Assessing Greenhouse Gas Emissions in the Oil Sands: Legislative or Administrative (in) Action?

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Abstract
The development of the oil sands in Alberta has become a focal point in Canada’s response to global climate change. Before an oil sands project can proceed, it must first undergo environmental assessment. This process frequently engages both provincial and federal environmental assessment legislation, which are implemented by administrative tribunals. The purpose of the paper is two-fold: firstly, to determine whether environmental assessment legislation provides regulators with the tools to assess the impact of an oil sands project's greenhouse gas emissions on the environment, and secondly, to examine how tribunals have been enforcing those standards during assessments. This paper finds that federal and provincial statutes provide panels with the scope to consider GHG emissions at the assessment stage; however, the relevant legislation places no demands on tribunals to specifically address the issue. The permissive language affords tribunals with latitude in downplaying the environmental effects of climate change. As such, climate change issues rarely surface in environmental assessments of oil sands projects, and when they do, the effects of climate change do not hinder regulatory approval. After reviewing policy responses, the paper concludes that any change in environmental assessment is only possible when either tribunals or governments prioritize the effects of climate change in environmental assessment.

Keywords
Oil Sands, Environmental Assessment, Climate Change
ASSESSING GREENHOUSE GAS EMISSIONS IN THE OIL SANDS: LEGISLATIVE OR ADMINISTRATIVE (IN)ACTION?

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INTRODUCTION

In November 2015, President Barack Obama rejected TransCanada’s plan to build the Keystone XL pipeline, largely due to concerns that the further development of the Canadian oil sands would hasten climate change.1 The United States’ rejection of Keystone XL calls for introspection in Canada: If the American government was reluctant to approve a pipeline from the oil sands for fear of escalating greenhouse gas (GHG) emissions, how and to what degree is the Canadian government assessing the climate change impact of oil sands projects? To answer this question, this paper will (i) determine whether the statutory framework in Canada and Alberta provides regulators with the tools to assess the impact of GHG emissions at the assessment stage and (ii) examine how tribunals have been enforcing those standards during assessments. Federal legislation in Canada requires companies to first undergo environmental assessment before they are authorized to construct and operate an oil sands project. In Alberta, the assessment process further requires a proponent to submit an environmental impact study to the Alberta Energy Regulator (AER). Pursuant to the AER’s mandate under the Responsible Energy Development Act (REDA),2 the tribunal then considers a proponent’s application under the Environmental Protection and Enhancement Act (EPEA).3 If the proposed project has a nexus with an issue under federal jurisdiction, a joint panel may be established under section 40 of the Canadian Environmental Assessment Act (CEAA) and would attract scrutiny under both federal and provincial legislation.4

The broad parameters of the relevant Alberta statutes invite the AER to consider GHG emissions when assessing oil sands projects. However, an overview of AER

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2 Responsible Energy Development Act, SA 2012, c R-17.3 [REPA].
3 Environmental Protection and Enhancement Act, RSA 2000, c E-12 [EPEA].
4 Canadian Environmental Assessment Act, SC 2012, c 19, s 52 [CEAA].
decisions demonstrates that climate change issues rarely surface in reports, and when they do, the effects of climate change do not elicit considerable concern. The federal statutory framework is *prima facie* superior to the Alberta legislation because it requires tribunals to support their findings in light of the precautionary principle and cumulative effects. However, recent reforms to the *CEAA* may undercut its application to oil sands projects. This paper will proceed in three segments. Part I will compare the statutory frameworks in Canada and Alberta to discuss their merits and deficiencies. In Part II, the paper will explore how GHG emissions have figured into the calculus of panels responsible for enforcing those environmental statutes. Using the Kearl Oil Sands’ environmental assessment as a starting point, the discussion will focus on the joint review panel’s Jackpine Expansion Project (JEP) assessment. JEP was the first oil sands project that was simultaneously analyzed under the new provincial and federal laws and is thus far the only oil sands assessment to have extensively considered climate change within the new framework. In light of the few environmental assessments that consider GHG emissions, and the scarce concern that GHG emissions garner when they are considered, the paper will conclude by exploring possibilities and prospects for reform.

I. ENVIRONMENTAL ASSESSMENT LEGISLATION

Environmental review and assessment by tribunals empowers the government to proactively halt or place conditions on an environmentally harmful project before it can proceed. In theory, it can be the “most powerful tool” in environmental protection.5 The purpose of environmental assessment, as endorsed by the Supreme Court of Canada in *Friends of the Oldman River Society v Canada (Minister of Transport)*, is twofold. First, to promote an “early identification and evaluation of all potential environmental consequences of a proposed undertaking” and second, “decision-making that both guarantees the adequacy of this process and reconciles, to the greatest extent possible, the proponent's development desires with environmental protection and preservation.”6 The information-gathering and decision-making components of environmental assessments ensure that policy-makers have the necessary factual basis to make a scientifically informed decision when granting or denying approval for a proposed development.7 In practice, however, environmental assessment legislation in both Canada and Alberta has not required tribunals to robustly consider climate change issues when assessing oil sands projects. A detailed examination of both legal regimes explains why this is the case.

