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Alberta’s hydrocarbon deposits have been a mainstay of provincial economic development since the Second World War. When Imperial Oil struck oil near Leduc, Alberta in February 1947, it marked the beginning of a petroleum boom that rapidly transformed Alberta’s impoverished agricultural economy and drew thousands of people to the province. As demand for oil grew, the oil industry and the Alberta government began producing synthetic oil from the vast bitumen deposits in the Athabasca region. The Alberta bitumen deposits are fine-grained sands, which hold up to eighteen per cent bitumen, a heavy and viscous hydrocarbon mixture. The largest of these, the Athabasca deposit, covers 50,000 square kilometers of north-eastern Alberta (Figure 1). The Athabasca deposit occurs in the McMurray formation, a stratigraphic unit of the Early Cretaceous Mannville Group of the Western Canadian Sedimentary Basin. The Athabasca bitumen deposits dwarf Alberta’s conventional oil deposits, but difficulties with mining and upgrading bitumen into synthetic crude oil prevented the commercial production of bitumen before the 1960s. In 1958 Sun Oil entered an agreement with Great Canadian Oil Sands Limited (GCOS) to finance a bitumen extraction plant. The Alberta government approved GCOS in 1962, construction started in 1964, and the 45,000 barrels per day (bpd) plant opened in 1967. In 1966, as construction progressed on GCOS, Cities Service, Imperial Oil, Royalite, and Atlantic Richfield Canada formed the Syncrude consortium and began planning a second plant. Responding to pressure from industry, and from modernist aspirations, governments in the 20th century ultimately prioritized resource extraction, technological development, and economic growth above associated costs and consequences.

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1 Imperial Oil is the Canadian arm of ExxonMobil, a descendant of Standard Oil. David Breen, ‘The Making of Modern Alberta’, in Catherine Anne Cavanaugh, Michael Payne and Donald G. Wetherell (eds), Alberta Formed, Alberta Transformed (Edmonton: University of Alberta Press, 2006), pp. 539–66, 539.


3 Whereas a deposit refers to a physical quantity of a hydrocarbon, a reserve is more like a production forecast: a changing, non-material assessment of how much hydrocarbon has been discovered, is legally and technologically accessible, and is economically viable. Alberta conventional oil deposits had an initial volume of 81.3 billion barrels. Remaining conventional reserves are about 1.8 billion barrels, and potential reserves of 19.7 billion barrels. Alberta Bitumen deposits top 1.7 trillion barrels, but the reserve size is closer to 166 billion barrels. Alberta Energy, 2016: http://www.energy.alberta.ca/

4 GCOS became Suncor in 1978.

As the industry developed, environmental issues became a significant public concern by the late 1960s. While governments sometimes view support for resource development as separate from environmental regulation, in the 1970s especially, the Alberta government could not segregate environmental concerns from the development of the oil sands industry. Environmentalism was not a new concern, but in the 1970s it became a formalized government responsibility as environmental organizations influenced policy and legislation. Provincial governments across Canada adopted regulatory instruments and established formal environmental agencies as part of an initial round of environmental legislation. Canadian environmental historians have shown how these policies and agencies were a response to growing environmental consciousness that was a culmination of earlier conservationist and preservationist ideologies, public recognition of Cold War era environmental issues, and the influence of ecology and the scientific community. In 1970, the Alberta Social Credit government’s last year in power, it created environmental policies and regulations and in 1971 became the first province to create a Department of Environment.

The Progressive Conservative (PC) opposition party criticized the government’s new policies as secretive and ineffective. Speaking about an oil spill at the Great Canadian Oil Sands bitumen extraction plant north of Fort McMurray in July 1971, Bill Yurko said: ‘The industry needs a whole new approach to pollution control…the general public should know what the individual industries are doing to the streams or to the air.’ After winning the 1971 election, the new Progressive Conservative (PC) provincial government expanded the powers and scope of

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9 Social Credit held power in Alberta from 1935 to 1971. It emerged as a social reform party focused on the rights of workers, farmers, and small business reformers hard done by the Great Depression. In this earlier time, under Premier William Aberhart, it was opposed to the oil industry and tried to break up big business. During its time in power it changed to represent right wing religious fundamentalists and became laissez faire with the business community and the oil industry. Alvin Finkel. The Social Credit Phenomenon in Alberta (Toronto: University of Toronto Press, 1989).

10 ‘Reforms Urged for Industries’ Pollution policy,’ Unlabeled newspaper article, 4 July 1971, M4755 file 709, Glenbow Archives (GA).
the previous government’s environmental policy, but also sought a direct role in the development of the oil sands industry. 

The energy and financial crises of the 1970s rapidly transformed the importance of the oil sands industry. Premier Peter Lougheed’s PC government tried to use the opportunity created by rapidly increasing oil prices to break the pattern of provincial subjection to primary resource industries that had defined Canadian economic history. In 1975 the Alberta and federal governments created the Alberta Oil Sands Environmental Research Program (AOSERP) to study the impact of the oil sands industry on the Athabasca region. In the same year, Alberta bought a 10 per cent, CDN$200 million, position in Syncrude, alongside investments from the federal and Ontario governments, and made major investments in research, infrastructure, and loans to the oil sands industry totalling almost CDN$1 billion—the Alberta government became both developer and regulator of the resource. This article asks: how did provincial and federal efforts to influence and impel the development of the oil sands industry affect environmental regulation and research? It argues that Alberta’s investment in Syncrude created a conflict of interest between environmental policy and the development of the oil sands industry, that emerged prominently among several factors, within which the Alberta PC government marginalized environmental research and regulation.

Aside from works by Arn Keeling and Erik Lizée historians have written little about the environmental legacies of hydrocarbon extraction in Alberta. Business and political histories of the Alberta oil industry have enhanced our understanding of how the industry has developed, how provincial politics have been shaped by oil, and how federal-provincial conflicts affected the oil industry; but have not explained the relationship between hydrocarbon development and environmental change. David Breen’s history of the Petroleum and Natural Gas Conservation Board addresses regulation, but he does not look at environmental issues, as the Conservation Board was focused on the conservation of hydrocarbon resources, not conservation in the environmental sense. Paul Chastko’s history of the oil sands industry shows that collaboration between the state and the oil industry to support sustained scientific research and technological development was integral to the evolution of bitumen from marginal resource to a viable source of synthetic oil, but it does not focus on the environmental impacts and politics of the oil sands industry. Popular authors such as Andrew Nikiforuk and William Marsden have assessed many of the social, environmental, political, and economic dimensions of the contemporary oil sands industry. But in writing for popular audiences, these works skim over or fail to address the historical development of environmental policy, seeing failures at environmental regulation as

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ideologically driven rather than rooted in Alberta’s particular historical context. Larry Pratt’s 1976 book *The Tar Sands: Syncrude and the Politics of Oil*, examined how the Lougheed government sidelined environmental concerns and hastened the development of the oil sands industry. It acknowledged the efforts of the PCs to fund AOSERP but viewed it as wasting public money to clean up its own mess. Characterizing the Lougheed government’s approach as exclusively negligent towards environmental issues, Pratt oversimplified the PC government’s approach to environmental issues by missing change in the Lougheed government’s approach through the 1970s. This article traces the emergence of Alberta’s environmental regulation and research and how it diverged with the energy and financial crises of the 1970s, interjurisdictional conflict over the rents and structure of the energy industry, and especially with provincial and federal investments in the oil sands industry, which emerged as political and economic factors that adversely affected the efficacy of environmental policy and led to the disfunction and dissolution of AOSERP by the end of the decade.

