



Government
of Canada

Gouvernement
du Canada

DISCUSSION PAPER:

DEVELOPING A STRATEGIC ASSESSMENT OF CLIMATE CHANGE



1. INTRODUCTION

The strategic assessment of climate change is being undertaken by the Government of Canada as part of the proposed better rules to protect our environment, fish and waterways, and rebuild public trust in how decisions about resource development are made. A clean environment and a strong economy go hand in hand. The strategic assessment of climate change will provide guidance to proponents, stakeholders, Indigenous peoples and decision-makers on how climate change commitments should be considered in impact assessments.

Environment and Climate Change Canada (ECCC) has developed this discussion paper to seek views on the objectives and scope of the strategic assessment of climate change. The discussion paper lays out considerations and poses strategic questions related to greenhouse gas emissions (GHGs), climate change and clean growth policies and their potential interactions with impact assessments.

Interested parties are invited to provide written comments to ECCC (at www.strategicassessmentclimatechange.ca or via email at ec.escc-sacc.ec@canada.ca) on or before August 31, 2018.

2. CONTEXT

2.1 Canada's Clean Growth and Climate Change Commitments

The Paris Agreement is an international agreement to strengthen the global response to the threat of climate change, building on the United Nations Framework Convention on Climate Change. The Paris Agreement, which entered into force in November 2016, establishes a collective long-term goal to hold the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit that increase to below 1.5 degrees.¹ Canada has committed under the Paris Agreement to reduce greenhouse gas emissions by 30 percent below 2005 levels by 2030, with all First Ministers agreeing to the target in the Vancouver Declaration in March 2016.²

In June 2017, the House of Commons reconfirmed Canada's commitment to the Paris Agreement.³

The Pan-Canadian Framework on Clean Growth and Climate Change, adopted on December 9, 2016,⁴ is a comprehensive plan to reduce emissions across all sectors of the economy, accelerate clean economic growth and build resilience to the impacts of climate change. The Pan-Canadian Framework will enable Canada to meet or even exceed its target to reduce emissions to 30 percent below 2005 levels by 2030.

Under the Pan-Canadian Framework, the Government of Canada, provinces and territories have also committed to working together to adapt to the impacts of climate change and build resilience in five areas:

- translating scientific information and Indigenous Knowledge into action
- building climate resilience through infrastructure
- protecting and improving human health and well-being
- supporting particularly vulnerable regions
- reducing climate-related hazards and disaster risks.

¹ For more on Canada's international action on climate change, visit: www.canada.ca/en/services/environment/weather/climatechange/canada-international-action.html

² Available at: www.scics.ca/en/product-produit/vancouver-declaration-on-clean-growth-and-climate-change/

³ Available at: <https://www.ourcommons.ca/Parliamentarians/en/votes/42/1/308/>

⁴ The Pan-Canadian Framework is available at: www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/climate-change-plan.html

In 2016, Canada also announced its Mid-Century Long-Term Low-Greenhouse Gas Development Strategy, to look beyond 2030 to start a conversation on how Canada can reduce emissions for a cleaner, more sustainable future by 2050.⁵

2.2 The Government of Canada's New System of Impact Assessment

The Government of Canada has proposed new legislation that would enact the *Impact Assessment Act*⁶. If enacted, this Act would establish a new process for considering the environmental, health, social and economic effects of projects, both positive and negative, and for determining whether a project's adverse effects within federal jurisdiction are in the public interest. This would include the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change. Other key features of the proposed new system include:

- Regulations describing the types of projects that may be subject to an impact assessment;
- An early planning and engagement phase for all projects to build trust, increase efficiency, improve project design, and give companies certainty about the next steps, requirements and timelines in the review process;
- Indigenous engagement and partnership throughout the process;
- Increased public participation opportunities;
- Legislated timelines, tailored impact assessment guidelines and rigorous timeline management to provide clarity and regulatory certainty;
- Strengthened monitoring, follow-up, and enforcement; and
- Transparent decisions based on science and Indigenous knowledge.