7 *Greenpeace v Canada (Attorney General)*, 2014 FC 463, 77 Admin LR (5th) 62 at para 106.
The Environmental Assessment Process in Alberta

Before the enactment of Bill 2, Responsible Energy Development Act, in December 2012, a proponent wishing to operate or modify an oil sands facility would be required to appear before the Energy Resource Conservation Board (ECRB). The ECRB would then issue licenses in accordance with six energy-specific enactments that regulate the methods and processes governing energy resource activities. Subsequently, a proponent would submit an environmental impact assessment to Alberta’s Ministry of Environment, Sustainability, and Resources Development, which would conduct an assessment of the project with reference to criteria outlined in the EPEA. However, the environmental assessment process for energy resource projects in Alberta has been overhauled since the enactment of Bill 2. The new regulatory framework streamlines the process under the AER. Pursuant to the mandate under section 2(1) of the REDA, the AER is responsible for “the efficient, safe, orderly, and environmentally responsible development of energy resources” in accordance with both energy resource and environmental enactments. Accordingly, the AER concurrently considers and decides applications under the EPEA and other energy-specific statutes. The EPEA has been amended to grant exclusive jurisdiction to the AER to hear and decide all environmental assessments as they relate to energy resource activities. Under section 15 of the REDA, the AER has the executive authority to consider the following factors when conducting an environmental review: (i) factors decreed by Ministerial orders (“any factor it must consider”) and (ii) factors issued by the Lieutenant Governor in Council Regulations (“factors prescribed by regulations”). This broad scope of authority suggests that the AER may consider any factor, including GHG emissions, when determining whether to approve a project.

The first set of factors listed under the REDA are those decreed by ministerial orders. Section 67 of the REDA authorizes the Minister of the Environment and Sustainable Resource Development to provide the AER with guidelines to ensure that its decisions are consistent with government priorities and environmental management. In the past, this “policy assurance” function has called into question the

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10 Supra note 2, s 2(1).
12 See s 2.1 of the EPEA, supra note 3.
independence of the AER, especially in light of the Alberta government’s frequent prioritization of industry needs. However, section 67 could theoretically be a powerful and efficient tool: if Alberta’s government wished to make climate change a government priority, the power under section 67 could be used to require the AER to consider climate change issues when conducting its assessments. The second source of factors that the AER must consider under the REDA is derived from regulations made pursuant to section 15. When the government consulted with the public in designing the new regulatory framework, the public suggested that the AER consider, inter alia, the impacts of a proposed activity on water, air, land, cumulative effects, and human and animal health. Notably, a project’s impact on climate change was absent. Rather than outlining specific environmental considerations, the ordinance that was eventually approved, Regulation 90/2013, merely requires the AER to consider the effects of an energy resource activity on the environment. The broad language used in Regulation 90/2013 cuts both ways. On the one hand, the text permits the AER to consider GHG emissions insofar as they may have an effect on the environment. However, without having to address specific points of environmental degradation, broadly worded parameters may enable the AER to narrow the scope of its analysis while acting in ostensible conformity with the statute. This is especially true given the fact that the AER must merely consider environmental effects. In fact, this was the precise problem with the REDA’s predecessor, which required the ECRB to consider the “public interest, having regard to... the effects of the project on the environment” when licensing projects. While the new regulation was designed to remedy ambiguities resulting from...
the “public interest test,” it is unclear how requiring the AER to consider the effects of an oil sands project will be much different. Indeed, the joint panel in the JEP decision, which will be discussed in detail later in the paper, determined that its findings would be the same irrespective of the test applied.\textsuperscript{20}

Giving substance to the current regulation is not aided by referring to other sections of the \textit{REDA}. Since the \textit{REDA} does not specify its own “purposes,” decision-makers are unable to rely on overarching guidelines that could inform their decision-making. Notwithstanding this omission, Professor Nickie Vlavianos argues that the AER would have to obtain guidance from the various statutes that it is responsible for enforcing when it is required to enforce them.\textsuperscript{21} This position is consistent with the Supreme Court of Canada’s judgment in \textit{ATCO Gas & Pipelines Ltd. v. Alberta (Energy & Utilities Board)}, which decided that a board’s powers “will necessarily be limited to only what is rationally related to the purpose of the regulatory framework.”\textsuperscript{22} Accordingly, the AER would have to conduct environmental assessments and devise conditions on projects in accordance with the \textit{EPEA}’s purposes, which recognize

\begin{enumerate}
\item the protection of the environment [a]s essential to the integrity of ecosystems and human health and to the well-being of society;
\item the need for Alberta’s economic growth and prosperity in an environmentally responsible manner and the need to integrate environmental protection and economic decisions in the earliest stages of planning;
\item the importance of preventing and mitigating the environmental impact of development and of government policies, programs and decisions;
\item the responsibility of polluters to pay for the costs of their actions.\textsuperscript{23}
\end{enumerate}

Reading the AER through this framework would give meaning to the assessment process by providing regulators with points of reference when assessing how a project’s GHG emissions affect the environment. Specifically, the \textit{EPEA}’s purpose of preventing, in addition to mitigating, the environmental effects of oil sands development could embolden regulators to require proponents to meet specific GHG reduction targets in order to prevent climate change, and not merely moderate a project’s contribution to it. Furthermore, placing environmental effects within the context of society’s well-being,
human health, and the integrity of eco-systems could encourage regulators to weigh the broad, global concerns of climate change and the implications of a project’s GHG emissions on them.24

To summarize, Alberta’s legislative framework does not specifically address climate change issues. The permissive language of the text is weak and enables the AER to meet its obligations without considering a project’s GHG emissions. However, this fact does not theoretically mean that tribunals must ignore climate change: the broad parameters of Regulation 90/2013 and a purposive reading of Alberta’s legislative framework provides the AER with a mandate to consider climate change when assessing the environmental impacts of proposed projects.

