietnam War and Washington's commitment to international economic prosperity following President Nixon's 1971 unilateral decision to bring down the Bretton Woods system, impose wage and price controls, and establish a 10 per cent tax on imports to protect domestic producers, thereby shifting US trade policy in a decidedly more protectionist direction and sending Canadians scrambling to find new trade partners. President Nixon's April 1972 speech before the Canadian Parliament seemed to deliver the eulogy for the special Canada-US relationship that underpinned Canada's post-Second World War economic growth. As Nixon put it, "It is time for us to recognize that we have very separate identities; that we have significant differences, and that nobody's interests are furthered when these realities are obscured."⁴⁵

At the national level, the NEB dominated oil and gas policy-making but remained highly dependent on the information provided by the industry itself, as the NEB lacked the capacity to gather geological, technical, economic, or financial data independently.⁴⁶ As world crude prices began to rise slowly in the early 1970s, concerns emerged about declining Canadian reserves from the WCSB and their implications for the ability of the Canadian industry to supply future domestic needs, let alone sustain continued exports to the United States. (Canada remained a net exporter of petroleum until 1975.⁴⁷) In 1972, the NEB examined Canadian production and reserves data and concluded that future production from all Canadian sources were insufficient to supply demand of both the export and domestic markets after 1973, and it recommended that Ottawa impose direct controls on crude oil exports. On 4 September 1973, the federal government introduced a series of ad hoc measures to reduce Canadian dependence on foreign imports of crude by asking Alberta's producers to freeze prices below world levels, cut 10 per cent of the 1 million barrels of Canadian oil exports to the United States, and levy a 40 cent tax on every remaining barrel exported—the exact difference between the “made in Canada” price and world prices. This triggered an increasingly sharp response from Premier Peter Lougheed. Two days later the Yom Kippur War started, and two weeks after that OPEC's Arab member states began their embargo, bringing the first dramatic increase in world crude prices and radically changing both the context and dynamics of the federal-provincial dispute over the capture of windfall profits.

Domestic and international factors thus prompted a shift in Canadian energy policy in a more protectionist direction. The decade-long battle between the Province and the federal government for control of natural resource rents, plus the commanding American presence in the Canadian oil industry (estimated by the federal government in 1973 to amount to 91 per cent share of the industry) made it easier for the Trudeau government to impose price controls, just as Nixon had in response to the currency crisis a few years before. The federal government then entered a pricing agreement with the Province that fixed Canadian wellhead prices below world levels and established the Foreign Investment Review Agency (FIRA), which required businesses investing in Canada to demonstrate that a “significant benefit” would accrue to the country. FIRA

squeezed out international investors and made middle- and upper-income Canadians the principal source of investment capital, averaging at least \$1 billion per year over the five-year period between 1976 and 1981. Like Mexico and Brazil, Canada also joined the growing global trend of creating a state-owned oil company, Petro-Canada, in 1974 to supplement the private sector, provide better information, increase the Canadian presence in the energy sector, serve as Ottawa's "window" on the industry, address the problem of underinvestment, and help develop Canada's energy "frontiers"—the oil sands, the Arctic, and offshore—to replace the declining reserves of the WCSB. Although the creation of a Crown corporation rankled Calgary's free-market enthusiasts, the Province created its own entity, Alberta Energy Company, in 1973 to stimulate capital investment and lessen dependence on foreign crude.⁴⁸ The oil shocks produced different policy decisions across the Americas, where the price increases acted as a de facto tax on consumers, equal to 2 per cent of GDP throughout the industrial West.⁴⁹ In Venezuela, increased confidence and rising oil and gas revenues provided the impetus to launch a grand development program with the nationalization of its petroleum industry and creation of *Petróleos de Venezuela S. A. (PDVSA)* on 1 January 1976. In Canada, fear—of growing provincial power and wealth, of economic stagnation brought on by shortages of petroleum, of freezing in the dark—drove federal policies toward greater state intervention. Collectively, the policies assumed both that US-owned multinationals operating in the Canadian oil patch could no longer be trusted to serve the national interest and that world oil prices would continue to rise. They also assumed that the federal government needed to serve as a catalyst to ensure that Canadian natural resources, particularly the higher-cost projects on the energy frontiers, would be developed for the benefit of Canadians.⁵⁰

