

**Considering Climate Change in the Federal EA process:
A Submission to the EA Review Expert Panel**



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1. Introduction

Environmental assessment (EA) is a tool used to ensure decision-makers have as complete a picture as possible of the potential for immediate, medium-term, long-term and cumulative environment impacts of proposed development projects. To achieve that goal, climate change must be considered. As with any process, environmental assessment should be properly structured and follow appropriate practices to ensure decision-makers have this critical information to inform their decisions. Sierra Club BC has a historic and abiding interest in EA best practices specific to considering climate change and those are highlighted for the EA Review Expert Panel in this submission. Specifically, Sierra Club BC recommends:

- Including GHG emissions from the project's full life cycle, including downstream emissions, in a project's EA;
- Explicitly linking the EA process to Canada's GHG reduction commitments;
- Explicitly acknowledging GHG emissions as a triggering mechanism for an EA;
- Including an analysis of alternatives to the project with a "zero option";
- Considering whether a project will have a "net contribution to sustainability" vs. keeping the "significance" analysis; and
- Implementing strategic level EA.

2. Climate in Environmental Assessments

2.1 Sierra Club BC's role

Sierra Club BC works to defend BC's wild places and species, within the urgent context of climate change. Our organization recognizes the value of EA in the protection of the environment and of the species living within it. Our vision is to conserve BC's wilderness while addressing BC's ecological, social and economic needs. Climate change poses a fundamental threat to all aspects of our vision, so we have made it our mission to spread awareness about this issue in processes like the present one and more broadly.

In 2015, Sierra Club BC collaborated with the Environmental Law Centre at the University of Victoria to compose a report outlining the failure to-date to integrate climate considerations in British Columbia's environmental assessment processes. The recommendations from that report may also be applied to federal EA processes. Its first four recommendations are reiterated below, and its last recommendation has been updated to better reflect current research on EA reform:

- To include GHG emissions from the project's full life cycle (including downstream emissions) when considering its contribution to climate change;
- To explicitly link EA processes to a jurisdiction's greenhouse gas (GHG) reduction targets;
- To explicitly acknowledge GHG emissions for project designation/as a triggering mechanism for an EA;
- To include an analysis of alternatives including a "zero option"; and
- To consider a “net contribution to sustainability” standard, rather than keeping the current “significance” approach.

2.2 Climate Change Recommendations Based on Good Practices

a) Including GHG emissions from the project's full life cycle

Under the current process, federal EA ostensibly considers a project's GHG emissions through the lifecycle phases of its design, construction, operation, and abandonment. The Canadian Environmental Assessment Agency (CEAA) provided general guidance to practitioners on incorporating climate change and GHG emissions into EAs under the previous *Canadian Environmental Assessment Act* (CEAA 2003 Guidelines); however, this guide is not legally binding and its contents are to be considered “at the discretion of jurisdictions and regulatory authorities” (CEAA 2003). Importantly, the GHG emissions and climate change ramifications of the transportation and end-use components of projects are largely scoped out of federal EAs. This is a critical omission since, for many projects, those project components contribute a tremendous amount – if not the majority – of project GHG emissions.

For example, the National Energy Board (NEB) is the regulator for all Canadian energy projects, and takes the lead on their EA (WCEL and Ecojustice, 2012). In an equivalency agreement with

British Columbia and Alberta, an NEB panel did not consider the global climate change impacts of the proposed Trans Mountain Expansion Project (TMEP) in its EA. It included only GHG emissions from the construction (1,020,000 tonnes) and operation (407,000 tonnes/year) of the project, which is only 1% of total downstream emissions if the burning of the bitumen transported by this pipeline is considered (IHS CERA, 2010; ECCC, 2016). The NEB panel did not consider the end use of the refined oil in Asia and the United States (downstream emissions) or the emissions from bitumen extraction in Alberta (upstream emissions). Sierra Club BC welcomed as an important first step the January 2016 announcement by the federal government that assessments of oil and gas projects such as the TMEP will now consider upstream GHG emissions. As a result of that change, Environment and Climate Change Canada (ECCC) released a final GHG Assessment report for the TMEP that accounted for the emissions from the oil exploration and production in Alberta relating to the project. However, to meaningfully assess the emissions and climate impacts of major energy projects like TMEP, the GHG emissions from end use must also be considered in the project's EA.