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EXTRACTION, POLLUTION, AND REGULATION

Unlike conventional hydrocarbon deposits, which can be pumped out of the ground and refined into a marketable product, the early oil sands operations had to extract bitumen by strip mining. Bitumen then had to be separated from sand and upgraded into less viscous synthetic crude oil that could be transported by rail tanker or pipeline: a complicated and costly process that is commercially viable only when oil prices are high and when done in large quantities to exploit economies of scale. Due to the composition of bituminous sand—a low-grade, discontinuous hydrocarbon—large-scale extraction, and energy intensive processing with complex and expensive equipment is required for it to be profitable. Strip mining bitumen requires the removal of an average of about twenty metres of overburden, an industry term for the rock, soil, muskeg, and trees that cover a deposit. GCOS used bulldozers, trucks, and bucket wheels to extract bitumen. Bucket wheel extractors, which are large excavation machines that consist of a wheel rimmed with toothed buckets, would rotate to excavate bitumen (Figure 2). Large conveyor belts would then transport the bitumen from the extraction site to the central processing facility. On reaching the central processing facility, the conveyor belt would dump the extracted material into a crusher, which would break apart large chunks of material into a finer consistency, and then move through the separation process. The hot water separation process works by boiling the bituminous sand so that the bitumen liquefies, separates from the grains of sand, and floats to the surface as the sand sinks. The hot water separation process is possible because bituminous sands in northeastern Alberta have a layer of water between the grain of sand and the bitumen. The process consumes a huge amount of water, which creates large tailings ponds. GCOS needed 10,700 litres of water per tonne of synthetic crude oil production. The GCOS tailings pond covered over nine square kilometres by the mid-1970s (Figure 3). The GCOS plant processed 7,000 tonnes of bitumen per day and produced approximately 45,000 barrels of synthetic crude oil per day by the end of the 1970s. Construction commenced on the Syncrude facility in early 1976 and the plant commenced production in 1978. Syncrude used a dragline, which is a system consisting of a large bucket suspended from a boom that could be manoeuvred to move large amounts of excavated material, in conjunction with a bucket wheel and conveyor belt, to excavate 17,000 tonnes of bitumen per day. The original Syncrude tailings pond covered 28 square kilometres over the span of its life.

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18 Bitumen can also be extracted in-situ, typically with Steam Assisted Gravity Drainage (SAGD) a technology that has proliferated since the 1990s. Surface mining still accounts for around half of bitumen production in Alberta. Alberta Energy Regulator, ST98 Commodity Forecast and Analysis: Crude Bitumen Production, https://www.aer.ca/providing-information/data-and-reports/statistical-reports/crude-bitumen-production.

19 The oil sands industry in the 1970s was to oil what Daniel Jackling’s copper mines were to copper in the 1920s. As rich deposits declined, and prices increased, Jackling turned to low-grade ore bodies, open-pit mining, and large-scale rock-crushing extraction processes. Tim LeCain describes Jackling’s techniques as mass destruction comparing it with Henry Ford’s mass production. Tim LeCain. Mass Destruction: The Men and Giant Mines That Wired America and Scarred the Planet (New Brunswick, New Jersey and London: Rutgers University Press, 2009).
Figure 2: Alan Orling, ‘Bucket reclaimer (full view) at Syncrude Facility in Alberta, Canada. Oil Sands operation,’ (Winter 1978), Large-format negative, Imperial Oil Archives, 82-1020/002 (06), GA.

Converting bitumen into a marketable hydrocarbon is a complex and energy intensive process. Raw bitumen is about 1000 times more viscous than conventional light oil and contains a lot of sulfur and complex long-chain hydrocarbons. Shippers cannot transport raw bitumen in pipelines, it is expensive to break down, and incompatible with conventional oil refineries. GCOS and Syncrude had to upgrade their raw bitumen to reduce its viscosity for pipeline transport, reduce its sulfur content, and break down long-chain hydrocarbons for processing in conventional refineries. The thermal cracking process, also called coking, converts the heavier fractions into a refineable product by heating the bitumen to more than 400ºC to break carbon-carbon bonds in the complex heavy hydrocarbons, and removing the excess carbon. Coking improves the hydrogen to carbon ratio of the bitumen and creates shorter chain molecules required for upgrading. The fractional distillation process separates the remaining heavier hydrocarbons by heating the bitumen mixture to separate the various fractions by their boiling point. The upgrader then blends the different liquid fractions to produce synthetic crude oil. Although Syncrude’s upgrading of bitumen was marginally more efficient with an energy return on energy invested (EROEI) of around 67 per cent, compared to 59 per cent for GCOS, both plants required more energy inputs than they could produce. All bitumen had to be processed in place using lots of water, electricity, and natural gas, and produced toxic by-products it deposited in tailings ponds and released through the smoke stack.

As the oil sands industry developed, it had significant adverse impacts on the surrounding environment from the construction and operation of extraction operations and associated infrastructure, the expansion of the town of Fort McMurray, water pollution from tailings ponds, oil spills, and atmospheric emissions. By 1976 the GCOS tailings pond leached over 1.5 million litres per day of toxic effluent into the Athabasca River. The bitumen upgrading process produced atmospheric emissions including sulfur dioxide, nitrogen dioxide, and hydrogen sulfide (Figure 4). Residents of the nearby Indigenous community of Fort McKay associated atmospheric emissions from oil sands operations with a decline in the health of regional vegetation. Although the oil sands industry asserted that bitumen extraction was not damaging the Athabasca environment, government research and community observation suggest that extraction and upgrading had extensive impacts that increased with the scale and intensity of production.

