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The Future of the Canadian Energy Industry in a Low Price Commodity Environment

Monika U. Ehrman*

INTRODUCTION

As wildfires raced across Northern Alberta in May and June 2016, they consumed over 1,930 square miles—almost the size of the State of Delaware or the Canadian province of Prince Edward Island—and displaced over 80,000 residents, mainly in the oilfield town of Fort McMurray. The City of Fort McMurray, Alberta, was once a small community known primarily for its rich natural resources, including fish, rock salt, and timber. In the early 1900s, Canada’s Federal Department of Mines, in conjunction with the University of Alberta, performed separation experiments to extract bitumen1 from the oil-rich sands.2 Decades later, in 1967, the Great Canadian Oil Sands—now Suncor—“proved that bitumen could successfully be removed [from] the oil sand and upgraded the crude oil on a large scale.”3 The commercialization and reserve recognition of the oil sands transformed Canada into the sixth largest oil producer in the world4 and the third largest holder of petroleum reserves, after Venezuela and Saudi Arabia.5 The massive fires, visible even in satellite photos, not only endangered lives and personal property, but also threatened to consume certain oil sands project infrastructure.

1. H. WILLIAMS & C. MEYERS, OIL AND GAS LAW: MANUAL OF OIL AND GAS TERMS 234 (2015) (“A naturally occurring viscous mixture, mainly of hydrocarbons heavier than pentane, that may contain sulphur compounds and that in its naturally occurring viscous state is not recoverable at a commercial rate through a well.”).
3. Id.
Ultimately, these fires caused the shutdown of eleven oil sands plants—1.2 million barrels of oil a day were taken off-line.6

The wildfires could not have occurred at a worse time in Alberta. Commodity price volatility in the period following 2014, when West Texas Intermediate peaked at over $103 per barrel, was apparent in its subsequent plummet to $30 per barrel by February 2016.7 Although crude oil prices have increased slightly since then, they recently closed around the meager price of $44 per barrel in August 2016.8 Natural gas prices, too, have fallen since 2014, closing under $3 per mmBtu in August 2016 from a high of $6 per mmBtu in February 2014.9 This significant decrease in commodity price has caused turmoil in the Canadian energy industry; it is especially prevalent in the exploration and production (upstream) sector, which is more sensitive to negative price fluctuations than the cost-of-service midstream and downstream refining sectors. In fact, the steep decline in prices since 2014 likely caused a $50 billion drop in capital spending—“the largest two-year decline since the Canadian Association of Petroleum Producers . . . and its predecessor organizations started tracking this data in 1947 . . . .”10 Other tangible effects on the energy industry sector include the loss of 110,000 jobs (including indirect jobs) and a decrease in Canadian government revenues from royalties and tax payments.11

The recent downturn in commodity prices is having a major impact on American and Canadian energy sectors as a whole. In the U.S., “[ninety exploration and production] companies have filed for Chapter 11 protection since the beginning of 2015[,]” with a combined defaulted debt of $66.5 billion ($26.5 billion in secured debt and $40.0 billion in

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8. Id.


11. Id. Indirect employment effects may arise from transactions done by those directly employed in the oil and gas sector (e.g., drilling, extraction, support).
Further, though merger and acquisition (M&A) activity is expected to rise in the near-term, estimates show that at least 135 exploration and production companies—including “Comstock Resources with a debt load of $1.2 billion, W&T Offshore with debts of $1.4 billion, EXCO Resources, which owes its creditors $1.2 billion, and Chesapeake Energy with $14 billion outstanding”—“are at a high risk of going under.” The short-term price outlook for crude oil and natural gas appears grim, and many publicly traded U.S. companies have relegated future development planning to price forecasts in the mid-$60s. Low commodity prices may be here to stay for quite some time.