Cumulatively, energy policies in the 1970s self-consciously pushed the Canadian industry away from continued integration with the United States and toward self-sufficiency. Symbolically, this meant industry operations shifted away from the low-cost but declining conventional reserves to bigger and ultimately riskier "megaprojects" with high upfront costs and long-term investment horizons only economically feasible given higher crude prices attained in the post-embargo world. In the United States, President Richard Nixon introduced price controls, encouraged

conservation, and launched Project Independence to attain energy independence by 1980.⁵¹ Under Trudeau, the Canadian Science Council invested nearly \$600 million in renewable energy programs, like solar energy, at the same time that federal dollars helped diversify the Canadian oil industry's sources of supply by joining with the Province of Alberta to bail out the Syncrude oil sands project.⁵² Federal subsidies and tax breaks during the prolonged boom between 1947 and 1972 encouraged producers to invest in exploration and development so that companies (and their investors) would not have to pay taxes. Dome's Charlie Dunkley noted that the system worked so long as companies spent their money wisely, deferring the payment of dividends to avoid taxes by turning profits back into exploration and development. "By the time 1972 came along, oil companies who had pursued the same policies that Dome had of ploughing everything back into the business, they were starting to pay tax because they couldn't spend their money prudently." Companies took greater risks or paid too much for land and wound up drilling dry holes in the process. "We [at Dome]," conceded Dunkley, "got sloppy in our exploration."⁵³

Federal and provincial policies combined to drastically alter the economics of petroleum exploration in the 1970s because four factors—rising crude prices, growing inflation, a rapidly changing regulatory and royalty environment, and the perception that the reserves of the WCSB were in decline—made it cheaper for companies with adequate cash reserves to acquire production through mergers and acquisitions. For Canadian companies that continued to develop their own reserves, federal policies encouraged them to pursue the more expensive and technologically complex "frontier areas" of the Arctic and offshore Newfoundland and Nova Scotia, where production costs were substantially greater because of harsher environmental conditions and shorter drilling seasons. To pursue his Arctic dream, Dome Petroleum's Jack Gallagher assembled a team of naval architects and engineers to build thirty-three ships of various sizes and classes for a cool \$600 million before drilling for a single barrel of oil from the Beaufort Sea. "If the gamble comes off," wrote *Maclean's* magazine, "Gallagher will have created in Canada an internationally ranked oil company. . . . If it fails, Gallagher's lifework could be endangered . . . and, incidentally, Canada's economic future will be that much bleaker."⁵⁴

Despite record crude prices, the economics of the project remained dubious in the absence of significant subsidies that distorted markets and placed government in the position of picking winners and losers. In 1977, at the urging of Jack Gallagher, Ottawa introduced a federal tax incentive known as “super-depletion” to stimulate frontier exploration. Super-depletion allowed companies to write off 166.66 per cent of their expenses from gross income above the standard 33.33 per cent depletion allowance. Dome eventually struck oil at Kanopar in 1979, where it produced 12,000 barrels per day. But even with super-depletion the project remained uneconomical because production costs were prohibitively high, a point Gallagher later conceded. “When you have over \$600 million up there which is inactive two-thirds of the year [this] drastically increases the costs.” Dome’s executives later estimated that each well drilled in the Arctic had to produce a minimum of 400 million barrels simply to break even.⁵⁵

The apex of nationalization came in the aftermath of the second price shock in the wake of the 1978–9 Iranian Revolution, which resulted in the removal of a million daily barrels from world markets and created a panic that drove prices above \$40 per barrel. Internationally, higher prices accelerated fears of shortages, raising the stakes for consuming states seeking to attain secure supplies. Polling completed for the Canadian Petroleum Association in the autumn of 1980 revealed that Canadians saw energy as the second most important issue confronting the nation after inflation. Half of Canadians thought the country would suffer energy shortages within a year and more than half were willing to pay more to secure energy supplies. The poll also clearly showed that Canadians trusted the federal government more than industry, with an overwhelming majority—75 per cent—favouring government regulation to increase Canadian control and ownership of the petroleum industry.⁵⁶ Combined with the return to power of Pierre Trudeau’s Liberals after a short-lived Conservative minority government under Joe Clark, the October 1980 announcement of the NEP offered the prime minister one last chance to wrestle with the troublesome energy question, quell public fears about the energy crisis, and reassert diminished federal authority at the hands of the provinces.⁵⁷ Crafted in secret, and completed without consulting either the industry or the provincial governments, the NEP attempted a dramatic

restructuring of industry economics, taxation, and operations. The NEP's formal unveiling as part of the federal budget on 26 October 1980 struck a defiantly nationalist tone, establishing three objectives for federal policy:

- It must establish the basis for Canadians to seize control of their own energy future through *security* of supply and ultimate independence from the world oil market.
- It must offer to Canadians, all Canadians, the real *opportunity* to participate in the energy industry in general and the petroleum industry in particular, and to share in the benefits of industry expansion.
- It must establish a petroleum pricing and revenue-sharing regime that recognizes the requirement of *fairness* to all Canadians no matter where they live.⁵⁸

Anticipating oil shortages as early as 1985, and believing that world prices no longer reflected adherence to market fundamentals of supply and demand, the NEP announcement made it clear that “any country able to dissociate itself from the world oil market of the 1980s should do so, and quickly. Canada is one of the few that can.”⁵⁹ At an estimated cost of \$11.6 billion, the NEP promised to achieve energy self-sufficiency and create conditions to realize the government's goal of achieving at least 50 per cent Canadian ownership by 1990. Altogether, the Department of Energy, Mines and Resources anticipated that the bevy of new taxes and programs would generate at least \$24 billion in revenues for the federal government.⁶⁰

To generate greater revenues for the federal government, the NEP launched the Petroleum and Gas Revenue Tax (PGRT). Loathed in industry circles as little more than a royalty on gross revenue, the PGRT established a flat 8 per cent tax on operating revenues and eliminated deductions for exploration and development expenses.⁶¹ Some funds would be returned to the industry via Petroleum Incentives Payments (PIP), but the PGRT would raise government revenues. Capitalized at \$5 billion for the 1981–5 period, PIP grants replaced writeoffs of exploration costs and the earned depletion allowance (that included a further one-third of exploration and development costs against resource income up to 25 per

cent) as the principal federal means of stimulating petroleum exploration, changing the industry's economics in the process. Prior to the NEP, profits from production typically financed exploration budgets—if a company was producing and selling oil and natural gas, it would invest in exploration. PIP grants became the chief means of stimulating exploration, and they rewarded businesses with at least 50 per cent Canadian ownership (as determined by the newly created Petroleum Monitoring Agency and enforced by FIRA) with payments equal to 10 per cent of costs for oil and gas exploration anywhere in Canada; the PIP increased to 35 per cent when the Canadian ownership level was 75 per cent or greater. The real incentive, however, lay in exploration and production on the frontiers, where all projects qualified for a 25 per cent PIP grant, but this increased to 80 per cent if the company was more than 74 per cent Canadian-owned, meaning that the government would spend “\$4 for every \$1 the firm is able to invest.”⁶²

To advance its nationalist agenda, and to administer the PIP grants, Ottawa created the Canada Oil and Gas Lands Administration (COGLA) to manage the approval process for exploration and development on the frontier projects like the Beaufort Sea and offshore Newfoundland and the Canadian Ownership Account (COA). COGLA regulations stipulated that exploration on federally controlled land be done with Canadian labour and equipment when possible and that companies had to have a minimum Canadian ownership of 50 per cent and effectively were the only way that the federal government could cap PIP expenditures that by 1983 were already \$1 billion beyond projections.⁶³ The COA established taxes on all oil and gas consumption in Canada and would be “used solely to finance and increase of public ownership in the energy sector.”⁶⁴ One of the most controversial nationalist measures, though, gave Petro-Canada an automatic 25 per cent ownership stake in projects undertaken on Crown lands.⁶⁵ In a nod to Canada's postwar legacy of multilateralism, the NEP allocated \$250 million for the creation of Petro-Canada International to “seek joint-ventures opportunities with other state-owned oil companies in the western world.” Toward that end, the government announced that preliminary discussions with Pemex in Mexico and PDVSA in Venezuela had already begun in pursuit of regional oil and gas development.⁶⁶ Unsurprisingly, given its explicitly nationalist aims and the