The Federal Environmental Assessment Process in Canada

Federal jurisdiction to regulate GHGs was confirmed by the Federal Court in Syncrude Canada Ltd v Canada (Attorney General) in 2014.25 Since GHG emissions have widespread impacts, “both levels of government will have sufficient flexibility in their legislative powers to ensure GHGs are considered in [environmental assessment] processes.”26 Since the environment is an area of shared jurisdiction within Canada’s federal framework, an oil sands project may trigger an environmental assessment process under the CEAA if a federal nexus exists. Under the CEAA, an assessing tribunal is responsible for determining whether the environmental effects of a particular project, such as its GHG emissions, constitute a significant adverse environmental effect. If the tribunal finds that an environmental effect is “significant,” the onus then shifts to the Governor-in-Council to decide whether the adverse effect can be justified in the circumstances.27 Only when the cabinet determines that a project’s adverse environmental effects are justified can the project proceed.

24 The fact that the EPEA identifies the “polluter pays” principle as a foundational purpose of the Act is problematic. The point of environmental assessment is to proactively avert environmental degradation; compensating society for environmental degradation once it has occurred may be a second-best solution. As will be seen in Part II, the joint panels in KOS and JEP identified the proponents’ compliance with Alberta’s “polluter pays” regulations as a mitigation measure since the regulations would require the companies to purchase credits or pay into a provincial fund if they failed to meet emission targets; however, the price of carbon at the time ($15/tonne) significantly underestimated its actual cost, as it is planned to reach $30/tonne. In this sense, the “polluter pays” principle can be used to distort the rationale for environmental assessment by remedying adverse environmental effects with pecuniary, opposed to proactive, means. A tribunal’s decision to consider “polluter pays” mitigation efforts is certainly compliant with the legislation, but it is unclear whether the principle’s inclusion is optimal from an environmental standpoint, especially if compensation does not reflect the actual harm.

25 2014 FC 776, 244 ACWS (3d) 328. Interestingly, at para 83, the court upheld the validity of renewable fuel regulations on the basis that climate change constituted a “real, measured evil” that fell within the federal government’s criminal law power.


27 CEAA, supra note 4, s 52(2).
Following the 2012 amendments to the CEAA, the Canadian Environment Assessment Agency (CEA Agency) can only conduct an environmental assessment for designated projects prescribed by regulation. As a result, environmental law professor Meinhard Doelle estimates that only ten per cent of projects that previously qualified for environmental assessment will now undergo the process.\textsuperscript{28} For projects that relate to the oil sands (excluding those relating to pipeline projects), a responsible authority can only assess the construction and operation of a new oil sands mine with a bitumen production capacity of at least 10,000 cubic metres per day or an expansion to an existing mine that would increase the mine’s area by 50 per cent and the mine’s production by 10,000 cubic metres per day.\textsuperscript{29} If a project falls into one of the designated projects that would trigger assessment, the CEA Agency may use its discretion to determine whether an environmental assessment is required.\textsuperscript{30} Accordingly, a project that might otherwise warrant scrutiny for its effects on climate change may be exempted from environmental assessment.

The 2012 amendments to the CEAA also limited the types of environmental effects that a federal tribunal could consider during assessments. Notwithstanding the amendments, it is clear that the CEA Agency could consider a project’s climate change impacts if an oil sands project qualified as a designated project and assessment was required. Under section 5(1)(b), an environmental legal authority can consider “any change that may be caused by the environment” outside Canada or in a province other than the one where the physical activity occurs or the project is carried out. Because “environment” is broadly defined under section 2 of the CEAA and since a project’s contribution to climate change may have an impact outside of Alberta, a compelling argument could be made that climate change would fall under the scope of federal review.\textsuperscript{31} Such a position was adopted by the CEA Agency in its draft assessment of the Pacific Northwest LNG project in 2016. The CEA Agency confirmed that considering the effects on atmospheric greenhouse gas levels was “a requirement under subsection 5(1) of the CEAA 2012 for changes that cross provincial or international boundaries.”\textsuperscript{32} The same conclusion was also reached by the National Energy Board (NEB) in 2014: while the NEB rejected the City of Vancouver’s motion calling for the NEB to expand the scope of its hearings to include the upstream and downstream climate change


\textsuperscript{29} Regulations Designating Physical Activities, SOR/2012-147 at 8-9.

\textsuperscript{30} Doelle, supra note 28 at 5.


impacts of the proposed Trans Mountain pipeline project, it accepted that GHG emissions could fall under the scope of section 5(1).  