However, as morose as the future appears for American businesses, it is far worse for Canadian exploration and production companies. Its first major challenge is that the Canadian hydrocarbon basin is heavily comprised of natural gas, which trades at multiples lower than crude oil. Its second major challenge is that the Canadian energy sector relies heavily upon exports to the U.S., primarily, and other countries for sale of same. In 2015, over 40% of Canadian energy production was sent to the U.S. Accordingly, any change in U.S. energy supply–demand metrics correlates with an associated change in Canadian energy exports. For example, Canadian natural gas imports, primarily utilized for electric power generation, have been replaced with domestic U.S. natural gas production, which has increased after the advent and wide-scale use of hydraulic fracturing. Additionally, the economic deflation and contraction of Brazil, Russia, India, and China, in addition to Japan and other liquefied natural gas (LNG) importers, have also resulted in decreased Canadian energy exports. Finally, changes in provincial and federal governments have resulted in administrations that do not favor hydrocarbon investment.

This article, adapted from the LSU Law Center symposium, Emerging Issues at the Intersection of Energy and Natural Resources (March 4, 2016), reviews, in brief, the decline in petroleum commodity prices; the magnitude and importance of the Canadian exploration and production sector (with particular attention given to its relationship with the U.S.); the

15. Cosponsored by the John B. Laborde Energy Law Center, the Journal of Energy Law and Resources, the LSU School of the Coast and Environment, and Campanile Charities.
effects of the drop in commodity prices and the resultant challenges faced by the Canadian energy industry; and possible strategies for Canada to weather the decline and improve its resistance to future price volatility.

I. OVERVIEW OF THE CANADIAN EXPLORATION AND PRODUCTION SECTOR AND ITS RELATIONSHIP WITH THE UNITED STATES

Oil and gas makes up 10.6% of Canadian Gross Domestic Product. 16 97% of Canadian crude oil exports flow to the U.S., while 100% of Canadian natural gas exports flow to its southerly neighbor. 17 These exports total $146 billion. 18 Additionally, revenues from energy industries include corporate income taxes levied on companies operating in Canada; indirect taxes (sales and payroll); Crown royalties, which are made up of “the share of the value of the oil and gas extracted that is paid to the Crown as the resource owner[,]” and “Crown land sales, which are paid to the Crown in order to acquire the resource rights for specific properties.” 19 The Canadian oil and gas industry provided $20.3 billion over the last five years. 20

For decades, Canada has been the largest energy exporter to the U.S., which imports 39% of its crude oil and 98% of its natural gas from Canada. 21 These countries enjoy a close, relatively unprotected border, and share a comfortable political relationship. Their geographical proximity, which offers relative ease in developing energy exporting infrastructure, such as pipelines, rail, and trucks, is a determinative factor in Canada’s energy export advantage. The advent of the shale revolution heralded a paradigm shift in global energy policy and geopolitics. Long an importer of petroleum, the U.S. relied on the whim of the Organization for Petroleum Exporting Countries (OPEC), the global oil cartel, to set the global commodity price of crude oil. However, George Mitchell’s groundbreaking research using a combination of hydraulic fracturing and horizontal drilling unlocked monumental, previously unrecoverable

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16. NATURAL RESOURCES CANADA, ENERGY FACT BOOK 2015–2016 4 (using 2014 numbers and including direct and indirect contributions; stating that “[o]il and gas includes oil and gas extraction, support activities for oil and gas extraction, natural gas distribution, petroleum refineries, and pipeline transportation.”) [hereinafter ENERGY FACT BOOK].
17. Id. at 5.
18. Id. (using 2014 numbers).
19. Id. at 7.
20. Id.
21. Id. at 5.
reserves and unleashed the potential for U.S. energy independence\(^{22}\)—vindicating President Richard Nixon and his vision for the same.\(^ {23}\)

Canada also benefited from this monumental hydrocarbon technology advance, utilizing the process in the giant Western Canadian Sedimentary Basin and Alberta and British Columbia shale plays, such as the Montney.\(^ {24}\) Production in the northern Alberta oil sands also increased, as did the related foreign acquisitions of Canadian energy companies—led, in part, by China, which seeks to secure energy supplies throughout the world. As a result, Chinese companies have acquired many companies and interests as they look to establish a strong presence in resource-rich Canada.\(^ {25}\) Unlike the U.S., which has been less than hospitable to Chinese M&A overtures, Canada’s open economy has embraced these deals. Between 2010 and 2013, Chinese companies made significant acquisitions in Canada including Sinopec’s acquisition of ConocoPhillips Company’s 9.03% stake in Syncrude Canada and China National Offshore Oil Corporation Ltd.’s acquisition of Nexen.\(^ {26}\) Other major acquisitions included the purchase of Talisman Energy by Spain’s Repsol, valued at $8.3 billion (USD), and Malaysian national oil company, PETRONAS, acquiring Progress Energy Resources Corp. for $6 billion.\(^ {27}\)