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21 EROEI is a ratio of the amount of energy obtained from a given energy resource to the amount of energy used to extract and process that resource. C.W. Bowman and G.W. Govier, “Status and Challenges in the Recovery of Hydrocarbons from the Oil Sands of Alberta, Canada,” Conference Presentation, *Tenth World Energy Conference* 19-24 September 1977, R1526 vol. 267 box 5 file 243-14, Library and Archives Canada (LAC).
24 ‘An Issues Assessment for Concerns Regarding Ongoing Oil Sands Developments and the Community of Fort Mckay’, (Fort McKay, Alberta: Fort McKay Indian Band, 1986).
26 Environmental impacts are described in greater detail in: “Author” (2015).
From the mid-1960s, increasing public concern about environmental issues pressured the faltering Social Credit government to establish the environmental agencies and policies.27 Historian Alvin Finkel has argued that the Social Credit government’s creation of environmental policies and the Department of Environment in the early 1970s was a last ditch effort to regain public support and prevent losing the 1971 election.28 In 1970 the Social Credit government under premier Harry Strom passed the Environment Conservation Act creating the Environment Conservation Authority, a three member panel to act as an ombudsman on environmental issues.29 PC MLA Bill Yurko criticized the proposed ECA, arguing that it was merely window dressing, a ‘nothing bill.’ The PCs instead supported a proposal for a Pollution Control Board, modelled on the Oil and Gas Conservation Board, which would have been bigger and more powerful than the ECA.30 The PC election platform championed environmental protection as its

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27 W.J. Yurko, ‘Nomination speech, by-election constituency of Edmonton Strathcona East,’ December, 1968, 79.94 Box 5 file speeches pre-1974, PAA.
28 Finkel, The Social Credit Phenomenon in Alberta, 186.
second priority after public participation and followed by its goals for resource development and economic diversification. 31 Peter Lougheed stated:

Progressive conservatives are committed to a firm policy of preserving and conserving the environment of Alberta... We recognize there must be a proper balance between the desire to not upset the natural state of our land and water and the job opportunities created by petroleum, timber, coal and other mineral and natural resource developers. However, if we are forced to lean in one direction or another, it would likely be towards conservation, rather than development.

In 1971, the same year that Prime Minister Pierre Trudeau’s government created the federal Department of Environment, Alberta passed the Department of Environment Act, creating the Alberta Department of Environment.32 The government granted the Department of Environment significant powers to manage environmental issues, including Article 16, which empowered the Minister of Environment to administer ‘stop orders’ to deal with contraventions of environmental law, and to shut down polluting facilities. Alberta also passed the Clean Water and Clear Air Acts, which granted the environment minister power to create pollution regulations.33

In the August 1971 election the PCs won a majority government taking 49 of the 75 seats, Social Credit taking 25, and the NDP taking one. In November 1971, the PCs created a sweeping array of environmental research programs, standards and approvals procedures, and a pollution control judiciary. The PCs gave the Department of Environment power to issue fines for pollution. Environment Minister Bill Yurko stated that the PC government espoused the ‘polluter pays’ principle. He spoke of how all pollution data would be public knowledge, that the scientific and academic communities would have unobstructed access to all such data, and that the public would be directly involved in the creation of environmental policy.34

In August 1972, the Conservation and Utilization Committee (CUC) advised the PC government to address the province’s approach to environmental regulation of the oil sands industry, which it described as ‘poorly defined, inconsistent and totally lacking in cohesiveness.’ The CUC stated that development ‘should result in a long-term benefit and improvement to Alberta’s physical and ecological environment,’ and that government should impose water effluent and atmospheric emission controls ‘to the limits of technology in order that environmental degradation would be prevented.’ 35 The oil sands industry often stated that it was too expensive to employ the best available sulfur dioxide capture technology, and thus it should employ more affordable, if less effective, technologies instead.36 Debates about the best versus the most affordable environmental impact mitigation technology were significant throughout the evolution of the oil sands industry and echoed conflicts about pollution control technology in

32 ‘Bill 32, The Department of Environment Act,’ Legislative Assembly of Alberta, 1971, 78.77 box 1, PAA.
33 ‘Bill 40, The Clean Water Act,’ Legislative Assembly of Alberta, 1971, 78.77 box 1, PAA.
34 William Yurko, “Address to the First Conference of the Public Advisory Committee on the Environment.” Edmonton, Alberta November 25, 1971, 79.94 Box 5, PAA.
36 Department of Energy and Natural Resources, “Notes Re. Great Canadian Oil Sands Submission of March 29, 1976 to the Alberta government,” October 21, 1976, 82.165 file. 466, PAA.
other industries. The CUC recommended that the government proceed cautiously, and commission a wide array of research and planning to limit the area impacted by bitumen extraction. In retrospect, one of most important recommendations from the 1972 CUC report was that the government should prevent industry from building tailings ponds immediately adjacent to the Athabasca River, as doing so would result in extensive watershed contamination. The Alberta government did not at this point express awareness of the specific sorts of pollutants contained in oil sands effluent water, as it had not done significant environmental research. However, it did demonstrate basic concern with the toxic qualities of effluent water.

In its first years, the Loughed government appears to have endorsed a similar position to that of the CUC, advocating that careful development of the industry. In 1972, the Alberta government amended the Alberta Environmental Research Trust Act to orient environmental research towards minimizing the impacts of oil sands operations, focusing research priorities on the disposal of mine waste and land reclamation. In October 1972 the Globe and Mail reported: ‘the Alberta government will not permit large scale development of the Athabasca oil sands until the completion of a policy review on environmental guidelines next year… Loughed prepared to slow development to ensure it goes ahead with best possible adherence to environmental protection.’ In November 1973 the Alberta government sought federal involvement in environmental research. Later that year, the Alberta government created the Alberta Research Secretariat and the Land Reclamation Division to ensure that companies restored the surface of completed industrial projects.

In early 1973, the PC government’s position was that it was ‘not generally under any pressure to develop synthetic crude oil… for the purpose of meeting either Albertan or Canadian Petroleum requirements,’ and that development should proceed at a pace that maximized domestic benefits and minimized environmental impacts. However, Loughed introduced flexibility into his policies by avoiding commitment to a framework. He told the Calgary Herald that his government was ‘not going to come forward with any long-term plan that commits our government to any particular royalty, public participation or other terms of reference that would tie our hands over the long-term in the tar sands.’ Yurko introduced a ‘one window concept’ whereby the ERCB became the umbrella regulatory agency that would conduct all project assessments and approvals, rather than individual government departments. The big picture responsibility for limiting pollution control lay with the Department of Environment, but for the oil and gas sector, the PC government delegated the responsibility for administering the

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41 A. MacPherson to J.B. Seaborn, 16 May 1980, RG39 box 76 file 6638-2-1-2-2 pt. 1, LAC.
regulation of pollution control. While the government mandated the ERCB to assess various social and environmental issues, its approval process only considered public economic benefits, and thus rarely blocked projects. Breen argues that the Conservation Board was informed by the prevailing Alberta sentiment that ‘nothing hinder the development of an industry that brought so many jobs, contributed so handsomely to the provincial treasury, and underpinned so much hope for the future.’ By introducing the one-window concept Yurko improved the efficiency of project approvals but also centralized decision making in the ERCB, which contributed to the marginalization of environmental concerns later in the decade.