Policy and regulatory changes would also be needed to implement the proposed *Impact Assessment Act*. Any changes are being informed by engagement with

provinces, territories, Indigenous peoples, industry, other stakeholders and the public. For more information, please visit: www.impactassessmentregulations.ca.

2.3 Addressing Cumulative Effects

The cumulative effects of development in a region are the changes to the environment caused by a variety of activities over time. While a project may have only modest impacts on its own, the impacts of multiple projects and other activities in a given region can, over time, result in significant cumulative effects. The Government of Canada is proposing a new approach to understanding and considering cumulative effects, including:

- **regional assessments** to guide planning and management of cumulative effects, identify the potential impacts on the rights of Indigenous peoples, and inform project assessments;
- a publicly-accessible **single window** containing environmental science, knowledge and data, with tools that enable users to help understand the potential impacts of a project;
- **national environmental frameworks** such as the Air Quality Management System and the Pan-Canadian Framework on Clean Growth and Climate Change;⁷ and
- **strategic assessments** to provide proponents, stakeholders, Indigenous peoples and decision-makers with transparent, consistent guidance on how environmental frameworks would be considered in the impact assessment process.

The elements of this new approach to cumulative effects will inform each other, provide a better understanding of environmental issues outside the scope of individual projects, and provide valuable information for impact assessments of projects.

2.4 Strategic Assessments

A strategic assessment provides guidance on how a policy, plan, program or issue relevant to conducting

⁵ The Mid-Century Strategy is available at: <http://publications.gc.ca/site/eng/9.825953/publication.html>

⁶ For more information, visit www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews.html

⁷ National environmental frameworks, as envisioned in the proposed *Impact Assessment Act*, include federal policies, plans or programs, as well as issues relevant to conducting impact assessments of designated projects or of a class of designated projects.

impact assessments should be considered in the impact assessment process. It will:

- help proponents and stakeholders understand and address cumulative effects by better aligning projects with environmental frameworks that protect different aspects of the environment, such as climate change and biodiversity;
- clarify the data and methodologies that the Government of Canada would require to help understand a project's impacts;
- streamline and focus the flow of information between proponents and the government in project-level reviews; and
- improve the understanding of a project's impacts and the mitigation measures that are needed.

Strategic assessments, as described above, are different from strategic environmental assessments (SEAs), which are required under the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*.⁸ An SEA is an evaluation of the environmental effects of a policy, plan or program and its alternatives.⁹ The Cabinet Directive on SEAs would not be affected by the proposed *Impact Assessment Act*.

2.5 Strategic Assessment of Climate Change

The strategic assessment of climate change will provide guidance to proponents, stakeholders, Indigenous peoples and decision-makers on how climate change should be considered in federal impact assessments. It will provide greater process certainty and transparency, and ensure that a project's greenhouse gas emissions and its resilience to climate impacts are considered and integrated as appropriate, in the impact assessment process. The guidance prepared would be considered an evergreen document with updates being made as needed to incorporate any changes in policy or process related to climate change or impact assessment.

In the following section, the key elements of a strategic assessment of climate change are introduced, along with **discussion questions** for stakeholders.

3. DISCUSSION QUESTIONS: PROPOSED ELEMENTS OF A STRATEGIC ASSESSMENT OF CLIMATE CHANGE

A strategic assessment of climate change is proposed to consist of **four key elements**:

1. **Quantification of a project's GHG emissions:** determining how to define, scope and quantify GHG emissions for the proposed impact assessment process, where applicable;
2. **GHG emission thresholds:** GHG considerations that should be taken into account when considering the assessment of a project;
3. **Early planning:** information related to GHG emissions that is pertinent to an impact assessment process; and,
4. **Impact assessment:** for projects that proceed to impact assessment, assessing a project's contribution to GHG emissions and determining a project's consistency with Canada's climate commitments and policies.

