

**Submission to the House of Commons Standing Committee on  
Environment and Sustainable Development  
Concerning the Review of the  
*Canadian Environmental Assessment Act***

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The focus of my submission is on major project reviews, as conducted by review panels appointed under the CEA Act. I will speak to the purposes of major project review, what it is that review panels are supposed to do in that regard, what objectives are or should be achieved by such reviews, and what government resources, policies, and actions are required to implement those objectives. My concern is primarily with products and outcomes, rather than with process.

For simplicity, throughout this brief I use the term “review panel” whether or not it is a joint review panel established by several authorities, and the term “government” regardless of whether in the specific context it means the Governor in Council, the Minister, or a responsible authority. I refer to the Act under review as the CEA Act, and the agency responsible for its administration as the CEAA. I use the terms “effects” and “impacts” interchangeably.

**The purpose and objectives of major project review under the CEA Act**

Section 4 of the CEA Act specifies that the purposes of major project review are:

- (a) to ensure that projects are considered in a careful and precautionary manner before federal authorities take action in connection with them, in order to ensure that such projects do not cause significant adverse environmental effects;
- (b) to encourage responsible authorities to take actions that promote sustainable development and thereby achieve or maintain a healthy environment and a healthy economy;

Section 25 of the Act specifies that a review panel is appointed where

- ... a responsible authority is of the opinion that (a) a project, taking into account the implementation of any mitigation measures that the responsible authority considers appropriate, may cause significant adverse environmental effects, or
- (b) public concerns warrant a reference to a mediator or a review panel ...

and the Minister chooses to act on that request.

Section 34 of the Act requires that a review panel shall

- (c) prepare a report setting out
  - (i) the rationale, conclusions and recommendations of the panel relating to the environmental assessment of the project, including any mitigation measures and follow-up program, and
  - (ii) a summary of any comments received from the public;

These three sections of the CEA Act provide the context in which review panels operate with respect to major projects. The key points are:

- The purpose of a major project review is to ensure that the project, if approved, not only avoids causing significant adverse effects, but also contributes to the achievement or maintenance of a healthy environment and economy.
- Review panels are appointed when there is an apprehension of significant adverse effects, on the part of either government or the public, but usually both.
- The primary product of a panel review is a report that provides conclusions and recommendations that address mitigation and follow-up, supported by a reasoned analysis, and advice to governments on achieving sustainability.

Major projects are elevated to comprehensive study or panel review precisely because they are not routine. The key questions the review of a major project should address are:

- does the project require the application of technology (including the economic and social means of implementing it), that is novel, or is untested in the receiving environment?
- what are the risks of accidents or malfunctions, in terms of probability of occurrence and severity of consequences?

If we were assured in advance that the environmental effects of a particular project would be limited to what is already within the ambit of existing laws and regulations, such as effluents, emissions, or permissible habitat loss, there would be no need for a major project review. Nor should a major project review direct its attention to the specifics of normal construction practices or routine project operations, whose consequences are well known, and for which appropriately designed and tested mitigations are already available, *except with respect to plausible significant adverse cumulative effects.*

It follows that major project reviews are not intended to function simply as a yes or no approval hoop. They are to provide guidance to both proponents and regulators on how to ensure that the objectives of the CEA Act are achieved over the life of a project, *from the time a shovel goes into the ground until decommissioning and abandonment.*

Applying a contribution to sustainability approach in major project reviews ensures that economic and social benefits are taken into account - not only short-term benefits but those with durable, equitable, and legacy effects. There are of course instances where a thorough review shows that a project proposal is so incapable of mitigation that it should not be approved at all. But in the great majority of cases, the result of a major project review under the CEA Act is an improved project.

It also follows that a review panel's recommendations for mitigation must necessarily be directed not only to the proponent (i.e. as permitting conditions), but also to government(s). And these recommendations are not limited to governments' legislative capacity as regulators, but may include any other mitigation measures of which they are capable, because as s.37.2 of the Act specifies, those measures

...are not limited to measures within the legislative authority of Parliament and include  
 (a) any mitigation measures whose implementation the responsible authority can ensure;  
 and  
 (b) any other mitigation measures that it is satisfied will be implemented by another person or body.