ENVIRONMENTAL POLICY AND THE DEVELOPMENT IMPERATIVE

The energy and financial crises of the 1970s that followed the oil embargo by the Organization of Arab Petroleum Exporting Countries (OAPEC) in 1973 and the decoupling of the US dollar from the gold standard in 1971 resulted in increasing energy prices and stagflation, which rapidly transformed the significance and economic potential of the oil sands industry. Timothy Mitchell has shown these were in many ways manufactured crises, as much the product of policies governments implemented in response to the geopolitical struggles between western governments, oil companies, and the producer states in the Middle East, as of material changes in oil supply or the global economy. Mitchell’s work challenges us to examine how perceptions and responses to the crises of the 1970s transformed democratic politics. Work on the crises of the 1970s has focused on energy policy and conservation, foreign policy, and the impact on consumers. However, as Tyler Priest has shown, the crises also created a favourable price environment and heightened concerns about energy security that created an imperative for the major US oil companies and US and Canadian governments to make major investments in remote and unconventional oil sources they saw as essential to national security and the stability of modern life. In a 2018 interview Allan Warrack, Alberta Minister of Lands and Forests from 1971-1975, described the increase in royalties from the oil industry: ‘we had a huge increase in price concurrent with a very substantial amount of new money and a greatly heightened royalty on that money. It was like a gusher.’ Alberta leveraged the oil price increases and supply fears

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45 W.J. Yurko, ‘Address to the Canadian institute of mining and metallurgy’ August 9, 1972, 79.94 Box 5, PAA.
46 Breen, Alberta’s Petroleum Industry and the Conservation Board, 537.
to expedite the extraction and upgrading of bitumen—a previously unaffordable synthetic fuel. For the Lougheed government, the oil sands industry was not an end in itself, but a way to profit from declining oil production, and use the money to diversify the Alberta economy and develop locally based business and innovation to move Alberta beyond its historical reliance on primary resources. In doing so, it struggled to manage the environmental impacts of development, and created a conflicted policy dynamic within which it sidelined environmental considerations later in the decade.

The 1973 energy crisis triggered an intense federal-provincial conflict to control the rents and energy flows of the oil industry. As oil prices skyrocketed, the Trudeau government sought to protect consumers by reducing the price difference between imported oil, which supplied eastern Canadian markets and Alberta oil, which supplied western Canada, and to limit oil exports to reach national self-sufficiency in oil supplies by the end of the decade. The federal government froze fuel prices at the pump and subsidized the CDN$3 billion difference between import and pump prices by increasing taxes on oil company profits to 50 per cent, levying a CDN$0.40 per barrel export tax on oil, ending oil companies’ allowance to deduct royalties from taxable income, and by reducing the depletion allowance from 30 to 25 per cent. It cut exports to the US by ten percent, created the Foreign Investment Review Agency (FIRA), and expanded the Canadian Development Corporation (CDC) to monitor US investment in the Canadian oil industry. The federal government also created Petro-Canada, a national oil company, and proposed the construction of a new pipeline to Montreal to divert Alberta oil to flow from west to east, to serve domestic markets. Alberta wanted its oil to flow from north to south, to maximize its profits by selling to the United States. Lougheed described the Trudeau government’s policies as ‘the most discriminatory action taken by a federal government against a particular province in the entire history of confederation.’ Lougheed then altered the provincial tax and royalty structure to create more revenue for the province, which contributed to an even bigger struggle over profits later in the decade. Despite its conflicts with Ottawa, Alberta still needed to cooperate with the federal government when it came to finance new oil sands plants.

On 4 December 1974, Atlantic Richfield Canada (ARCAN) withdrew its 30 per cent ownership position from the Syncrude consortium. Its investments in the Prudhoe Bay, Alaska oil field, along with federal export reductions and increased costs, made it reluctant to support the project. Following negotiations to save the in Winnipeg, Manitoba in February 1975, the federal government bought a 15 per cent position worth CDN$300 million, the Alberta government a 10 per cent position worth CDN$200 million, and the Ontario government a five per cent position worth CDN$100 million. Previously on the margin of the oil industry, the energy crisis pushed bitumen to the forefront of Canadian energy strategy. The agreement freed Syncrude from any future pro-rationing, and guaranteed it access to world markets and prices. The government of Alberta also lent Canada-Cities (Cities Service) and Gulf Canada CDN$100 million each and contributed CDN$7.8 million the Athabasca River bridge construction project. The province created the Alberta Oil Sands Technology and Research Authority

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54 Chastko, Developing Alberta’s Oil Sands: From Karl Clark to Kyoto, 148-52.
55 Don Getty to W.A. Posehn, 30 May 1975, 82.165, file 49, PAA.
56 Syncrude Project, The Winnipeg Agreement, Winnipeg, Manitoba, 3 February 1975, 82.165 vol. 49 file 440, PAA.
(AOSTRA) with a CDN$100 million budget to work with industry to develop extraction and upgrading technology.\(^5\) Alberta financed the construction and operation of the CDN$225 million Syncrude Utilities Plant. Alberta formed the Alberta Energy Company, 50 per cent of which was government owned, and 50 per cent of which it sold as shares to the public. Lougheed believed that by taking control of the oil industry and extracting more revenue, Alberta could finance diversifying its economy, break its dependence on the oil industry, and ensure the future economic and political independence of the province. By the end of the decade, political scientists John Richards and Larry Pratt argued that the Alberta government had emerged as an entrepreneurial actor in the oil industry, ending the previous Social Credit government’s passive relationship with the oil industry.\(^5\)