Each of these elements is discussed in turn below, and **key questions** are identified for discussion.

3.1 Quantification of a Project's GHG Emissions

Direct and upstream emissions

The strategic assessment of climate change will provide guidance on how a proponent is to quantify direct and upstream GHG emissions. Downstream emissions would not be assessed.

GHG emissions are considered transboundary impacts and are currently assessed under the *Canadian Environmental Assessment Act, 2012*. This would continue under the proposed *Impact Assessment Act*.

In January 2016, the Government of Canada announced interim principles, which stipulate that upstream GHG emissions will be estimated and included as information in the decision-making process. Upstream

⁸ Available at www.canada.ca/en/environmental-assessment-agency/programs/strategic-environmental-assessment/cabinet-directive-environmental-assessment-policy-plan-program-proposals.html

⁹ For examples of SEAs, visit: www.canada.ca/en/environment-climate-change/services/sustainable-development/strategic-environmental-assessment/public-statements.html

GHG emissions are related to the industrial activities from the point of resource extraction to the project under review. A draft methodology for estimating upstream GHG emissions associated with major oil and gas projects undergoing federal environmental assessments was pre-published in Canada Gazette Part I¹⁰. The specific processes included in upstream activities will vary by resource and project type. To date, six projects under federal environmental assessments have had an assessment of upstream GHG emissions.

The following questions are intended to inform the development of a consistent approach to assessing both GHG emissions in impact assessments, as well as addressing uncertainties in this assessment.

QUESTION FOR DISCUSSION: DIRECT AND UPSTREAM EMISSIONS

1. For what types of project should upstream GHG emissions be included in the scope of GHG emissions assessed?

Uncertainty

When estimating upstream GHG emissions, the net growth in emissions may be overestimated if, for example, a new project displaces other sources of GHG emissions. The term "incremental GHG emissions" refers to the portion of upstream emissions that would occur only if the project under review was developed. This requires an assessment of the conditions under which Canadian upstream activities could be expected to occur even if the project were not to be developed. The intent of the Government of Canada would be to assess the incremental upstream emissions linked to a project, recognizing the uncertainties around the analysis of incrementality.

QUESTION FOR DISCUSSION: UNCERTAINTY

2. How should uncertainty related to the analysis of GHG emissions be managed and communicated?

Emission intensities

In addition to considering absolute GHG emissions, "emission intensities" could be of interest in the impact assessment process to enable a comparison between projects or technical processes being proposed by a proponent. Emission intensity refers to the amount of emissions per unit of output and could allow for comparison between processes or projects. This type of comparison could inform whether a project or process is energy efficient, qualifies as Best in Class or implements Best Available Technologies or Best Environmental Practices (BAT/BEP) economically achievable. BAT/BEP can be defined as the most effective technology, technique or practice economically achievable for reducing GHG emissions, and is discussed further under Section 3.4.

QUESTIONS FOR DISCUSSION: EMISSION INTENSITIES

3. What should be the relative importance of emission intensities and absolute emissions?

4. Should project emission intensities be compared to comparable, high-performing and energy efficient projects in Canada and internationally?

Avoided emissions and GHG offsets

There may be situations where GHG emissions resulting from a proposed project may reduce existing emissions. The term "avoided emissions" refers to the extent to which a project could lead to emissions not happening elsewhere in Canada or internationally. For example, a natural gas electricity generation facility that replaces a coal electricity generation facility could claim to avoid the higher (coal) emissions that would occur if the new project was not proposed. However, it is difficult to estimate avoided emissions with certainty.

"GHG offsets" refer to a mechanism to account for emission reductions elsewhere in Canada or internationally that could occur as a result of a project being developed. This can be done by acquiring emission credits achieved by one party that can be purchased and used to compensate for the emissions of another party.