A project's Terms of Reference (TOR) includes scoping details, which in turn determines the nature of its review and the issues that will be considered. Whether to include upstream and downstream effects within the EA is a scoping decision. As downstream effects have potential impacts that often dwarf those of the proposed project, they require consideration and mitigation. Another key component currently missing in the scoping phase is public opinion regarding the list of issues (Mulvihill, 2003). In the TMEP EA, almost a third of intervenors surveyed regarding the NEB's performance specifically identified the need to evaluate both upstream and downstream effects, hence needing to include them in the Board's list of issues (Zmuda, 2016). This demonstrates a growing public consensus that we cannot defer our responsibility for downstream emissions to other countries. If EA is to incorporate the public's opinion and act in the public interest, then intervenors' concerns about the project's indirect consequences must also be addressed.

b) Explicitly linking the EA process to Canada's GHG reduction commitments

Canada has made a number of commitments to combat climate change, most recently in 2015 at the twenty-first Conference of the Parties of the UN Convention (COP21). There, Canada made a

commitment to attain a 30% GHG emissions reduction from 2005 levels by 2030 (UNFCCC, 2015; Lyman, 2015), and ratified this commitment on November 4, 2016.

Canada's history with GHG emissions reduction targets is poor (Lyman, 2015). Our past failures highlight the disconnect between our international commitments and our capacity to follow through on these commitments. Currently, Canada is not on track to meet its 2020 reduction targets that were agreed to under the 2009 Copenhagen Accord (Environment Canada, 2014). To improve our record on GHG emissions reduction, we must implement and enforce new measures, including within EA. Even when project proponents do consider and account for GHG emissions from construction and operation of their proposed projects, their submissions rarely frame those emissions within federal GHG reduction targets. Though proponents and practitioners are encouraged to use the CEAA 2003 Guidelines to incorporate climate change in EA, as mentioned the document has no enforceable legal status (Gray, 2015) and its implementation has not been widespread and is sometimes ineffective (Doelle, 2016). With enforceable and properly implemented laws in place, federal emissions commitments such as those set at COP21 should become the thresholds or limits relevant to assessing GHG emissions within EA. As it is difficult to trace climate change impacts back to individual projects (Doelle, 2016), GHG reduction targets may be used as a proxy for assessing climate impacts in EA. Failing to require a direct link between new projects and our international climate commitments could stall or fatally undermine Canada achieving its GHG reduction goals.

c) Explicitly acknowledging GHG emissions as a triggering mechanism for an EA

Section 52 of the *Canadian Environmental Assessment Act, 2012* designates proposed projects that are listed on the *Regulations Designating Physical Activities* for EA. Projects not identified under the regulation will only undergo an EA if a CEAA official makes a designation request to the Minister of Environment (CEAA, 2015). Ultimately, a large number of projects that will contribute to climate change do not require an EA (Doelle, 2016).

Rather than the current project designation approach, the initial review should seriously consider climate and require proposed projects undergo EA when their expected emissions after mitigation are no longer negligible (and therefore, the project will contribute to climate change). This

initial determination will dictate the type of EA process required, if any. It may be based on emission level ranges with corresponding EA processes, where projects in the largest emission category trigger the most comprehensive EA process. Or it may require projects above a certain GHG emission threshold (e.g. a certain number of metric tonnes of CO₂-e per year) to undergo EA, with their process proportional to their level of emissions. This measure would capture the proposed projects that are expected to contribute the most to climate change but that are currently not required by undergo an EA. The emission threshold or levels will be policy decisions. This approach will also provide Canada with a much greater capacity to track aggregate GHG emissions, in furtherance of our international climate commitments.

d) Including an analysis of alternatives with a "zero option"

An improved federal EA process should require consideration of alternative means of carrying out the proposed project's goals, and specifically include technically and economically feasible alternatives and their relative environmental effects (e.g. an alternative location, different routes, mitigation measures and methods of development) (CEAA, 2015). Every project proponent should be required to appraise the potential impacts of alternative project configurations, with an emphasis on alternatives with no or comparatively less adverse environmental effects. A "zero option" (also known as the "no-project" or "null" alternative) should be required as well, to permit analysis of the opportunity cost of building the proposed project. A zero option would also provide a baseline from which incremental emissions could be measured and inform the significance of the project's GHG emissions (Ho & Tollefson, 2016).