The fact that climate change matters continue to fall within the scope of the CEAA is important. This is because the CEAA is in many respects more demanding than Alberta’s EPEA. When considering the factors under section 5, the CEA Agency must consider the legislation’s foundational purposes when gathering information for government and prescribing conditions on proposed projects. Section 4(1) of the CEAA requires the Agency to consider projects “in a careful and precautionary manner” and encourages the study and incorporation of “the cumulative effects of physical activities in a region” in its assessments. This precautionary principle is important when considering climate change. As the Supreme Court of Canada noted in Spraytech v Hudson, and more recently in Castonguay Blasting v Ontario, the principle requires regulators to err on the side of caution when a project has the potential to cause serious and irreversible damage, even when the science is not conclusive. In the Guidelines for the Taseko Prosperity Gold-Copper Mine Project, the CEA Agency noted that the decision-maker must employ the principle “especially where there is a large degree of uncertainty or high risk” and when the “human health of current and future generations” is at stake. Applied to the climate change context, the principle prevents regulators from discarding climate issues merely because one cannot demonstrate environmental consequences from a project’s GHG emissions.

The CEAA additionally calls on decision-makers to examine a project within its context and not in isolation. Being alive to the “cumulative effects” of a project requires the tribunal to consider “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” This view was adopted by the Federal Court in Bow

34 See Lambrecht, supra note 8 at 37. According to Kirk Lambrecht, the “public interest” test under Alberta’s previous enactment provided the ECRB with authority to consider the cumulative environmental effects of an application; however, permitting cumulative effect assessments cannot be equated with its inclusion in the CEAA as a fundamental purpose of environmental assessment.
35 114957 Canada Ltee (Spraytech, Société d’arrosage) v Hudson (Town), 2001 SCC 40 at para 31; see also Castonguay Blasting v Ontario, 2013 SCC 52 at para 20.
38 Koehl, supra note 26 at 198.
Valley Naturalists Society v Canada, which was cited favourably by the Alberta Court of Appeal in 2009:

Implicit in a cumulative effects assessment . . . are effects from both the project as scoped and other projects or activities . . . It is not illogical to think that the accumulation of a series of insignificant effects might at some point result in significant effects . . . [A] finding of insignificant effects of the scoped projects is sufficient to open the possibility of cumulative significant environmental effects when other projects are taken into account.  

The utility of “cumulative effects” in the climate change context is evident: a project’s GHG emissions may be individually minor but collectively contribute to significant changes to the climate. A requirement to consider cumulative effects when assessing a project with significant GHG emissions reframes the question as “not whether a particular emission was the one that broke the camel’s back, but rather whether it is an emission that will contribute to such an occurrence.” Irrespective of the fact that both the precautionary and cumulative impact doctrines underlie Canada’s environmental assessment regime, their application to climate change issues has been ineffectual. To explain this claim, this paper will turn to examining environmental assessments that have considered climate change issues in the oil sands.

II. ADMINISTRATIVE CONSIDERATION OF GHG EMISSIONS DURING ASSESSMENTS OF OIL SANDS PROJECTS

Before the New Legislative Regimes: Kearl Oil Sands and Joslyn Mines

Before the adoption of the REDA in Alberta and the CEAA, two joint panels conducted environmental assessments of oil sands projects that expressly considered GHG and climate change: Kearl Oil Sands and Joslyn Mines. In the case of Kearl Oil Sands, the decision of the joint review panel regarding its assessment of climate change was appealed to the Federal Court in 2008. In Pembina Institute v Canada (Attorney General), environmental groups challenged the joint review panel’s 2007 decision that the Kearl Oil Sands’ (KOS) GHG emissions of 3.7 million tonnes per year constituted an insignificant adverse environmental effect. Since the environmental effect was not significant, the government did not have to justify why the benefits of the project outweighed the harm that the project’s GHG emissions would produce. The panel substantiated its decision in light of Imperial Oil’s proposed mitigation measures, which

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40 Koehl, supra note 26 at 208.
41 2008 FC 302, 80 Admin LR (4th) 74 at para 70 [Pembina].
were largely speculative: it committed to low-NOx mine equipment when it became commercially available and agreed to participate in and implement a study on Best Available Technology Economically Available (BATEA) for oil sands development.\(^{42}\) It is unclear whether the panel should have relied on mitigation measures that were conditional and uncertain when determining that the proposed project’s emissions would be insignificant. As environmental law professor Nathalie Chalifour explains, the CEAA requires reviewers to consider measures that are technically and economically feasible.\(^{43}\) While sitting on the Federal Court, Chief Justice Iacobucci (as he then was), held in *Tetzlaff v Canada*, that the measures require that the technologies be “known.”\(^{44}\) If the panel were to find that an otherwise harmful effect was insignificant because it could be assuaged, it ought to have ensured that those measures actually existed and that there was some factual basis for determining that they would reduce KOS’s adverse effects.

