



# Addressing “Purpose of” and “Alternative Means” under the *Canadian Environmental Assessment Act, 2012*

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For the most up-to-date versions of CEAA 2012 and regulations, please consult the Department of Justice website at: <http://laws.justice.gc.ca/en/>

## Updates

This document may be reviewed and updated periodically by the Canadian Environmental Assessment Agency (the Agency). For the most up-to-date version, please consult the Policy and Guidance page of the Agency website at: [www.ceaa.gc.ca](http://www.ceaa.gc.ca)

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## User Feedback

If you have used or consulted the Operational Policy Statement: Addressing “Purpose of” and “Alternative Means” under the *Canadian Environmental Assessment Act, 2012*, we would like to hear from you.

Please submit your comments through the [User Feedback](#) webpage. Thank you for taking the time to contribute. Your feedback is appreciated



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## Purpose

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The Operational Policy Statement (OPS) aims to ensure that the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) requirements related to the purpose of a designated project and alternative means of carrying out the designated project are met in all environmental assessments (EAs) for which the Canadian Environmental Assessment Agency (the Agency) is the responsible authority.

The OPS sets out the general requirements and approach to address the purpose of a designated project and alternative means of carrying out the designated project under CEAA 2012 when the Agency is the responsible authority.

The OPS informs the preparation of directives by the Agency, such as the Environmental Impact Statement (EIS) Guidelines. The OPS serves as core guidance to project proponents. It provides direction to Agency employees in their interactions with those engaged in federal EA, such as proponents, federal authorities, other jurisdictions, Aboriginal groups and the public, throughout the EA of a designated project.

## Application

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In the OPS, "project EA" means the EA of a designated project under CEAA 2012. Throughout the OPS, the term "environmental effects" refers to environmental effects as described in section 5 of CEAA 2012.

The OPS should be used to inform the preparation of the EIS Guidelines and EIS for a designated project. It should be used in conjunction with other Agency policy and guidance instruments.

For application under CEAA 2012, this OPS replaces the Agency's OPS entitled, *Addressing "Need for", "Purpose of", "Alternatives to" and "Alternative Means" under the Canadian Environmental Assessment Act*, which had been updated in 2007.

The 2007 OPS will continue to apply for project EAs initiated under the *Canadian Environmental Assessment Act* that are being completed pursuant to the transitional provisions of CEAA 2012.

## Relevant Provisions of CEAA 2012

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CEAA 2012 aims to protect components of the environment that are within federal legislative authority from significant adverse environmental effects caused by a designated project. In addition, CEAA 2012 ensures that a designated project is considered in a careful and precautionary manner to avoid significant adverse environmental effects, when the exercise of a power or performance of a duty or function by a federal authority under any Act of Parliament is required for the designated project to be carried out.

Section 19 of CEAA 2012 identifies factors to be considered in the EA of a designated project, including:

- the "purpose of" the designated project, as per paragraph 19(1)(f); and



- “alternative means” of carrying out the designated project, as per paragraph 19(1)(g).

With respect to the latter, alternative means considered in a project EA must be technically and economically feasible. The project EA must address the environmental effects as defined under section 5 of CEAA 2012 for each of these alternative means.

Section 5 of CEAA 2012 describes the environmental effects that must be considered in the implementation of the legislation, including changes to the environment and effects of changes to the environment. Paragraph 19(1)(a) clarifies that environmental effects include cumulative environmental effects and environmental effects of accidents and malfunctions.

A project EA must address other factors laid out in section 19 of CEAA 2012. For example, factors related to determining the significance of environmental effects, selecting mitigation measures and implementing a follow-up program are also considered for the one or many alternative means brought forward for decision making. Community knowledge and Aboriginal traditional knowledge may also be taken into account in the project EA.