Section 38 of the Act provides the key link to assuring improved outcomes with respect to environmental quality and sustainability, by requiring government to  
... design a follow-up program and ensure its implementation.

Subsection 5 specifies that:

...the results of follow-up programs may be used for implementing adaptive management measures or for improving the quality of future environmental assessments.

Thus, sections 37 and 38 of the CEA Act make clear that the connection between a panel's advice to the parties that established it, and improved outcomes for the biophysical environment as well as economic and social well-being, is the required follow-up program. I will return later in this brief to the desired outcome of a follow-up program and what is required to implement it.

Finally, it should be noted that the CEA Act specifies that the focus of a panel review is the project proposal as filed by the proponent. It is now widely appreciated that projects may have significantly adverse cumulative environmental effects, in combination with other projects or activities, and review panels are explicitly charged with considering these effects. But the project focus remains. The Act makes no provision for strategic or regional reviews.

### **Obligations of a review panel**

I have had the honour of serving on review panels for over eight years. On the basis of that experience, I want to direct your attention to the obligations of review panels and the constraints on them. This is to assist you in considering the extent to which you as legislators can improve their role in the major project review process.

The key product of a review panel is its report. There may be other beneficial outcomes along the way, such as better understanding and dialogue between the proponent and the public about each other's concerns, but the report is what a review panel must by law produce. As Mr. Leboeuf of CEAA told you on 27 October:

... panels have the statutory obligation that was made clear by court cases to fulfill all the requirements of CEAA and it's for them to be satisfied in each case that they have all the information they need to report back to the minister.

A review panel must come to an understanding of what information it requires, and ensure that this information is placed on the public record. This information ranges from individual citizen opinion to highly technical scientific information. And there is no practical limit on what participants may choose to file in support of their submissions. But failure to obtain and consider all relevant information can be challenged in the courts, and has in the past required review panels to reconvene for that purpose after submitting their reports. It is the obligation of each panel member to have heard or read that information, and to have comprehended it sufficiently to be able to arrive at a reasoned judgement for which he or she can signify approval. The report's findings and recommendations must be transparent. A reasonable person must be able to understand how a panel came to a particular conclusion, whether or not he or she agrees with that conclusion. Again, failure to report in that manner can result in legal challenge.

In considering the evidence before it, a review panel must first and foremost determine what might cause “significant adverse environmental effects”, and whether these effects are project-specific or cumulative (or indeed whether specific claims about impacts have any plausible connection to the project under review). It must also consider how a project might best contribute to sustainability. These determinations are certainly situational and, as in all judgements, they incorporate an element of subjectivity. But they must be guided by established standards and norms that are grounded in law, policy, and not least, science.

A review panel must do its job according to the principles of natural justice, including procedural fairness and transparency. That means it must respect the rights and interests of all participants, any of whom can file either procedural or substantive motions along the way. It must be mindful of the jurisprudence (of which there is a growing body) that applies to its process. A review panel must also fulfill (but not exceed) its mandate as provided for in the Act and in the agreement by which the parties established it. So although a review panel’s primary product is its report, it needs also to pay attention to process. If it fails to do so, it may be subject to legal challenge, either during its proceedings or after it reports.

Review panels are independent bodies in the sense that they must reach their decisions uninfluenced by the interests of the parties that established them, and their members must be free of personal material interest in the outcome. Review panels are given considerable latitude in determining what they need to know and how to find it out. However, review panels are given rather less guidance and support in so doing, and as I noted above, they can be legally challenged for not getting it right.