incentives toward Canadianization, the NEP triggered a renewed round of industry mergers and acquisitions by Canadian oil companies, who believed they could buy oil in the ground cheaper than they could find it via exploration. They were also eager to capitalize on the new federal Canadianization incentives. A few months after the announcement of the NEP, Petro-Canada kicked off a fifteen-month industry-wide buying spree lasting from February 1981 to August 1982 in which it paid \$1.7 billion to acquire Petrofina Canada, the subsidiary of Belgium's Petrofina S. A. Altogether, fourteen additional major mergers and acquisitions (valued at \$43 million or more) took place at a total cost of \$7.67 billion. Arguably, the frenzy of nationalist mergers and acquisitions climaxed with Dome Canada's \$2 billion purchase of Connecticut-based Conoco's 53 per cent stake of Hudson's Bay Oil and Gas (HBOG) in the summer of 1981. While most media and public attention focused on the majors, hundreds of independents operating in the Canadian oil patch also got in on the act, "farming-in" (paying a portion of exploration costs) on lands controlled by foreign-owned firms.⁶⁷ Most of the buyouts were paid for in US dollars, financed on the basis of short-term loans, or, in the case of Petro-Canada and the Canadian Development Corporation, taxpayer money. The sheer volume of acquisitions drove up inflation and resulted in the devaluation of the Canadian dollar that, five years before, in 1976, traded at par with the US greenback. By mid-1981, however, just as the orgy of Canadianization reached a crescendo with Dome's acquisition of Conoco's stake in HBOG, the value of the Canadian dollar plunged to \$0.76 against the US dollar and the inflation rate hit 12.9 per cent. The grim news prompted Finance Minister Alan MacEachen to instruct Canadian banks to stop lending to oil companies hoping to finance further mergers and acquisitions.⁶⁸ To restore flagging confidence in the Canadian dollar, the Bank of Canada raised interest rates in August 1981 to a staggering 21.03 per cent—its highest level in history—and the Canadian government borrowed from the banks to back the dollar.⁶⁹

The NEP also kick-started negotiations between the federal and provincial governments to reach a new agreement on pricing and revenue sharing signed by Lougheed and Trudeau on 1 September 1981. The agreement forecast that world crude prices would rise and established the base price of "made in Canada" oil—by fiat—at \$16.75 per barrel, approximately 85

per cent of world levels. Over the next decade, the deal projected crude prices would increase 13 per cent a year to reach \$67 per barrel by 1 July 1990. Ottawa and Edmonton fully expected the deal would produce oil and gas revenues of \$212.8 billion dollars over its five-year term. But instead of rising, world crude prices began declining months later in March 1982 when OPEC cut its prices by \$5 per barrel. Globally, petroleum consumption reached 63.1 million daily barrels in 1980 before declining to 58.7 million in 1983 as a result of more effective conservation measures and the beginning of a recession in the Western economies in 1982. Furthermore, overproduction, both by OPEC and non-OPEC producers, resulted in a sizable glut on the world market, placing gradual downward pressure on prices until the elimination of supply overhangs.⁷⁰

The decision to divorce Canadian oil from world prices and encourage development of the energy frontiers produced different problems. The federal government discovered that estimates for the PIP grants severely underestimated costs. The June 1982 budget saw the federal deficit climb to \$19.6 billion, \$9.1 billion over the \$10.5 billion deficit forecast just seven months earlier.⁷¹ As world crude prices declined, the gap between world and domestic prices widened, making frontier projects envisioned to provide future supplies unprofitable. By early 1983, the “made in Canada” price of \$43.88 per barrel for “new oil” proved substantially higher than the world market price of \$29 per barrel. Moreover, federal restrictions on oil exports to the United States transformed Canada from a net oil exporter to a net importer by 1976.⁷² Between 1972 and 1984, Canadian oil dropped from supplying 50 per cent of US crude imports to about 7 per cent. Because softening world crude prices made imports cheaper for Canadian consumers, the combination effectively shut in Alberta oil. In a period when the NEP forecast supply shortfalls and promised to make Canada energy self-sufficient, Alberta’s crude production declined every year between 1980 and 1982, when production totals were 20.6 per cent lower than those in 1979. Daily production increased slightly to 1.03 million barrels in 1984 before dropping to 914,722 barrels in 1986.⁷³

Meanwhile, the wave of industry nationalizations in 1981 transformed the energy crisis into a financial one because of the investment decisions of Canada’s major banks to finance Canadianization. Dome financed its post-NEP expansion with high-interest short-term loans, and by early

1982 Dome faced the prospect of paying off a crippling debt of \$6.3 billion to creditors with few liquid assets or revenue sources, transforming the issue of Dome's survival from an energy question to one implicating the solvency of Canada's financial system because three of Canada's big banks—Toronto Dominion, the Bank of Montreal, and the Commerce—each loaned Dome over \$1 billion. If the company defaulted on those loans, policy-makers feared it might bring down the nation's banking system. Facing few good alternatives, the federal government contributed \$500 million to a \$1 billion bailout package that also forced Jack Gallagher to step down as Dome's chairman in 1983.⁷⁴