Investing in the oil sands industry saddled the government of Canada—but especially the Alberta government—with conflicting mandates as both regulators and developers of the resource. This policy dynamic created a conflict of interest, which made government beholden to industry in a way that compromised the ability of policy makers to implement adequate environmental regulation and research. The problem was more significant for Alberta. Proportionally, Alberta’s investments in the oil sands industry much larger than those of the federal government. Alberta was the owner of the resource under the 1930 Natural Resource Transfer Acts, with which Canada transferred ownership of subsurface minerals to the province. The extent to which the Lougheed government considered this dynamic a conflict of interest is not clear. Lougheed’s position seems to have been that as an owner, Alberta was exposed to the risks associated with the hydrocarbon economy regardless of government involvement, and so it should take a larger position in the industry to have more a more controlling regulatory and financial influence, and to reap more public benefits. Asked whether environmental policy became a conflict of interest after the Alberta government bought into Syncrude, Allan Warrack said: ‘I don’t think it has to, but if you have shaky governance, it happens. I think that does finger a very soft point, yes. Yes, I do.’ Though not out of bad will, Warrack said the PC government began to neglect environmental issues, and environmental regulation started to degrade during the 1975-1979 term under Don Getty as Minister of Energy and Natural Resources.\(^6\) Although well intended, the PC government sidelined its environmental agenda as the oil sands industry developed, and environmental problems emerged alongside serious technological and financial difficulties for the industry. By the end of the decade, the PC government came to present environmental regulation and research as a threat to the success of the oil sands industry, of which it had become a part.

Two concepts from environmental governance scholarship help examine Alberta’s environmental policies in the 1970s: symbolic politics and agency capture. Jens Newig defines symbolic environmental legislation as laws with high strategic effectiveness and low substantive effectiveness that are designed to manage rather than resolve environmental problems. Symbol and substance are relative characteristics of environmental legislation: all legislation is somewhat symbolic, all symbolic legislation is somewhat effective. Substantive effectiveness can be measured by its suitability, enforceability, and the resources allocated to the law’s implementation. Strategic effectiveness can be measured by the extent to which a policy relieves


\(^{6}\) Allan Warrack, interview with author, Edmonton, June 15, 2018.
political pressure, the severity of consequences in the case of noncompliance, the hierarchical position of the law, and the timing of the passing of the law.60 Alberta’s environmental policies in the 1970s had symbolic elements. The Social Credit government passed its environmental laws during an election cycle to show that they were acting to address environmental concerns. While the environment minister had the power to issue stop orders, which gave substantive effectiveness and symbolic significance to the laws, the issuance of stop orders and other regulatory powers were subject to ministerial discretion. The discretionary nature of these regulations enabled the Alberta government to neglect and minimalize their substance when their focus on environmental policy shifted following the 1973 crisis.

The discretionary nature of these laws does not on its own reduce Alberta’s environmental policies to being merely symbolic. A core criterion for identifying symbolic policy is legislative intent: purely symbolic legislation must be deliberately designed to fail to meet it stated objectives.61 In the early years of the PC government, strengthened the Social Credit environmental policies which it had critiqued as being ineffective. Asked in a 2018 interview about the PC government’s commitment to environmental protection, former cabinet minister Allan Warrack replied that the PCs had a ‘very’ serious commitment: ‘because it matters in itself, but also… in terms of the public perception of it, that if we didn’t be careful and keep it clean, it will fall into bad faith with the public…and of course that’s what happened.’62 Warrack’s response shows that the PCs, initially at least, worked to develop environmental policy out of genuine concern for the environment, and because of the strategic importance of protecting the environment. The PCs wanted it both ways. Their legislative intent was to develop substantive policies that were symbolically effective to demonstrate to the public their action on environmental issues.

While many environmental laws turn out to be ineffective, not all ineffective laws are symbolic.63 More significant for Alberta’s environmental policy was clientelism, a form of agency capture in which regulated industries gain influence over regulators.64 After the province bought into Syncrude, the lines between government and industry, the regulator and the regulated, became increasingly blurred. Agency capture evolves through a process of ‘bureaucratic slippage’ by which the regulated industry gradually shifts the actions of the regulatory agency towards its interests and away from those of the public.65 The Department of Environment developed close relationships with industry that limited participation in the standard setting process to representatives of government and industry. Although the environmental laws of the 1970s contained substantive enforcement provisions, the Department’s main strategy was to negotiate compliance. It viewed prosecution as an aggressive action that would undermine future compliance and good will, that it would only use after

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61 Ibid., 278.
exhausting all other options.\textsuperscript{66}

Changes in the PC government’s willingness to address environmental issues became apparent in its engagement with scientific research and development decisions. In the early 1970s, the only study ecological study of the oil sands region was a 1973 report by Intercontinental Engineering of Alberta, which held that without government intervention and industry adoption of preventative measures, the environmental effects of multiple oil sands operations would be significant.\textsuperscript{67} In a 1974 address Yurko said: ‘it is our duty and responsibility to the as yet unborn generations not to leave them a legacy of environmental desecration in North-Eastern Alberta. Our intent today is to lay down a base of requirement so stringent as to prevent such a catastrophe from occurring.’ Yet he was skeptical that it would be politically feasible for any government to overcome economic dependence on bitumen production once labour was trained, infrastructure built, and construction began.\textsuperscript{68} In the legislative assembly the following week Yurko referred to the environmental impacts of the oil sands industry: ‘at this time all we do know is there may be a problem in the future. We will be studying it with considerable intensity.’\textsuperscript{69} Later that day, Lougheed said, the ‘general assessment we have at the moment is that in terms of development it’s quite clear that the environmental situation can be adequately handled.’ Based on the assumption that his government had taken steps to protect the environment, ‘we would hope that… members on both sides of the House would encourage the creation of new and meaningful jobs in this province.’\textsuperscript{70} Lougheed’s statement reflected an increasingly polarized position that presented the prospect of rigorous environmental policy as a zero-sum against economic growth and job creation.

The federal government was significantly more critical of the environmental risks of bitumen extraction.\textsuperscript{71} After becoming Environment Minister in 1974, Jeanne Sauvé stated that the environmental impacts of the oil sands industry were unacceptable and called for much more rigorous environmental assessments. She advocated federal-provincial participation in a research program to fill knowledge gaps and to improve government regulatory capability to assess the cumulative effects of multiple operations.\textsuperscript{72} An exchange between Yurko and Sauvé about Environment Canada’s critique of Syncrude’s environmental impact assessment report shows the growing influence of the energy crisis. Sauvé wrote that Syncrude had ‘failed to appreciate the real scope of environmental concerns and has also failed to address the question of environmental protection in either a realistic or adequate manner.’ She found the report lacked quantitative assessments of ecosystems in the lease area and underestimated the potential ecological consequences of the project. Sauvé wrote: ‘the environmental forecast from the development must be considered as conjectural.’\textsuperscript{73} Yurko, who had advocated environmental protection in the early 1970s, replied that environmental research must not delay oil production: ‘we know that major information gaps exist in respect to the baseline environmental data in the entire area. Nevertheless, in light of Canada’s critical energy balance, it… does not appear