Keep in mind that review panels are appointed on a one-off basis for each project review. Most panel members have little or no legal training, and some panel members have no post-secondary education. There are very good reasons for this practice, and in my experience the diversity of membership brings invaluable local knowledge and wisdom to the table. But it does mean that panels require both legal and technical support, both to prepare for and conduct hearings, and to prepare their reports. How much and what type of support varies in each case and is not easily predictable in advance. As review panels are not standing bodies they must obtain that support on an as-needed basis, in keeping with prevailing public service requirements regarding expenditure and procurement. The parties that establish panels (generally CEAA specifically) do provide them with a manager and core secretariat support. But in order to preserve panel independence, the CEAA does not provide the ongoing support of its own standing legal and technical staff, except in exceptional circumstances.

In light of these facts, I now turn to three questions that have already arisen in your proceedings:

- Should mandatory time limits be imposed on panel reviews?
- What if any restrictions should be imposed on the scope of panel reviews?
- Can panel reviews be done just as well by existing and ongoing regulatory bodies such as the NEB and CNSC?

My observations are directed to what you as legislators might reasonably accomplish, in contrast to what might better be left to internal agency policy and administration.

## **Mandatory time limits**

Personally, as a panel member, I would welcome anything that allowed me to return to my family, my home, and my work earlier than later. I am sure that every panel member with whom I have served would heartily endorse this view. But we are there to serve public needs, not our own.

A panel review is a public process, and its participants have both legal rights and reasonable expectations that must be addressed. The process once begun has certain required steps: for example, determining the sufficiency of the proponent's Environmental Impact Statement before proceeding to hearings; the hearings themselves; and the preparation of the report to the required standard. Review panels make their own rules of procedure but within established guidelines and legal norms. The panel and particularly the chair have some latitude in conducting the proceedings, especially during the hearings, but again within limits. If participants make motions on procedures or substance, the panel must give them due consideration. If a proponent chooses for its own reasons to postpone the proceedings, the panel cannot compel it to do otherwise. If there is a court-imposed injunction on the panel's proceedings, the panel must abide by it. If the panel does not fully address its mandate, particularly with respect to the information it gathers and how it assesses that information, it may be subject to challenge.

If a panel is challenged for any of the foregoing reasons, whatever time and money was saved by short-cutting on procedure and report preparation may well be more than expended in the courts later on. Fortunately, neither of the panels on which I served was challenged during or after its proceedings on the basis of its own actions or results.

This is not to say that there isn't room for improvement. There are things that can and should be done with respect to

- the timely and effective provision of technical support to panels
- the timely and fulsome provision of information to panels by all participants, and
- panel guidance and training with respect to procedures and conduct.

It is not obvious to me, however, that any of these things can be accomplished simply by imposing a mandatory time limit on panel reviews. I think these are matters that the CEAA, the responsible agencies, and the other parties involved in establishing joint review panels should address, as part of their own ongoing improvement of policies, procedures, and administration.

## **Scope of panel reviews**

The most basic issue of scope is whether panels do their own scoping in relation to the project under review, or whether the parties that establish them do that in advance. In this context scoping refers to identifying the values – environmental, social, or economic - that might be at risk (or for that matter benefitted) by the project or by its cumulative effects. In the Voisey's Bay review we did our own scoping and provided the proponent with instructions for its EIS. In the Mackenzie Gas Project, that was done for us before we began. There is no mandatory or consistent practice, and there are arguments for and against either approach.

It is now well-established that panels must consider cumulative impacts, and that they should consider the project's contribution to sustainability as well as its significant adverse effects. This should be more firmly and explicitly expressed in the legislation. The tools for effectively and transparently addressing these matters are much less well established, however. Insofar as this challenge is related to follow-up programs and scientific assessment, I address it below.

It has already been suggested in these proceedings that there is a need for some sort of review processes that go beyond the project-specific. These are characterized as strategic level reviews that address policies, programs or plans at a high level, or regional level reviews of multiple development scenarios.

This may well be a good idea. If you go in that direction, however, I would caution you to provide substantial clarity on the distinction between a strategic review and a project review. That clarity would have to address matters of how a review panel is constituted, how it should go about its business, and who would pay for it (including the necessary information that such a review would require).