### **Considerations in Addressing the “Purpose of” the Designated Project**

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The purpose of the designated project is defined as the rationale or reasons for which the designated project would be carried out from the proponent’s perspective. It conveys what the proponent intends to achieve by carrying out the designated project. It is often described concisely in terms of:

- the problems that the project is intended to address (for example, resolving a supply gap);
- the opportunities that the project is designed to seize (for example, achieving growth potential);
- the manner in which the project relates or contributes to broader private or public sector policies, plans or programs (for example, contribution to an energy efficiency plan); and/or,
- any other objectives of the proponent in carrying out the project (for example, increasing the productivity of a business line).

The information regarding the purpose of the designated project should be sufficient to provide context for public and technical comment periods during the project EA, and ultimately to allow the decision maker to understand the purpose of the designated project. Should a Governor in Council decision subsequently be required, it may also help inform whether significant adverse environmental effects would be justified in the circumstances.

### **Considerations in Addressing “Alternative Means” of the Designated Project**

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“Alternative means” are the various technically and economically feasible ways under consideration by the proponent that would allow a designated project to be carried out. Identified by the proponent, the alternative means include options for locations, development and/or implementation methods, routes, designs, technologies, mitigation measures, etc. Alternative



means may also relate to the construction, operation, expansion, decommissioning and abandonment of a physical work.

The alternative means should be considered by the proponent as early as possible in the planning of a designated project, even before the beginning of the EA process by a responsible authority. The Agency recognizes that projects may be in the early planning stages when project descriptions are being prepared. In many cases, proponents have not made final decisions concerning the placement of project infrastructure, the technologies to be employed or other options that may exist for various project components. In these situations, project proponents are strongly encouraged to describe the various options available, and their associated environmental effects, within the project description. This will allow the Agency to set direction in the EIS Guidelines regarding which alternative means should be addressed in the EIS, where appropriate, and will avoid unnecessary delays at a later stage of the project EA. Project proponents should contact the Agency for further guidance in this area prior to the submission of the project description.

Once an EA has commenced, the approach and level of effort applied to addressing alternative means is established on a project-by-project basis, taking into consideration:

- the characteristics of the project;
- the environmental effects associated with the potential alternative means;
- the health or status of valued components (VCs) that may be impacted by the alternative means;
- the potential for mitigation and the extent to which mitigation measures may address potential environmental effects; and,
- the level of concern expressed by Aboriginal groups or the public.

EA documentation must clearly explain and justify the methodologies that have been used to address alternative means. At any step during the alternative means analysis, the proponent may consider community knowledge and Aboriginal traditional knowledge.

Considering the alternative means of carrying out the designated project should include the four steps described below:

### **Step 1: Identify technically and economically feasible alternative means**

To identify and describe the technically and economically feasible alternative means to carry out the designated project, the proponent should:

- *Develop criteria to determine the technical and economic feasibility of the alternative means.*

Examples of technical criteria could include use of energy, mode of operation, performance, supporting infrastructure, schedule and risks. Examples of economic criteria could consist of a comparison of cost estimation and forecasted revenues.

- *Identify and describe the alternative means from the proponent's perspective.*



The description of the alternative means must be in sufficient detail to establish how to assess them relative to the criteria developed for determining their technical and economic feasibility, as well as to support the analysis described in Steps 2 to 4.

- *Establish which of these alternative means are technically and economically feasible.*

A qualitative approach may be used to establish how the alternative means relates to the criteria, based on evidence and professional judgment. Thresholds or other quantitative decision-making tools may also be used, when available and relevant for specific criteria.

- *Document the rationale for the alternative means retained for consideration in the project EA.*

The rationale must provide sufficient detail for an independent reviewer to assess the criteria developed, the nature of the alternative means considered, the approach taken to assess these alternative means against the criteria, and the alternative means retained for further analysis in Step 2.

## **Step 2: List their potential effects on valued components**

Under CEAA 2012, identification of VCs for the project EA is made in relation to section 5 of CEAA 2012 and takes into account direction provided by the responsible authority. Analysis is then undertaken iteratively to examine which of those VCs should be considered in addressing alternative means identified in Step 1 as technically and economically feasible.

For Step 2, the proponent should:

- *Identify the key VCs potentially affected by each alternative means.*

The end result is an understanding of what VCs should be retained for analysis given the nature of the alternative means under consideration.