Perhaps the greatest irony of Trudeau's nationalization program was that it found itself increasingly at odds with emerging economic policies in the United Kingdom and the United States that reasserted interdependence and globalization after state interventions in the economy failed to slay the twin demons of stagnant economic growth and inflation. Starting with the 1979 election of Margaret Thatcher, followed by Ronald Reagan's inauguration as president in 1981, the neoliberal revolution revived global capitalism. Characterized by reduced taxes, privatization of state-run enterprises, cutbacks to public-sector spending, the pursuit of free trade, and deregulation, the policies pursued by the US and UK governments during this period kick-started two and a half decades of unprecedented economic expansion. Bowing to the reality that federal energy policies failed to achieve their objectives, in July 1984, the new Canadian prime minister, John Turner, announced that the federal government would re-examine aspects of the NEP. Accordingly, it began dismantling the unpopular program months before the 17 September federal election brought Brian Mulroney's Progressive Conservatives to power. Armed with a more pragmatic neoliberal approach than either Prime Minister Thatcher or President Reagan, Mulroney nevertheless advocated a free market approach and a liberalized trade agenda that emphasized improved relations with the United States, accessing greater volumes of international capital, and reliance on market forces to allocate resources.⁷⁵

Conservative energy policies predated Mulroney's election when energy critic Pat Carney began consulting with industry groups to help formulate the Conservative's oil and gas policies. Mulroney's Conservatives sought to reduce the role of government, re-establish investor confidence,

and ensure equity of prices and supply.⁷⁶ The Western Accord (June 1985) deregulated oil and gas pricing established during the Trudeau years, replaced the PIP grants with tax incentives available to any company, and abolished export restrictions adopted during the oil shocks.⁷⁷ Gone were the more overtly nationalist overtones of FIRA; in its stead came Investment Canada, with its mandate to attract foreign investment and capital.⁷⁸

The path pushing Canada toward interdependence and globalization passed, once again, through the United States. In 1984, even after the nationalist interventions of the previous decade, 75.6 per cent of Canadian exports went to the United States and the Liberal government initiated a study by Donald Macdonald that concluded that Canadians would benefit greatly from reducing trade barriers with the United States. Negotiations began between Canadian and American representatives toward a free trade agreement in May 1986. Ratification of the Canada-US Free Trade Agreement (CUFTA) in 1988 signalled the formal transformation of North American energy markets to interdependence, with market forces lowering transaction costs, reducing the need for lengthy hearings, and determining both prices and the volume of trade.⁷⁹ Significantly, the energy provisions within the CUFTA provided Canadian energy producers with security of market while simultaneously guaranteeing the United States security of supply. Perhaps most important of all in the aftermath of the NEP, the agreement prevented either government from enacting discriminatory measures against the other. Further steps included the privatization of Petro-Canada in 1990. As a result, the United States began importing ever-larger volumes of crude oil and natural gas from Canada. Access to American markets fuelled the expansion of the Canadian industry. Canada tripled the volume of oil exported to the United States between 1985 and 2007, becoming the single largest exporter of crude oil to the United States in 2004. Meanwhile, over the same period, natural gas exports quadrupled and supplied approximately 16.5 per cent of US annual natural gas demand.⁸⁰

Clearly, the globalization and integration of the Canadian and US petroleum industries was far from straightforward. Certainly, proximity, cross-border ties, shared values and beliefs, as well as common institutions and regulatory frameworks, made integration easier, but they did

US Imports of Canadian Crude, 1987-2000 (bbl)

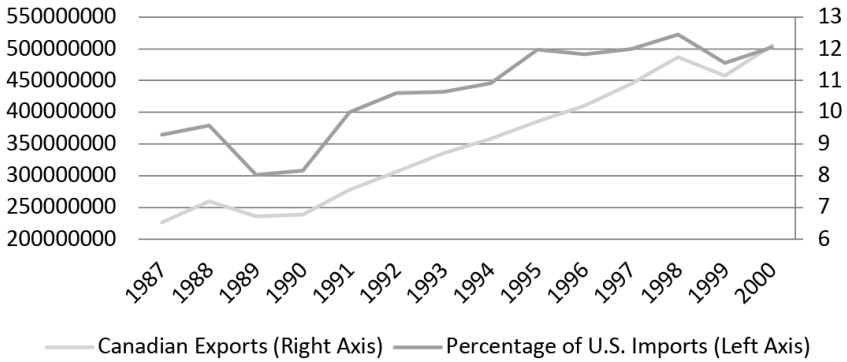


Figure 8.2 US Imports of Canadian Crude, 1987–2000 (bbl)

not make it inevitable, or, I hasten to add, permanent. At crucial points—like with the import quota programs of the 1950s or the Canadianization drive of the 1970s—one state or the other stepped back from further integration. Current petroleum policies, buffeted as they are by domestic affairs, developments within the global industry, technological change, and environmental concerns, are bound to remain dynamic.

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