Canadian M&A activity peaked along with crude oil prices in 2014. And though the subsequent price decline was unwelcome, it certainly was not unexpected to those familiar with the turbulence of the petroleum economy. However, what most surprised energy analysts and industry officials was OPEC’s apparent refusal, or inability, to curtail its members’ production. Energy observers hypothesized that OPEC, disgruntled over the American impact of shale oil production, decided to defend its market position.\(^ {28}\) After all, in 2014 the U.S. surpassed Saudi Arabia to become...
the world’s largest producer of petroleum.\textsuperscript{29} To achieve this stature less than fifty years after the Arab oil embargo and price shocks is astounding. The U.S., once so worried about a lack of energy that it permitted the construction of several LNG import terminals, now exports natural gas and has become the global swing supplier. Thus, experts surmised that OPEC desired ridding the American threat and employed the ages old strategy used by Rockefeller and his fellow Robber Barons—flood the market with supply, which would result in a corresponding drop in price and outlast the competition.

II. EFFECTS OF THE COMMODITY PRICE DECLINE AND CHALLENGES TO THE CANADIAN ECONOMY

Canadian exploration and production companies, like their American counterparts, initially believed that the decline in commodity prices would be short-lived, similar to the 2009 mini-bust. Analysts concluded that several OPEC members could not afford to suffer low crude oil prices for any significant duration. The budgets for most OPEC members, many of which are petrostates, are closely tied to revenues averaging $100 or more per barrel crude oil. The Energy Information Administration (EIA) reported:

Members of the Organization of the Petroleum Exporting Countries (OPEC) earned $404 billion in net oil export revenue in 2015, according to U.S. Energy Information Administration (EIA) estimates. These earnings represent a 46\% decline from $753 billion earned in 2014. Although these net export earnings include Iran’s revenues, the net export revenue is not adjusted for possible price discounts that Iran may have offered its customers between late 2011 and January 2016, when nuclear-related sanctions targeting Iran’s oil sales were in place . . . OPEC members’ 2015 net oil export revenue was at the lowest level since 2004, with significant implications for the fiscal condition of member countries that rely heavily on oil sales to fund social programs and to import other goods and services. In inflation-adjusted terms, OPEC net oil export revenue totaled $606 per person in 2015, down 83\% from the 1980 level of $3,500 per person.\textsuperscript{30}


Canadian producers benefitted from the experience of past booms and were reluctant to take immediate, drastic actions such as project stoppages or layoffs. These lessons were hard-learned in the 1980s, when mass layoffs resulted in a “missing generation” of skilled oilfield workers, including petroleum engineers and geologists. However, crude oil prices remained low through 2015, leaving companies to pursue various strategies to cut costs. Repsol Oil & Gas, which acquired former Canadian darling Talisman Energy for $15 billion in late 2014, “cut 10 to 15 per cent of its Calgary workforce in light of ‘low global energy prices’ and expected reductions in future activity levels” in 2016. Canadian headquarters of American companies were shuttered. In December 2014, Houston-based EOG Resources closed its Calgary headquarters and “sold most of its Western Canadian assets to Calgary energy giant Canadian Natural Resources Ltd” with a package of southwestern Manitoba assets going to Winnipeg-based Tundra Oil and Gas Ltd. “The remaining Canadian EOG assets, mainly in the Horn River Basin of northeastern B.C. but including some Alberta assets being retained because of partner agreements, are to be managed from the [U.S.]” In 2015, “Suncor, the largest oil sands operator, announced plans to eliminate about 1,000 contract jobs [and] Shell Canada said it would cut its oil sands work force by about 10[%].”