¹⁰ Available at: <http://www.gazette.gc.ca/rp-pr/p1/2016/2016-03-19/html/notice-avis-eng.html>

QUESTIONS FOR DISCUSSION: AVOIDED EMISSIONS AND GHG OFFSETS

5. Should avoided emissions be subtracted from a project's GHG emissions?
6. How should GHG offsets be considered in the impact assessment process?

Carbon leakage

Carbon leakage refers to the situation that may occur if industries and projects decided to move production to other countries with less stringent emissions constraints, which could lead to an increase in emissions. The risk of carbon leakage may be higher in certain trade-exposed, energy-intensive industries.

QUESTION FOR DISCUSSION: CARBON LEAKAGE

7. Should carbon leakage considerations enter into a project's assessment, and if so, how?

3.2 GHG Emission Thresholds

The Government is considering how GHG criteria or a threshold could be used when considering the assessment of a project.

The discussion on environmental thresholds or criteria has also been raised in the Consultation Paper on Approach to Revising the Project List. The consultation paper states that the Project List revision will consider areas with environmental objectives or standards set in legislation, regulations and policy; in some cases, thresholds may be used to consider the potential for adverse effects. Proposed areas include "potential for direct greenhouse gas emissions above a defined level."

In addition, the Project List consultation paper states that "proposed entries [to the Project List] may also have conditions associated with them that would exempt the activity from assessment if the conditions are present. For example, in-situ oil sands facilities could be added to the Project List due to potential effects on areas of federal jurisdiction, in particular greenhouse gas emissions, but exempted from federal assessment where a jurisdiction has in place a hard cap on greenhouse gas emissions."

QUESTION FOR DISCUSSION: GHG EMISSION THRESHOLD

8. What criteria should be considered in determining GHG emissions thresholds? What are your views on applying thresholds to determine which projects are on the Project List?

3.3 Early Planning and Engagement

The early planning and engagement phase would be used to confirm whether an impact assessment is required, the type of assessment (i.e. Agency-led review or Panel review) and the scope of factors to be considered in the review. Information could be used to determine whether an impact assessment is required based solely on GHG emissions, even if the project exceeds a defined threshold. This information could include:

- estimated direct and upstream emissions associated with the project;
- whether the project is adopting best available technologies and best environmental practices economically achievable; and,
- whether there are climate policies/measures in place governing GHG emissions at federal, provincial or territorial levels.

QUESTIONS FOR DISCUSSION: EARLY PLANNING AND ENGAGEMENT

9. What type of information should be required in the early planning phase to support discussions on whether, from a GHG emission perspective, an impact assessment is required?
10. How should the implementation of best available technology / best environmental practices economically achievable be considered in the early planning phase?
11. How should federal, provincial and territorial GHG laws, regulations and policies be considered in early planning?

3.4 Impact Assessment

Climate change objectives

Once GHG emissions resulting from a project subject to an impact assessment are estimated, it may be useful to outline how projects would be considered against aggregate climate change objectives using a common and transparent framework.

As noted above, Canada has committed to take action through the Paris Agreement, and has developed the Pan-Canadian Framework on Clean Growth and Climate Change to address this global challenge. The proposed *Impact Assessment Act* requires the consideration of the extent to which the effects of the designated project hinders or contributes to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change.

QUESTIONS FOR DISCUSSION: CLIMATE CHANGE OBJECTIVES

12. How should federal, provincial and territorial GHG laws, regulations and policies, and international climate commitments be considered at the impact assessment phase of a project?

13. What other information could proponents be asked to provide that would be useful in assessing how the project contributes to Canada's climate change commitments?

14. How should the federal government's modelled forecasts of emissions be utilized in assessing a project's impact on meeting our commitments?

Carbon sinks

The term "carbon sink" refers to the ability of a forest, ocean or other natural environment to absorb carbon dioxide from the atmosphere. The impact of carbon sinks (e.g. forests, agricultural soils or wetlands) can influence the ability to remove carbon dioxide from the atmosphere. Conversely, the enhancement or creation of carbon sinks may help Canada reach its emissions reduction commitment.