\textsuperscript{67} Pratt, \textit{The Tar Sands: Syncrude and the Politics of Oil}, 102-04.
\textsuperscript{68} W.J. Yurko, ‘Will Environmental Requirements Limit Energy Supplies?’ May 8, 1974, 79.94 Box 4, PAA.
\textsuperscript{69} W.J. Yurko, \textit{Alberta Hansard}, 26 Apr. 1974, p. 1443, PAA.
\textsuperscript{70} Peter Lougheed, \textit{Alberta Hansard}, 26 Apr. 1974, p. 1443, PAA.
\textsuperscript{71} Jean Chrétien to Jack Davis, 16 Jan. 1974; Jack Davis to Jean Pierre Goyer, 24 Mar. 1974, RG108 vol. 284 file 4833-3, LAC.
\textsuperscript{72} Jeanne Sauvé to W.J. Yurko, 18 Dec. 1974, RG108 vol. 284 file 4833-3, LAC.
\textsuperscript{73} Pratt, \textit{The Tar Sands: Syncrude and the Politics of Oil}, 107.
prudent to delay oil sands development until all needed information is available. By the end of
1974, policy rhetoric from the Lougheed government had changed from the cautious tone that
characterised 1971 and 1972, to statements that expressed the need to quickly develop the
industry.

In 1973 the ECA asked the minister of Environment to hold public hearings on the
impacts of the oil sands industry. In 1974, Environment Minister Bill Yurko approved the ECA’s
motion to review the impact of tailings ponds on migratory birds. In September 1975 the
Authority completed its report, which confirmed the threat posed by tailings ponds to migratory
birds and recommended that the ECA hold public hearings. But, in 1976, the new Environment
Minister David Russell blocked the ECA’s request, stating that it would wait a few years to
allow AOSERP to do its work, and defended the government’s decision to allow the Syncrude
project to proceed before environmental research ‘you cannot ask a company to wait for ten
years for a decision.’ In 1977, Russell told the ECA that it would not be allowed to conduct any
hearings into energy projects, and that it would task the ERCB with this responsibility instead.

The PCs won a landslide majority in the 1975 election, winning 69 seats. The election
demonstrated broad public support for Lougheed’s diversification policies fuelled by the
development of the oil sands industry and weakening support for environmental groups. In
March 1976 Grant Notley, who was the leader and sole MLA of the Alberta New Democratic
Party (NDP) and one of the few dissenting voices in the Legislature, sought to pass a motion that
would require Syncrude’s sulfur dioxide permitted emissions reduced from 287 tons per day to
60. He argued that the government’s permitted emissions limits were arbitrary, could not
realistically prevent the impacts of sulfur dioxide, and that technology existed to reduce
emissions. The Syncrude investment had put the government in ‘virtually a conflict of interest
position,’ he argued, ‘because we are now a major part of that project… The more stringent the
environmental standards are, a portion of that cost will have to be met by the taxpayers of
Alberta.’ Environment Minister David Russell responded dismissively: ‘Albertans are darn
lucky to have a Member… representing their interests on the Syncrude board, because we’ve got
a very exciting and pioneering development going on up there.’ PC MLA Tom Chambers, who
sat on the Syncrude board of directors, criticized Notley. Changing the regulations would ‘be the
height of irresponsibility,’ that ‘those who would destroy the viability of the project by
attempting to force needless and unduly harsh environmental standards are doing an immense
disservice, not only to Syncrude, but to Alberta and to the Canadian nation as a whole.’ In
response to Chambers, Social Credit Opposition Leader Bob Clark argued that the government’s
investments in the oil sands industry would compromise future environmental regulation:
The government of the day, regardless of who the government is, now has got at
least a billion dollars… committed to this project. If there isn’t a good rate of
return, if the project doesn’t work well… there’s going to be tremendous pressure
on the government of the day to make some adjustments… The [sulfur dioxide

76 Winfield, ‘The Ultimate Horizontal Issue: The Environmental Policy Experiences of Alberta and Ontario, 1971-
77 The NDP was a small oppos ition party in Alberta, which in 2015, won the election and ended the PC’s 44 years
governing Alberta. Grant Notley was the father of Premier Rachel Notley.
78 Grant Notley, Alberta Hansard, 16 Mar. 1976, p. 196, PAA.
80 Tom Chambers, Alberta Hansard, 16 Mar. 1976, p. 201, PAA.
emissions] permit will be reviewed in, I believe, 1983… the Department of Environment will be making recommendations as to what should happen to the permit. If Syncrude is having very serious problems at the time, let’s not be so naïve as to say there is not going to be pressure to make changes in the standards… I think it is important that we recognize the conflict of interest situation is here, regardless of where we sit in the House.81

The opposition was concerned about the impacts on the environment, but also the financial risk the Alberta government was taking to finance the Syncrude project. Notley’s motion was defeated by the majority PC government. But by criticizing the public/private partnership that funded Syncrude, the opposition challenged Lougheed’s strategy of industry control through participation.

Before defeating the Social Credit government in the 1971 election, Lougheed had criticized the Social Credit government for incompetently managing the province’s relationship with the oil industry. He argued that the Social Credit government had failed to capture royalties and other revenues, missed economic opportunities, did not adequately regulate the industry, and overlooked the environmental impacts of development. The PC strategy was to maximize the public benefits of the oil industry through direct participation, while simultaneously working to minimize the environmental impact of the industry through regulation and research.82 While this was an effective strategy for buttressing the oil sands industry, when financial and technical problems mounted, the Alberta government reneged on its commitments to environmental regulation in favour of protecting the industry.

ENVIRONMENTAL RESEARCH

Concurrent to investing in Syncrude, the Alberta and federal governments created the Alberta Oil Sands Environmental Research Program. AOSERP worked under joint control of Environment Canada and the Alberta Department of Environment with a five-year budget of CDN$40 million. AOSERP was tasked with producing information to aid the drafting of environmental regulations for environmental impacts, but the program was confined to research functions and could not manage or regulate projects.83 AOSERP received financial support and personnel from the federal and provincial government, from Fisheries and Oceans Canada, Environment Canada, representatives from Alberta agencies, and university researchers.84 AOSERP was managed by a series of committees chaired by two federal and six provincial representatives, reported through an Alberta program manager, and jointly to the Ministers of Environment. Before Alberta and Canada signed the AOSERP agreement, correspondence between scientists and managers within Environment Canada shows concern that federal investments in Syncrude could compromise research priorities.85 As AOSERP evolved, it experienced internal and external conflicts between researchers, government bureaucrats, and officials.