Former purchasers also suffered buyer’s remorse as “oil prices fell from over $100 per barrel in 2014 to $40 per barrel in mid-2016 . . . .” Regretting their high-priced purchases, Chinese firms implemented measures such as “cost cutting, capital postponement, and layoffs to preserve investments.” Further, while those companies have not decided to abandon Canada, they are “starting to approach oil investment from a value perspective [ . . . and are] less speculative and more conservative in

31. See Alex Nussbaum & David Wethe, Lost Generation Of Oil Workers Leaves Few Options For Next Boom, BLOOMBERG (July 7, 2016), rigzone.com/news/oil_gas/a/145492/Lost_Generation_Of_Oil_Workers_Leaves_Few_Options_For_Next_Boom [https://perma.cc/9KFF-RR3V].
34. Id.
36. Mawji, supra note 25.
37. Id.
the price they are willing to pay with the expectation of unlocking wealth."\textsuperscript{38}

Projects, current and planned, were also postponed or cancelled. Cenovus Energy stated it would “reduce investment spending by 27\%", and set aside plans for two oil sands project expansions."\textsuperscript{39} Additionally, many oil sands projects requiring Steam Assisted Gravity Drainage (SAGD)—the most common technique for extracting the deepest deposits of oil sands—are now uneconomic.\textsuperscript{40} Smaller companies’ SAGD projects, which were approved at higher commodity prices, are now unworkable in today’s world of $50 crude.\textsuperscript{41} According to the Bank of Nova Scotia, “[t]he break-even point for a brand-new SAGD project, including a [nine percent] average return on investment, requires crude prices of at least $65 a barrel, which is among the highest extraction cost in the oil industry . . . ."\textsuperscript{42} Moreover, unlike the typical conventional well or even unconventional shale well, oil sands operations are not easily alterable and require a long-term stable price environment to be economic. These massive projects do not have operational flexibility, forcing companies to maintain production “to cover the sizable debt on their multibillion-dollar investments.”\textsuperscript{43} And halting production has the added consequence of ceding market share to other global producers.\textsuperscript{44}

The Canadian exploration and production sector also faces several other major challenges. In particular, Canadian resource basins are primarily composed of natural gas, where natural gas is trading in lower multiples than crude oil. Additionally, many Canadian subsidiaries of the U.S. or other foreign companies must compete with other home or foreign assets. Tough economic conditions require companies to invest limited dollars in projects that produce the greatest returns. With above-mentioned EOG Resources, its divestment decision was “consistent with EOG’s focus on its outstanding U.S. crude oil opportunities.”\textsuperscript{45} Canada also faces an overreliance on the U.S. market, along with those associated cross-border transportation infrastructure challenges such as the failure of the

\textsuperscript{38} Id.
\textsuperscript{39} Austen, supra note 35.
\textsuperscript{40} Chester Dawson, Falling Crude Prices Upend Canada’s Oil Sands Projects, WALL ST. J., July 22, 2015, wsj.com/articles/falling-crude-prices-upend-canadas-oil-sands-projects-1437609134 [https://perma.cc/4Y7G-DUL5].
\textsuperscript{41} Id.
\textsuperscript{42} Id.
\textsuperscript{43} Austen, supra note 35.
\textsuperscript{44} Id.
\textsuperscript{45} Healing, supra note 33 ("We plan to reinvest some of the proceeds in these high-return assets, while retaining our position in the Horn River Basin and other exploration areas," said EOG chairman and CEO Bill Thomas in the release.").
Keystone Pipeline, which President Obama announced that he was rejecting on November 6, 2015.\textsuperscript{46}

The contentious pipeline debate and effective halting of the project did not better the Canadian energy environment. Rather, stopping the pipeline removes much needed market liquidity and takeaway capacity options. The once-reliable Canadian LNG markets faltered as the U.S. and Australia entered the LNG export arena by building new LNG export facilities.\textsuperscript{47}