Along with including downstream emissions, under section (a) above, alternatives to the project and alternative ways of completing the project are another essential part of scoping an EA.

e) Considering whether a project will have a "net contribution to sustainability" vs. keeping the "significance" analysis

Even when project proponents do detail their proposed projects' expected GHG emissions and their effects on national targets, whether these emissions are "significant" varies greatly between projects. For example, the MacKenzie Gas Project (MGP) was expected to contribute 0.25-0.50% of Canada's emissions and the Pacific NorthWest LNG Project (PNW) was expected to contribute 0.75% of Canada's emissions (Ho & Tollefson, 2016). The MGP's review panel

found that the “evidence did not establish that the [MGP] Project’s GHG emissions would result in significant adverse environmental impacts.” In contrast, in its review of PNW, CEEA found that its emissions would be “a marked increase” in Canada’s emissions and its GHG emissions are likely to cause significant adverse environmental effects (Ho & Tollefson, 2016). The two reviewing bodies reached entirely different conclusions about the significance of the projects’ GHG emissions, though the projects’ emissions were only 0.25-0.50% apart in their contribution to Canada’s total emissions. The determination of whether a project may have significant adverse effects from GHG emissions does not currently follow clear criteria (Ho & Tollefson, 2016) and this must be remedied.

This demonstrates that the binary “significant” or “not significant” finding found in the current EA process is outdated and does not lend itself to the complexity of assessing climate impacts. Ho & Tollefson (2016) recommend implementing a sustainability-based EA framework as a next generation of EA. This may involve the question: "does the [project] provide a net contribution to lasting environmental, social and economic well-being without demanding trade-offs that entail significant adverse effects?" (WCEL, 2016).

Specifically, when considering project approval, a reviewing body should consider whether a proposed project is expected to help or hinder Canada’s ability to meet its climate targets. In this regard, Doelle (2016) recommends considering if:

- “The project does not involve GHG emissions.
- The project involves GHG emissions that are lower than all viable alternatives.
- The project will assist Canada in meeting its climate mitigation commitments and goals without undermining other Nations’ efforts.
- The project hinders efforts to meet or exceed Canada’s 2020 and 2030 targets.
- The project hinders efforts for Canada to achieve GHG emission neutrality before 2050.
- The project involves GHG emissions that are higher than viable alternatives, but it also involves greater net benefits in other areas.
- The project is/is not economically viable once it has fully internalize the cost of its GHG emissions over the life cycle of the project” (Doelle, 2016).

At the decision-making stage, the reviewing body's rationale regarding a proposed project's GHG emissions should be clear in relation to the project's impact on Canada's ability to meet its climate goals. There should also be clear rules to hold proponents accountable for emissions that end up exceeding levels predicted during the EA, and proponents should be liable for the life-cycle emissions of the project through enforceable approval conditions.

If the reformed EA process retains "significance" as a decision-making standard, it must be clearly defined from a climate perspective. Approaches to assess significance in the context of climate change involve monetary cost-benefit analyses; the extent to which the project complies with GHG reduction requirements; the consideration of the context of emissions, including short- and long-term effects and benefits; and the 'mitigation to reduction' approach (Gray, 2015).

f) A note on strategic level environmental assessments

Finally, it should be noted that the above recommendations are for project-level environmental assessment, but climate change is a global problem. The far-reaching effects of climate change require a project's GHG emissions be assessed not solely at a project level, but at a regional and a strategic level as well. Reforms to federal EA must consider changes to provincial and territorial assessments and follow assessment criteria reflective of the geographical scale of the analysis (i.e. global, national, local) (Ho & Tollefson, 2016). The current EA Review must emphasize strategic assessment, including developing strategic plans, policies and programs, as these inform project level EA and ease the burden on reviewing bodies at the project level from having to making policy decisions (WCEL, 2016).

Conclusion

The 2016 EA Review is timely given Canada's recently ratified international climate commitments and the federal government's commitments to Canadians in relation to acting on climate change. Updating the federal EA process to ensure a fulsome assessment of a project's contribution to climate change, and ensuring that Canada's climate commitments are integrated into project decisions, are important steps to guaranteeing that Canada meets its GHG reduction targets.

Sierra Club BC trusts that the recommendations in this report will be adopted to ensure future development follows a consistent and rigorous EA process, to ensure that Canada's climate, environment and health and welfare of its current and future citizens is protected.

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