85 A. S. Rosemarin, Fisheries and Marine Service to Dr. R. H. Bailey, Lands Directorate, 20 January 1975, RG39 box 76, file 6638-2-1-2-2 pt.1, LAC.
industry, which centred on disagreements about the program’s research priorities and general purpose.

Industry and government prioritized the oil sands industry and sought research that would identify which impacts were acceptable and what affordable measures the oil sands industry could take to reduce damage to the environment. Researchers were more concerned with establishing baseline data and identifying problems. The Alberta Environment Research Secretariat (AERS) maintained that AOSERP research should focus on the ‘solution of practical social and technical environmental problems… and to provide scientific data for the use of government and industry so a better job can be done of protecting man, animals and plants and to aid in restoring the area to a biological productivity as good as or better than before mining commenced.’ 86 The Oil Sands Environmental Study Group (OSES), which represented industry, wanted AOSERP to focus on studying the capacity of regional ecosystems to absorb pollution. At the second AOSERP planning workshop Bill Cary, chair of the OSES, expressed dismay at the use of AOSERP money in funding projects that were not helpful to advancing research in industry priority areas.87

One of the biggest issues with the AOSERP program stemmed from the Alberta government’s interference in the program’s management. In the first year of the program it replaced several of the program managers with Department of Environment bureaucrats who were not familiar with scientific research, which created conflict with AOSERP scientists. At a July 1976 meeting, Deputy Environment Minister Walter Solodzuk attributed the program’s management problems to its organizational structure. AOSERP’s structure did not delineate clear lines of responsibility or accountability. Technical Research Committees (TRCs) that designed the research, and managers responsible for the function of the program, dually managed project teams. 88 Ron Wallace—director of the Aquatic Fauna Technical Research Group, who went on to a long career as a federal environmental scientist with the Environmental Protection Service and to later work on the Joint Oil Sands Monitoring Program—argued that the steering committee should separate researchers from program management to preserve the autonomy of research.89 The planning committee found it problematic that AOSERP had not produced broad-based reports that industry and government could easily use. It stated that the ‘narrow, discipline-specific projects that characterize the present Program will not provide answers to questions on broad environmental problems.’ The committee felt it problematic that AOSERP did not consider any of the proposed oil sands industry development or reclamation scenarios environmentally sound or acceptable.90

AOSERP struggled because of its size and inefficient bureaucratic management. Before the 1970s, small labs operated by primary investigators that could focus on specific questions did most environmental science research in Canada. AOSERP was a large, complex organization influenced by a wide range of stakeholders. Shortly after the dissolution of AOSERP, Ron Wallace wrote that AOSERP’s guidelines were not useful for its scientists. ‘The “top-down” control of science and scientists that emerges,’ Wallace wrote, ‘typically leads to the assignment

87 Bill Cary, AOSERP Joint Steering Committee Meeting Minutes, 30 Sept. 1976, GR1981.203/4 box 1, PAA.
89 Ron Wallace, AOSERP Joint Steering Committee Meeting, 17 Aug. 1976, in RG39 box 76 file 6638-2-1-2-2 pt. 1, LAC.
90 Program Operations Group Meeting #2, Nov. 1976, 81.203 box 1 file 6, PAA.
of work activities in accordance with jurisdictional mandates and immediate political realities — not on the basis of either the problem or scientific competence.\textsuperscript{91} Conflicts between administrators and scientists compromised the efficacy of AOSERP.

Following the 1976 planning meetings, Alberta Environment reorganized AOSERP to a systems-based research framework that diverged so far from the original structure of the program that it required the federal and provincial governments to sign a new agreement in 1977.\textsuperscript{92} Alberta eliminated the senior advisory and liaison committee and replaced it with an advisory board appointed by the Alberta Minister of Environment. Alberta appointed a new program director, made the TRCs accountable to the program director.\textsuperscript{93} These changes reduced the autonomy of AOSERP as the new structure gave control to managers who were not scientists, and often lacked the scientific literacy to make sound scientific assessments or manage research. R.P. Angle, a meteorology and climatology specialist, wrote to the head of the Air Quality Control branch of AOSERP, that researchers felt intimidated by the research manager, that ‘proposals were no longer suggested, referred to subcommittee and then acted upon. Instead, committee members were asked only to criticize already written terms of reference.’ The new structure was a ‘major shift towards meeting objectives set by Alberta rather than those set by the federal government.’\textsuperscript{94} The federal government’s objective was to finance a research program that would establish the ecological baselines of the Athabasca ecosystem before major development took place. Alberta initially pursued this same goal, before unilaterally changing the direction of AOSERP to address oil industry priorities such as how to mitigate environmental impacts, and how much development the Athabasca ecosystem could withstand. The financial involvement of the Alberta government in the oil sands industry correlated with Alberta’s reorganization of the AOSERP program towards provincial and industry objectives.

In September 1978, the federal government withdrew funding from AOSERP. Federal Environment Minister Len Marchand cited budget cuts as the main reason for withdrawal, but also wrote that Alberta’s dominance of the program made the federal government less willing to support it.\textsuperscript{95} The federal government saw Alberta as mismanaging the program and felt that interjurisdictional conflict had undermined the program’s effectiveness.\textsuperscript{96} Russell wrote to his federal counterpart that Alberta viewed the federal withdrawal from AOSERP with ‘extreme displeasure.’ It compromised ‘harmonious federal-provincial relations,’ was a violation of existing contractual commitments, and regardless of jurisdiction the unknown environmental impacts of bitumen extraction in the Athabasca region were matters of national importance.\textsuperscript{97} The provincial government funded AOSERP until the end of 1980, when it cancelled the program.

\textsuperscript{93} AOSERP Steering Committee to All AOSERP Technical Research Committee Chairmen, 18 Jan. 1977, GR1977.0370 AOSERP 1 2005-1-2-55R, LAC.
\textsuperscript{95} Len Marchand to D.J. Russell, 13 Sept. 1978, R1526 vol. 267 no. 5 file 243-14, LAC.
\textsuperscript{96} R.G. Skinner, ‘Comments on termination of AOSERP,’ ibid.
\textsuperscript{97} D.J. Russell to Len Marchand, 3 Oct. 1978, R1526 vol. 267 no. 5 file 243-14, LAC.
Following the federal government’s withdrawal from AOSERP, correspondence within Environment Canada shows that federal scientists were worried about impacts of the oil sands industry. An advisory committee to the federal Department of Energy, Mines, and Resources wrote that the environmental impacts of a synthetic oil program adequate to meet the federal goal of self-sufficiency by 1990 would be immense. While the two governments had initially based environmental standards on the assumption that the industry would use the best available sulphur dioxide and waste water technology, standards had shifted towards the Alberta government’s positions that ‘only proven and applied technology is used for tar extraction and for pollution control.’ By the end of the decade the growth of the industry had outpaced environmental research and the development of pollution control technology.