In the absence of a strategic review mechanism, panels are sometimes urged to assume that responsibility. In my view, they should not do so. Panels are often asked to push the boundaries of their mandates and greater clarity of guidance in that regard would be helpful. Panels already have a substantial mandate, especially if they are to address issues of cumulative effects and sustainability effectively.

Determining exactly where the boundary lies between the cumulative impacts of a particular project, and larger regional level planning concerns, is already difficult. The nature and breadth of expertise within a major project review panel, and of the expertise reasonably available to it, is almost certainly insufficient to deal with high-level policy reviews. Perhaps strategic reviews are more in the nature of a public inquiry or commission, and should be considered as such. The level of detail and specifics to be considered are quite different. Consider, for example, Ontario's Hartt Commission on northern development in the 1970s, and the federal Beaufort Sea review in the 1980s. These were triggered by specific project proposals, but were elevated to conceptual, regional reviews. I would say that those panels were confronted with quite different tasks than in the more limited scope of a major project review panel, and were unable to come to grips with the specific questions that the CEA Act expects a panel to answer today.

Further, project reviews are financed largely on a cost recovery basis by project proponents. Proponents will not surprisingly be reluctant pay for a review of things for which they are not responsible and from which they have no expectation of benefit. The further away a review moves from the proponent's direct responsibility, the more the public should bear the cost.

Whether or not you adopt the strategic review concept, I think it needs to be understood that major project reviews are, or should be, embedded in other policy and planning processes, whether these be (and I am using northern examples here) regional land use plans, range or resource management plans, and on the part of governments, clarity on what policies, action



plans, and management plans (and resources for implementing same) are actually in place to fulfill existing legislative commitments. These provide essential guidance for review panels, not to mention proponents. If they are not in place, a review panel is less able to supply a clear answer on significant adverse effects. To the extent that you as legislators can ensure that those other processes are in place and are working, you would improve the major project review process.

### **Who should conduct panel reviews?**

Recently the National Energy Board and the Canadian Nuclear Safety Commission have been assigned greater authority over the environmental review of projects within their jurisdiction. While these are highly competent regulatory bodies, it is less clear that either of them has in its mandate or culture or scope of expertise, the means of considering cumulative impacts or project contribution to sustainability.

When the NEB makes a determination of public convenience and necessity, it is clearly not the same exercise, nor is it done with the same criteria and transparency, as a review panel's determination of project contribution to sustainability. The focus of a regulatory agency review is attaching conditions to proponent construction and operating permits, which they then regulate by means of inspection and enforcement. In this capacity, they do not make recommendations to themselves, nor do they consider transparently the question of adverse impact as it might relate to the limits of their own regulatory capacity. Nor do they focus on making recommendations to other agencies or ministries or (with the obvious exception of the overall determination about whether to proceed) to the government as a whole. Finally, these regulatory bodies have rather different rules of procedure (and I would suggest more formal and costly ones for intervenors) than do review panels. For these reasons I would say that the NEB and the CNSC are most definitely not substitutes for major project review panels as they are presently constituted.

Having said that, I do think there is room for greater harmony and integration between review panels and the NEB or CNSC on specific aspects of project review. For example, perhaps there should be joint review of specific technical matters, such as where one body considers certain engineering practices in light of system integrity, and the other considers the same practices in light of their environmental impact. This could result in greater consistency and certainty with respect to specific mitigation measures.

### **The importance of monitoring and follow-up**

Monitoring and follow-up are crucial to ensuring that

- impact predictions are verified
- prescribed mitigations are implemented and effective
- unanticipated adverse effects are detected and addressed
- there exists a prescribed course of action to correct for significant adverse effects as they occur (sometimes referred to as adaptive management), preferably triggered by agreed thresholds.

These objectives are the fundamental basis for ensuring that the review process actually produces tangible results with respect to environmental integrity and sustainability. If effective monitoring and follow-up do not occur, then the public benefit of reviewing major projects is much reduced.