Upon review, the Federal Court deferred to the joint panel’s decision on GHG but ruled that the reasons supporting its finding were inadequate.\(^{45}\) Merely two months after the judge remitted the case back to the panel, it released an addendum identifying mitigation measures that were not previously cited. Nevertheless, the panel failed to specify the amount of GHG emissions that would be reduced by these schemes, and it did not explain why the GHG emissions were insignificant.\(^{46}\) In the end, the panel concluded that “there was very little evidence... to suggest that [the GHG emissions] will result in significant adverse environmental effect” if the project met proposed intensity targets.\(^{47}\) Since intensity emissions do not reduce the absolute emissions from the project, it is arguable that they should not have been used to mitigate the project’s adverse contributions to climate change.\(^{48}\) In coming to its conclusions, the original tribunal and subsequent judicial decision ignored important CEAA principles which would suggest that unmitigated and permanent GHG emissions ought to constitute significant adverse effects. For instance, the panel ignored the precautionary principle by not including it in its terms of reference,\(^{49}\) and subsequently undermined the

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\(^{43}\) Chalifour, *supra* note 37 at 256.
\(^{45}\) *Pembina*, *supra* note 41 at para 79.
\(^{46}\) Chalifour, *supra* note 37 at 264.
\(^{48}\) Koehl, *supra* note 26 at 189.
\(^{49}\) Alberta Environment, *Final Terms of Reference: Environmental Impact Assessment Report for the Proposed*
principle by deciding in favour of the project despite the “lack of certainty related to the management of cumulative impacts for key environmental parameters.” On judicial review, Justice Tremblay-Lamer recognized the principle as a founding tenet of the CEAA but did not rule on whether the panel erred in law by failing to consider the precautionary principle. However, Justice Tremblay-Lamer did dilute the principle’s meaning by noting that adaptive management could mitigate potential harms. This aspect of the decision was especially controversial, since it elevated adaptive management to a fundamental principle of environmental assessment even if it does not appear among the purposes of the CEAA.

After KOS, there was only one major oil sands assessment that considered climate change issues before Canada and Alberta adopted their respective changes to environmental assessment in 2012. In Joslyn Mines, the proponent Total sought approval for a project that would emit 2.7 million tonnes of carbon dioxide annually, or one per cent of Alberta’s total GHG emissions. In its 2011 report, the joint review panel found that the project was not likely to cause a significant adverse effect if the proposed mitigation measures were implemented. Akin to KOS, the mitigation measures did not correlate to emission offsets and were largely speculative. For instance, while Total promised to research and allocate space for a proposed Carbon Capture and Storage facility, the project was not yet undertaken. Likewise, the panel did not engage in detail with the concepts of cumulative effects and the precautionary principle when rendering its decision. Looking at KOS and Joslyn Mines together, there was consensus prior to 2012 that large-scale GHG emissions did not produce significant adverse effects. Furthermore, these cases demonstrate that litigation measures that would not directly offset the adverse effect could support such a finding.
Assessment of Oil Sands Projects after the REDA and the CEAA, 2012: Jackpine Mine Expansion Project

Since the respective changes to the Albertan and Canadian environmental assessment processes in 2012, there has been only one assessment of an oil sands project that has attentively considered climate change issues: Jackpine Mine Expansion Project, Application to Amend Approval 9756 (JEP).56 In the 2013 decision, Shell Oil brought an application before the ECRB57 to amend a previous application for its Jackpine bitumen in-situ site. Shell sought to expand the mine area, divert a river, and construct new facilities in order to increase its production of bitumen by fifty per cent.58 A joint review panel was established under the former CEAA, because the expansion project necessitated regulatory approval under the provincial EPEA and the federal Fisheries Act and Navigable Waters Act.59 After the adoption of the REDA and the CEAA 2012, respectively, the terms of reference for the project changed to incorporate the new legislative framework. According to Shell’s environmental impact study, the expansion project would emit an additional 1.2 million tonnes of carbon dioxide annually, representing a 2.5 per cent increase in Alberta’s annual GHG emissions based on 2010 levels.60 Much like Imperial Oil in KOS and Total in Joslyn Mines, Shell relied on speculative mitigation measures to support a finding that the environmental effects of the project were negligible. None of the commitments were readily enforceable, nor were any of them specifically tied to the project itself. For instance, Shell proposed being a “leading company in carbon dioxide mitigation,” setting as an “aspirational goal” the reduction of its GHG emissions to match the emission output of imported crude and optimizing energy efficiency in accordance with BATEA. While Shell noted that its QUEST Carbon Capture and Storage facility would be operational by 2015, it failed to specify how much of the project’s carbon dioxide emissions would be offset by the province-wide facility.61 While the panel “encourage[d] Shell to offset more greenhouse gas emissions by implementing additional measures elsewhere” (which additional measures the panel had in mind remain unclear), it was of the opinion that the project was “not likely to result in significant adverse environmental effects from GHG emissions, provided that the mitigation measures proposed are completed and


57 As the REDA was enacted during the application process, the decision-making body under the EPEA was originally the ECRB.

58 JEP Report, supra note 20 at 1.


60 Ibid at 49.

61 Ibid at paras 282 & 285.
implemented.”62 The finding suggests that several years after the joint panel’s original findings in KOS, tribunals continued to rely on uncertain mitigation measures to support their view that a project’s climate change emissions constituted an “insignificant” environmental effect.