The final AOSERP report by Director Stuart Smith stated that the program had established environmental baseline data which showed that the impacts of air pollution on soils and vegetation had not revealed significant impacts from atmospheric pollutants, and that studies looking at water and fish in the Athabasca River had not identified major downstream impacts. However, Smith also expressed anger at the Alberta government’s cancellation of the program and looked to a dark future for environmental monitoring of the oil sands industry. Smith wrote that AOSERP’s research was preliminary and could not accurately predict long-term impacts. Smith wrote that there had been a ‘startling transformation of the region during the period from 1960 to 1980,’ and that the results of AOSERP were not reliable. Smith wrote that the program’s research deficiencies had ‘prejudiced the capacity for the program to detect the effect of emissions and effluents on terrestrial and aquatic ecosystems.’ He concluded that ‘neither impacts nor predictions for the future are possible from the results of AOSERP investigations.’ Many of AOSERP’s studies did not present an accurate picture of environmental conditions in the Athabasca region as they were incomplete and did not cover a wide enough area or duration. Although environmental research continued under the Alberta Environment Research Secretariat (AERS), the collapse of AOSERP marked the end of collaborative environmental research in the oil sands region.

CONCLUSION

The 1970s were formative years for environmental policy and research in Canada. The energy and financial crises of the 1970s and government investment in Syncrude created a development imperative that conflicted with Alberta’s intention to carefully regulate the development of the oil sands industry. When bitumen projects faced mounting financial and technological pressures the Alberta government granted them regulatory concessions, such as higher permissible sulphur dioxide emissions, which resonates with Dimitry Anastakis’s finding that Canadian regulators permitted far more automobile emission pollutants than their US counterparts during the same period. Both levels of government minimized environmental

regulations in debates about the oil sands industry that were dominated by economic and oil supply security concerns. The AOSERP program was at first independent, well-funded, and progressive, but its large size and cumbersome management were not conducive to it achieving its research objectives. Its scientists disagreed with the Alberta government’s research priorities, which led to the Department of Environment replacing its managers and restructuring the program to meet provincial and industry objectives. The provincial government’s interference in the program, and tensions between the federal and provincial government, led to the federal government withdrawing from the program, and its eventual dissolution in 1981. Though Alberta set a precedent as the first Canadian province to create a department of environment, its commitments to environmental regulation trailed behind the rapid development of the oil sands industry. By the mid-1980s, research by the Alberta Department of Environment and observations of Indigenous communities reported that the oil sands industry was having serious environmental impacts. With AOSERPs dissolution, government environmental research in the oil sands region declined in the 1980s against a backdrop of collapsing oil prices and abandoned projects. Rooted in the volatile political economy of energy and a conflicted policy environment, environmental regulation and research has inadequately addressed the destructive legacy of bitumen extraction. From the 1990s forward the PCs used the symbolic policy discourse of “sustainable development” and “consensus building” in its integrated resource management to create a perception that it was appropriately managing environmental issues while it expedited development.\textsuperscript{103} The development of the Alberta oil sands industry is significant for its scale, but the regulatory issues exposed by its development are not unique. Environmental legal scholar David Boyd has argued that regulatory capture permeates Canadian departments of environment at both the federal and provincial level, as ‘the corporations and individuals subject to environmental regulation become “clients” whose interests prevail over the broader public interest that the government is supposed to defend.’\textsuperscript{104}

There are several lessons that Alberta’s early experience regulating the oil sands industry can teach us. First, declining reserves of conventional oil will increase global dependence on unconventional sources that bear a much higher environmental cost. The nature of bitumen, as a large, low-grade hydrocarbon deposit, which requires massive land disturbance to extract and huge water and energy inputs to convert into a marketable product, means that it may not be possible for the oil sands industry to have a significantly less damaging impact on the Athabasca environment. If shale, deep sea, polar, and heavy oil deposits become standard sources of petroleum, environmental risks will increase, recognizing that there is no perfect regulatory environment. The Lougheed government’s experience shows that pressure to respond to changing circumstances can divert otherwise progressive regulatory regimes. Second, industry will always operate in the most cost-efficient way, and will lobby extensively for financial concessions. Throughout the development of the oil sands industry, developers had direct lines of communication to the highest levels of government. Oil price increases, inflation, and energy security concerns amplified industry voices and drew regulatory concessions from the Alberta government. Finally, when governments invest in high stakes, financially tenuous, and environmentally destructive energy projects that become integral to a regional economy, it creates conflict of interest that marginalizes environmental regulation and research. Without a


clear separation of the private and public sectors, lines between industry and government become blurred. In 2018 the federal Liberal government purchased the Kinder Morgan Trans Mountain pipeline for CDN$4.5 billion, and the Alberta NDP government announced it will be investing up to CDN$2 billion in the project and an additional billion in upgrading capacity.105 These recent investments show that the development and regulatory issues described in this article transcend time and political party lines, and instead characterize a fundamental problem in the governance of countries and provinces that depend on the extraction and export of primary resources.

Although the Alberta government has since sold its position in the oil sands industry, Alberta has yet to establish environmental research and monitoring programs and policy that adequately assess the impacts of the oil sands industry.107 The federal-provincial Joint Oil Sands Monitoring program (JOSM), which operated from 2012-2015, was established to unify environmental policies and programs between the federal and provincial governments and stakeholders. The Alberta government created the Alberta Environmental Monitoring, Evaluation, and Reporting Agency (AEMERA) as part of the JOSM program, to conduct environmental research. The federal and provincial government ended JOSM in 2015, in part because AEMERA was reluctant to cooperate with Environment Canada as an equal partner in oil sands monitoring. Indigenous communities widely boycotted JOSM as it had not consulted or accommodated them.

In a report commissioned by Alberta Environment and Parks (AEP), Paul Boothe, a management professor at Western University, called for the dissolution of AEMERA. He found that ‘three years and tens of millions of dollars later, the results are an organization that is still struggling to get established, dysfunctional relationships with its two key partners, AEP and EC (Environment Canada), and a failure of all three parties to realize the promise of the transformation JOSM planned to bring critically-needed, world class environmental monitoring to Alberta’s oil sands.’108 By failing to successfully conduct or facilitate high quality, long term, independent scientific research into the environmental impacts of the oil sands industry, Alberta has repeatedly missed opportunities to present a clear picture of environmental change in the Athabasca region. Without meaningful and independent monitoring and research, environmental policy in the oil sands region will continue to be a speculative endeavour that hastens bitumen extraction behind a facade of environmental stewardship.