Perhaps the greatest challenge to the Canadian energy sector is the current political climate. Turnover in both the energy-heavy province of Alberta and in the Canadian federal government resulted in administrations that favor environmental progress within the energy sectors. In May 2015, Albertans voted in a New Democratic Party (NDP) government to succeed the longstanding Progressive Conservative party. The NDP Leader and now Premier of Alberta, Rachel Notley, promptly announced her intention to move Alberta away from hydrocarbons; to impose a hydrocarbon tax (similar to the one already passed in neighboring British Columbia); and to declare to American investors that Alberta was not open to petroleum investment.\textsuperscript{48} Since those first days, however, Premier Notley appears to have shifted her ideologies, recently supporting additional oil sands projects, favorable tax systems, and encouraging private investment. However, she did temper her speech to the investment community by commenting that changes to greenhouse gas emissions and the provincial royalty scheme were likely, but would be done in consultation with all stakeholders.\textsuperscript{49}

Likewise, political winds swept through the Canadian federal government during the October 2015 election. Liberal Party Leader Justin Trudeau succeeded Conservative Party of Canada Prime Minister Stephen Harper over thirty-five years after his father, Pierre Elliott Trudeau’s dynamic legacy, which included the creation of a national energy company—Petro Canada. In his first days in office, Prime Minister Justin Trudeau voiced


his support for environmental measures that move away from the use of hydrocarbons. Most recently, Prime Minister Trudeau proposed a federal carbon price, setting carbon pollution at $10 CAD per ton in 2018 and rising annually to $50 CAD per ton in 2022.50 “Trudeau said his measures would help Canada meet greenhouse gas emission cuts agreed under the Paris climate change accords.”51 As a result, the conflation of these events has resulted in great uncertainty in the Canadian energy sector.

III. CANADIAN STRATEGIES TO WEATHER THE DOWNTURN

Ultimately, Canada, like its southern neighbor, optimistically hopes for an increase in hydrocarbon commodity prices. The most recent OPEC meeting in September 2016 gave confidence to markets and producers alike that supplies may ramp down in the near future. Otherwise, it is relegated to reform and adapt, much as the industry did during the mini-downturn in 2009. During this market decline, companies were incentivized to economize shale well operations, learning to complete hydraulic fracturing operations in less time and with fewer resources.

However, Canadian strengths include prolific, unconventional reserves and a favorable currency hedge in that Canadian companies are spending in the lower-valued Canadian dollar, but selling their commodities in the higher U.S. dollar. This natural and protective hedge has alleviated some of the pain associated with decreased commodity prices.

Additionally, Canada possesses proven long-term assets such as the Western Canadian Sedimentary Basin, the oil sands, and the offshore Newfoundland assets of the Hibernia oilfield. Further, even though economies have shrunk worldwide, Canada’s access to the Atlantic, Pacific, and Arctic Oceans offer easy access for LNG transportation and Arctic energy exploration once markets improve. Strategies that Canada should employ include cutting costs; considering foreign ownership (which may lead to divestiture during downturns); and strategic M&A activity. Longer term, provincial and federal governments should embrace the idea of energy realities, which do not foreclose environmental protections or energy portfolio diversification. Also, consideration should be given to the propriety of foreign control of Canadian assets. Although foreign control indicates that a nation operates within open markets—i.e., investments are controlled by both domestic and foreign companies—and is supportive of “an efficient,

51. Id.
competitive, and innovative energy system," foreign controlled assets are often subject to closer financial and prospective security in tightening capital markets and during periods of decreased revenues.

CONCLUSION

The uniqueness of a changed North American energy system means that Canada, too, must adapt to the U.S.’s transformed role from energy importer to swing supplier and energy exporter. The U.S. not only became (for the most part) Canada’s “only customer,” but its number one competitor. And the additional challenge of earthquakes arising from oil and gas operations appears on the horizon. This challenge poses difficult questions for stakeholders to answer given a relative lack of information on underlying causes and whether oil and gas induced seismicity is preventable without resorting to development prohibitions. In particular, two such interesting questions include imposition of a liability regime and security. Nevertheless, the timely expansion of Canada’s pipelines network to deliver to more markets at home and abroad, along with the development of liquefied natural gas export facilities remains a national priority. Doing so would allow Canadians to earn full value for their resources and create economic activity that would otherwise be lost.

52. See ENERGY FACT BOOK, supra note 16, at 11.
53. Id. (stating that “[g]enerally, a corporation is deemed to be foreign-controlled if more than 50[%] of the shares are owned by one or more foreign companies.”).