In its impact assessment, Shell noted that climate change is a global issue and the project should therefore be understood in a global context. Since the project’s contribution to global GHG emissions would be 0.004 per cent, it would be unreasonable to find the project would have a significant effect on the environment.63 This argument is unpersuasive under the rubric of cumulative effects. As the Oil Sands Environmental Coalition noted, this would effectively relieve any project with large-scale GHG emissions from mitigating climate change because no oil sands project alone would significantly increase climate change on a global scale.64 Rather, a cumulative effects approach would require the panel to recognize that:

[As the] gap between the total emissions and the upper limit [on climate change] narrows, the greater the potential that limit will be exceeded. Where there is greater potential that the limit will be exceeded, the more important every incremental contribution becomes . . . Thus, a cumulative impacts analysis eliminates the need to establish a direct causal link between an individual project’s emissions and the resulting climate change consequences.65

However, instead of placing Shell’s proposal within the context of previous and future GHG emissions, the panel merely noted that the project complied with Albertan GHG emission regulations. What is left unclear is how Shell’s compliance with provincial legislation assisted the panel in demonstrating that the cumulative effects of the project were insignificant. As noted above, the regulations do not require new projects to be carbon-neutral.66 Accordingly, any project that emits unmitigated GHG contributes to the cumulative effects underlying climate change. Furthermore, the project would have necessarily set Alberta back in meeting its climate change target at the time, which was a 50 million tonne reduction of GHGs below “business as usual” levels by 2020.67 The

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62 Ibid at paras 290-291.
63 Ibid at para 292.
64 Ibid at para 293.
66 The regulations require a 2% annual reduction of GHG emissions based on a project’s third year of operation, up to a maximum of 12%. See Specified Gas Emitters Regulation, Alta Reg 139/2007, s 4.
67 JEP Report, supra note 20 at 51. Currently, Alberta’s target is to emit 260 Mt of carbon in 2020, which is a 28 Mt increase compared to its 2005 standards. Current estimates indicate that Alberta is not on track to meet the 2020 goal: emissions will actually surpass 287 Mt or 24 per cent above 2005 standards. See: Shawn McCarthy, “Greenhouse gas emissions: Who’s responsible for climate policy in Canada?” The Globe and Mail (23 March 2015) online: <http://www.theglobeandmail.com/news/politics/canadas-provinces-are-taking-the-the-lead-on-climate-but-should-they/article23583907/>.
panel observed that the project “will make it more difficult for Alberta and Canada to meet their GHG reduction targets”; however, it could not support a finding that the emissions would be significant when taking cumulative effects into account. Thus, without actually considering cumulative effects in light of other projects and global climate change, the panel decided that project approval was unlikely to result in significant adverse cumulative environmental effects.

The determination that 1.2 million tonnes was not a significant adverse effect is in many respects unsurprising. While the joint panel in JEP did not raise Pembina, the annual absolute emissions from JEP were one-third of those produced by KOS. If the emissions from KOS and Joslyn Mines were not significant, it would be difficult to reconcile a finding that the emissions in JEP were. Two observations can be made to counter this point. First, evidence since 2007 has further solidified the view that the world is reaching, if it has not already surpassed, a climate change precipice. On this basis, the context in which the JEP panel considered the project’s GHG emissions in 2013 was dissimilar to the context in which the KOS tribunal operated six years beforehand. Furthermore, there were considerable changes in environmental law between KOS and JEP that could have substantiated a departure from the KOS standard. In the 2012 comprehensive study report Randle Reef Sediment Remediation Project, the task group applied the CEAA 1992 to assess a project’s impact on air quality, which included the emission of GHG into the atmosphere. The task force found that an adverse environmental effect to air quality should be considered significant if, inter alia, the duration of the adverse effect is long-term (greater than fifteen years), would persist after the project was complete, and would substantially affect the ecological or social context. The same year, the CEA Agency issued its comprehensive study on Little Bow Reservoir Rehabilitation and Upgrading Project. It determined that the project’s impact on climate change was insignificant as its emissions constituted a mere 0.000008 per cent of Alberta’s total GHG emissions; the tribunal substantiated its finding on the basis that a significant threshold on climate change would be reached where the “change in total provincial GHG [was] greater than 0.1%.” If the methodology employed in these two reports were applied to JEP, there would be a strong basis for finding that the expansion produced significant adverse

68 JEP Report, supra note 20 at 298.
70 Ibid at 160.
environmental effects. Specifically, the Jackpine mine would have surpassed the *Little Bow Reservoir* threshold by over twenty-five times.

Apart from these substantive concerns, a further criticism lies with the joint panel’s ambiguity over its approach to analysing GHG emissions. The Terms of Reference for the *Jackpine Expansion Assessment*, for example, outlined the environmental effects that would be considered pursuant to the federal legislation and did not include GHGs or any aspect under section 5(1)(b) as part of its study. However, within the Terms of Reference, there was no mention of the *EPEA*. While it is highly unlikely that the panel’s analysis would be different whether it relied on the federal or provincial acts, or both, the failure to frame its analysis reflects a larger failure to meaningfully engage with environmental legislation. For instance, if the joint panel was considering the *CEAA* framework, one would expect the panel to consider the precautionary principle. If the panel operated under the provincial regime, one would expect it to address the purposes of the *EPEA*, such as preventing environmental degradation and promoting human and environmental health. Without making any reference to the *EPEA*, the only principle the panel alluded to was the obligation for polluters to pay which, as demonstrated above, can be problematic as a mitigation technique.