- *Examine briefly the potential effects on the VCs for each alternative means.*

The intent is to relate the alternative means under consideration with their potential effects on key VCs. A full assessment of environmental effects is not necessary at this stage.

The intent is to develop a sufficient understanding of potential environmental effects of the alternative means under consideration to inform the selection of an approach in Step 3 and, subsequently, to serve in scoping the assessment of environmental effects in Step 4.

## **Step 3: Select the approach for the analysis of alternative means**

Based on information gathered in Step 1 and Step 2, proponents are encouraged to identify a preferred means of carrying out the designated project. The preferred means then becomes the focus of the project EA, and no further analysis is generally required on other alternative means considered in Step 1 or 2.

In cases where the proponent is not able to identify a preferred means, multiple alternative means can be brought forward in the project EA. For efficiency, the proponent is then encouraged to identify a scenario that will become the focus of the analysis. The other



alternatives would be the object of further analysis only in terms of how they differ from the scenario relative to potential effects on VCs.

### **Case A: Identifying a preferred means**

To identify a preferred means among the alternative means of carrying out the designated project, the proponent should:

- determine and apply criteria to examine the environmental effects (identified in Step 2) of the technically and economically feasible alternative means (identified in Step 1). Examples of criteria are distance to a watercourse or minimization of loss of wildlife habitat.
- compare the alternative means on the basis of environmental effects, as well as technical and economic feasibility. Thresholds, governmental standards and public concerns may support the criteria used in the comparative analysis; and
- identify the preferred alternative means based on the relative consideration of environmental effects, and of technical and economic feasibility.

If a preferred means is selected, the analysis and the rationale for the choice should be explained from the perspective of the proponent, and be documented in the EIS in sufficient detail to provide context for public and technical comment periods during the project EA, and ultimately to allow the decision maker to understand the choice.

### **Case B: Bringing forward multiple alternative means**

The proponent can bring forward in the project EA multiple alternative means that are technically and economically feasible. The proponent is then encouraged to:

- identify one scenario on which the analysis will focus; and
- describe how the other alternative means retained for further analysis differ from this scenario.

The choice of a scenario should be informed by Steps 1 and 2, as well as the consideration of whether a preferred means can be identified in Step 3. There are many ways in which such scenario can be built.

The scenario can be selected based on practical criteria such as, likelihood that it will be implemented, efficiency in the comparative analysis of alternative means, or ease of presentation in an EIS. For instance, selecting a scenario that represents the worst case of potential environmental effects would provide increased confidence that the predictions in the project EA are applicable to any of the alternative means.

### **Step 4: Assess the environmental effects of alternative means**

In the case where a preferred means is chosen by the proponent (Step 3-a), the project EA should focus the analysis on the environmental effects of the preferred means. A concise



summary documenting Steps 1 to 3 in EA documents will suffice to inform reviewers and the decision maker of other alternative means considered by the proponent.

In the case where the proponent chose to put forward multiple alternative means to carry out the designated project (Step 3-b) in the project EA, the following approach is suggested:

- conduct the analysis of the environmental effects of the scenario;
- assess the environmental effects of the other alternative means on the basis of the consequences of their deviation from the scenario;
- after consideration of mitigation measures, provide a rationale for determining the significance of the environmental effects related to the scenario and to each of the other alternatives means.

For either case, the proponent must provide sufficient information to allow the decision maker to decide whether, based on the definition of environmental effects in section 5 of CEAA 2012, the designated project is likely to cause significant adverse environmental effects after implementing mitigation measures.

The final implementation of a designated project can vary somewhat from the proposal considered during the project EA. In the case where multiple alternative means are brought forward, the proponent will be expected to carry out the designated project in a way that is consistent with the analysis (e.g. the proponent will implement one of the scenarios that was brought forward or within the bounds of the worst case scenario assessed during the EA). Similarly, when a preferred means is identified for analysis, variations during implementation are acceptable provided that they remain within the bounds of the analysis conducted. In both cases, proponents must comply with conditions established in the EA decision statement.