QUESTION FOR DISCUSSION: CARBON SINKS

15. If a project is expected to have significant positive or negative impacts on carbon sinks that are not offset, how should these be considered in an impact assessment?

Climate resilience

Climate resilience is the ability to survive and prosper in the face a changing climate. The proposed impact assessment process includes a consideration of the potential impacts of the environment on a project, including as a result of climate change. Considerations for the effective implementation of resilience measures in the impact assessment process may minimize damage and lower risks and costs over the long-term for individuals, project proponents and governments. Efforts to reduce the environmental footprint of projects would contribute to greater resilience by reducing resource use (e.g. water conservation contributes to resilience against drought) and sustaining natural spaces, which act as a buffer against climate change impacts.

Under CEAA 2012, adaptation and climate resilience are considered in project reviews, and this would continue under the proposed *Impact Assessment Act*. The strategic assessment of climate change offers an opportunity to potentially build on current practices and provide clear, consistent guidance to proponents, stakeholders, Indigenous peoples and decision-makers.

QUESTION FOR DISCUSSION: CLIMATE RESILIENCE

16. How should project impact assessments consider a project's resilience to climate change, i.e. the project's vulnerability to climate change impacts, such as the impacts of extreme weather events? What information from proponents would assist in this assessment?

Best available technologies / best environmental practices (BAT/BEP)

The Government is considering integrating GHG-related best available technology and best environmental practices (BAT/BEP) into the impact assessment process. BAT/BEP can be defined as the most effective technology, technique or practice economically achievable for reducing GHG emissions.

BAT/BEP would encourage project proponents to consider managing GHG emissions from the preliminary design stage. Over the longer term, the implementation of BAT/BEP would provide a practical way to ensure that long lived infrastructure projects emit lower levels of GHG emissions.

**QUESTIONS FOR DISCUSSION:
BEST AVAILABLE TECHNOLOGIES /
BEST ENVIRONMENTAL PRACTICES (BAT/BEP)**

17. How should the implementation of best available technology and best environmental practices economically achievable be considered in the impact assessment phase of a project?

18. What information should be considered in defining economically achievable BAT/BEP in the context of greenhouse gas emissions, climate change and impact assessment?

Expert Advisory Panel

The Government of Canada is considering the establishment of an expert advisory panel for the Strategic Assessment of Climate Change.

**QUESTIONS FOR DISCUSSION:
ESTABLISHING AN EXPERT ADVISORY PANEL**

19. What considerations should guide the Government's selection of an expert advisory panel for the Strategic Assessment of Climate Change?

20. Which types of expertise should be represented and how should stakeholders be engaged?

The strategic assessment will inform how climate change is considered in impact assessments, and reflected in the impact assessment report required under the proposed Act. The report and strategic assessment will inform how climate change is considered as a decision-making factor, providing clarity and transparency for individual project reviews.

4. NEXT STEPS

This discussion paper will be used to develop terms of reference for the Government of Canada's strategic assessment of climate change. This process will also be informed by the principles of public participation, transparency, and cooperation with jurisdictions, including Indigenous jurisdictions.

Taking into account these considerations, ECCC is considering the following next steps:

- based on input received on this discussion paper, the Minister of Environment and Climate Change would establish terms of reference, as envisioned in the proposed *Impact Assessment Act*, for conducting the strategic assessment of climate change;
- establish an expert advisory panel for the strategic assessment of climate change;
- a draft strategic assessment report would be published in fall 2018. Consultations on the draft report would follow;
- a Strategic Assessment of Climate Change Report would be submitted to the Minister of Environment and Climate Change in 2019.

ECCC is seeking your views on the key considerations and questions described in this discussion paper.

Your input and ideas are important.

To provide your comments, you can visit www.impactassessmentregulations.ca/strategic-assessment-climate-change, or submit comments by mail or email to the following address by August 31, 2018:

**Évaluation stratégique des changements climatiques –
Strategic Assessment of Climate Change**

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