For this reason, a lack of clarity in the law to be applied, or in the purposes to be considered when applying a given law, may be one of the best avenues for interveners to successfully appeal a panel decision. While the application and interpretation of a tribunal’s home statute would be reviewed on the standard of reasonableness, a panel’s decision to ignore the precautionary principle or cumulative effects may form a basis for judicial intervention: misapplying the law, or ignoring it completely, could ground a finding of unreasonableness. That being said, potential for judicial review should be treated cautiously, especially if a tribunal makes reference to these principles but does not explore them in detail. In a recent examination of the standard of review for environmental assessments, the Federal Court of Appeal in *Ontario Power Generation Inc v Greenpeace Canada* determined that deference is owed to regulatory expertise when legislation requires a regulatory authority to “consider” a factor. In other words, the degree to which a panel “considers” a factor is a matter of judgment best left for the panel. A panel only needs to demonstrate “some consideration” in order for the decision

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73 See Chalifour, *supra* note 37 at 262. It is important to note that merely padding an assessment with the language of the relevant legislation may not pass judicial muster. The judge in *Pembina*, reviewing the joint panel’s decision on a standard of correctness, ruled that the panel’s reasons for its conclusion on GHG emissions were insufficient. It is worth noting that the applicants in *Pembina* also challenged the panel on its application of the precautionary principle, but the court did not rule on the alleged error in law. Chalifour argues that the court thus “relegated the precautionary principle to a tool of statutory interpretation that lurks in the background of judicial analysis,” which may pose a barrier to future litigants seeking judicial review on this basis.
to be reasonable; only when a tribunal provides “no consideration at all” will the decision attract judicial review.\footnote{Ontario Power Generation Inc v Greenpeace Canada, 2015 FCA 186 at para 130.} In this respect, the discretion accorded to panels in considering an application in a precautionary manner under the CEAA or in considering a project’s environmental effects pursuant to the REDA may serve to insulate the panels from judicial scrutiny. Interveners would face a similar problem if they wished to directly challenge a panel’s finding that a project’s climate change impact was insignificant. As noted above, a panel’s weighing of evidence and its conclusions drawn from the evidence are to be reviewed on a reasonableness standard.\footnote{Ibid at para 122; Greenpeace, supra note 7 at para 25.} Accordingly, an intervener would have to demonstrate that a panel’s finding on the significance of GHG emissions was unreasonable. This would be difficult after Pembina, where the Federal Court did not take issue with the panel’s conclusion on significant adverse effects but merely noted that the reasons supporting this conclusion were inadequate.

**Summary of Part II**

Six years separated the original panel decisions in KOS and JEP. Despite the bolstering of climate change evidence and the heightened urgency to address the issue during the intermittent years, tribunals have not been persuaded to believe that GHG emissions from large-scale oil sands projects constitute significant adverse effects on the environment. Reliance on speculative mitigation measures, provincial emissions targets, and restrictive readings of environmental assessment legislation have consistently supported this conclusion. Determining that a project’s GHG emissions have significant adverse consequences cannot by itself stymie a project’s approval. Rather, the finding of “significant adverse effects” requires the government to determine why the effects should be justified in the circumstances. Indeed, the joint panel in JEP was the first panel in the oil sands industry to conclude that a project would have significant adverse effects, noting that JEP would have negative effects on wetlands, migratory species, and aboriginal peoples.\footnote{Martin Olszynski, “Shell Jackpine Mine Expansion Project: The Mysterious Case of the Missing Justification”, (12 December 2013) online: Ablawg <http://ablawg.ca/wp-content/uploads/2013/12/Blog_MO_Shell_Jackpine_December-2013.pdf>.} Unfortunately, the panel did not come to a similar conclusion regarding climate change.\footnote{See Pacific NorthWest, supra note 32 at 38-9. It is worthy to note that the CEA Agency’s draft assessment of Pacific NorthWest LNG found that the project’s GHG emissions would constitute a significant adverse environmental effect after taking into BATEA and emission offset or credits under British Columbia’s Greenhouse Gas Industrial Reporting and Control Act. The project is expected to increase GHG emissions at the provincial level by 8.5% and the national level by 0.75%. Recognizing that the GHG emissions would be irreversible, the Agency concluded that while the “effects of greenhouse gases from the Project in a particular location cannot be measured . . . the geographic extent of the environmental effects is global due to the cumulative nature of greenhouse gas emissions and their contribution to climate change at the global level.”} In light of the JEP panel’s
findings, the federal government was required to determine whether the negative effects of JEP could still be justified in the circumstances. The effects were held to be justified and project approval was granted accordingly. As such, finding that a project’s GHG emissions constitute a significant adverse effect should not be seen as a radical measure to thwart business development in Canada; it should rather be viewed as an exercise in promoting greater transparency by advising Canadians why a project’s negative impact on climate change may nevertheless still be in the public’s interest.

CONCLUSION

Canada’s energy industry has faced unprecedented challenges since JEP was decided in 2013. These have included the crash of oil prices in 2015 and the anticipated reduction of oil sands development. In light of these challenges, the GHG emissions emanating from the oil sands may very well be attenuated as a result. This fact, however, does not change the evidence that was before the joint panels at the time the oil sands projects were approved. When JEP was decided, Environment Canada predicted that GHG emissions in the oil sands sector would increase by 116 per cent between 2010 and 2020. The industry’s emissions would have come to represent 36.4 per cent of Alberta’s and 14.4 per cent of Canada’s total emissions by the end of the decade. Although these statistics were calculated at the macro level, they were an aggregate of projects such as KOS, Joslyn Mines, and JEP. The individual contributions to climate change were “insignificant” but were nevertheless expected to emit 7.2 million tonnes of carbon dioxide into the atmosphere per annum.

The CEAA and the relevant Alberta statutes, both in their previous and current frameworks, provide panels with the scope to consider GHG emissions. As demonstrated above, without specific criteria governing climate change, the doctrines of precaution and cumulative effects, among others, do not serve as a barrier to approving some of the greatest greenhouse gas emitting projects in Canada. This would suggest that tribunals may not be acting consistently with the purposes of environmental assessment identified under Oldman. As the Newfoundland Court of Appeal contended in Labrador Inuit Assn. v Newfoundland:

If the rights of future generations to protection of the present integrity of the natural world are to be taken seriously . . . care must be taken to interpretation and application of the legislation. Environmental laws must be construed against their commitment to future generations and against a recognition that, in addressing environmental issues, we often have imperfect knowledge . . .

If the legislation is to do its job, it must therefore be applied in a manner that will counteract the ability of immediate collective economic and social forces to set the environmental agenda. It must be regarded as something more than a mere statement of lofty intent. It must be a blueprint for protective action.80

However, it would be unfair to direct one’s criticism solely to the panels, despite the fact that tribunals do not wholeheartedly implement the ideals of their enabling legislation. For instance, the federal government could specify the meaning of “significance” by regulatory decree in order to facilitate implementation when assessing issues like climate change.81 The government could also create a presumption that if a project emits a certain amount of GHGs, its environmental effects would automatically be deemed adverse. This would require cabinet to justify the project’s negative impact on climate change before it could grant project approval. More radically, Professor McLeod-Kilmurray has argued that Canada should replace its current sustainable development framework for prioritizing development with the Australian model, which emphasizes “ecologically sustainable development.” McLeod-Kilmurray suggests that if such an approach were the mandatory standard in the CEAA, the outcome of KOS and presumably other oil sands assessments would be different, because such a model does not seek to balance the environment and development but rather sees protection of the environment as fundamental to sustainable societies.82 In Alberta, Professor Nickie Vlavianos has further argued that regulations made pursuant to the REDA ought to incorporate the precautionary principle and cumulative effects.83 However, it is unclear whether this would be effective given the experience of tribunals considering climate change pursuant to federal legislation. As noted in Part I, the provincial government could also fashion regulations under section 67 of the REDA or through a regional plan that could specifically address climate change and even go so far as identifying GHG thresholds that the AER would have to abide by when deciding whether to license a project.

80 Labrador Inuit v Newfoundland (Minister of Environment and Labour), 155 Nfld & PEIR 93; 152 DLR (4th) 50 at paras 11-12.
81 Koehl, supra note 26 at 206.
83 Vlavianos, supra note 9.
Although its findings fall outside of the context of oil sands development, the Joint Review Panel for the Mackenzie Gas Project called on the federal government to “develop and implement, as soon as possible, legislation and regulations to reduce greenhouse gas emissions in Canada to meet or exceed existing national targets in the Climate Change Plan for Canada.”\(^{84}\) Several years after the recommendation, a robust climate change plan has yet to come to fruition. The federal government has thus far refrained from implementing GHG targets that would impact oil sands development even though emission standards already exist in other sectors, most notably in transportation.\(^{85}\) Given the simplicity of some of the proposed changes, and the legislative clarity and direction that these changes could provide, it may be surmised that the ambiguity is also preferred or even desired by the Alberta and federal governments. To counteract the lack of legislative guidance, McLeod-Kilmurray argued that tribunals reviewing oil sands projects should not only recommend provincial and federal government action on climate change, akin to the Mackenzie Gas Project, but also go one step further and call for a moratorium on oil sands development until appropriate schemes are in place.\(^{86}\) To support this view, the authors point to the 2007 Whites Point Quarry assessment, where the joint review panel called on Nova Scotia “to develop and implement a comprehensive coastal zone management policy or plan” and insisted that the province “should impose a moratorium on new Approvals” until such a scheme was implemented.\(^{87}\) An activist decision by a joint review panel, however, is neither realistic nor desirable. The Whites Point Quarry decision was itself the subject of a NAFTA arbitration hearing, which Canada lost.\(^{88}\)

It therefore appears that any change in environmental assessment is only possible when either tribunals or governments prioritize the effects of climate change in environmental assessment. Until then, it is unlikely that any oil sands project will be denied approval on the basis that its climate change impact is significant and the environmental effects of its GHG emissions outweigh the benefits that would accrue to the province if the project was allowed to go forward. As demonstrated in this paper, the relevant legislation places no demands on responsible authorities to address climate change specifically, and permissive language affords tribunals with significant latitude in downplaying the environmental effects of climate change without recourse to specific principles or thresholds. While “environmental assessment cannot be a meaningless

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86 McLeod-Kilmurray, *supra* note 82 at 90.

87 *Ibid*.

hoop to jump through on the road to regulatory approval,” the experience in the oil sands industry suggests that the current process is ill-suited to addressing the climate change repercussions of projects subject to review.  