A follow-up program is not to be confused with ongoing regulatory or contract compliance, which is already the responsibility of existing designated agencies. It is because of the novelty of specific project features, or of their application in the particular receiving environment, and of potential cumulative effects, that a follow-up program is required.

Because a major project review occurs at an early stage of project design, the review is necessarily at a high, conceptual level. The proponent will not have undertaken detailed engineering and design work at this stage, and indeed that kind of work will (as in the case of a mining operation) necessarily evolve over the life of the project.

The prediction of the significance of both project and cumulative impacts can therefore only be at a hypothetical level by the conclusion of the review. Untested mitigation measures for novel features of the project are also only hypothetical. By this I mean that the review panel's determinations and proposed actions have been identified on the basis of competing impact hypotheses and competing mitigation or enhancement measures, based on the best available evidence and scientific and technical knowledge *at that time*. That is the guidance that regulators are looking for, and that is the basis for designing monitoring and follow-up programs for the purpose of avoiding adverse effects and maximizing beneficial ones over the life of the project.

Effective monitoring requires

- a baseline understanding of the status and dynamics of the receiving environment, and
- a system for detecting and measuring changes to that environment.

As it is impossible (or at least a waste of money and effort) to monitor everything, the starting point is the "significant adverse effects" that the review has determined the project might likely produce, and their proposed mitigations.

The most beneficial and cost-effective way of determining whether a significant adverse impact has occurred is to develop clear, rigorously formulated, and testable hypotheses about project cause and environmental effect, and identify the environmental indicators that could confirm those effects. These indicators must be reliable and measurable. The necessary measurements, and their analysis, must occur over the entire period of the relevant project activity. What I am describing here is in essence a science program.

It should be evident that a very similar base of data, information, understanding and analysis is required by both the review panel during its deliberations, and those responsible for monitoring and follow-up over the life of the project. A review panel does not need all of this to be in place before it begins its review. But it should be satisfied, by the end of its review, that there is or will be a means in place to produce the relevant baseline information as it is needed, and to develop the monitoring and follow-up system as required. The science programs required to support this system, especially with respect to determining cumulative impacts, must by their



very nature be continuous not episodic, at least regional and preferably national in scope, and meet high, consistent, and recognized standards of measurement and analysis.

So who generates the information that both a review panel and a monitoring and follow-up program require, how does the science get done, and how do the results get put on the table? Who is responsible for making those things happen?

For the purpose of a CEA review, the proponent is expected to provide baseline information on the receiving environment, and its best estimate of any significant adverse effects of its own activities after it has applied mitigation, as well as the benefits the project might produce. It does this in the form of an Environmental Impact Statement (EIS). Although a proponent may spend a lot of money to produce this document, it does very little of the fundamental research and analysis on which its EIS relies. For the most part a proponent obtains this from government sources. It supplements this with highly site-specific and problem-specific data-gathering and assessments, generally contracted to private sector consulting firms. These will assist in compliance monitoring, but rarely in effects monitoring. In my view, this is as it should be. There is no reason to expect an individual proponent to conduct baseline scientific research or ongoing monitoring programs at a regional level.

If the project is approved, and the proponent chooses to proceed, it will be for the proponent to conduct compliance monitoring. By this I mean, documenting that it is complying with all applicable regulatory and contractual requirements with respect to its own authorized activities. And it will be for the regulatory agencies that they do that.

But the scientific information and the science program I am talking about goes well beyond that. I am referring to the verification of impact predictions and mitigation effectiveness, with respect to matters of concern that may or may not be regulated, and may or may not be due to specifically authorized proponent activities, but rather to cumulative impacts. Assuming government adopts the review panel's recommendations on mitigation, monitoring, and adaptive management, it is government that must ensure that it has the resources and can take the necessary follow-up action and, as the Act calls for, "improve the quality of future environmental assessments". If government cannot do this, then there is no basis for expecting the desired environmental quality outcomes or improvements specified by the CEA Act to be fulfilled.

For most of the time that Canada has had an environmental assessment system for major projects in place, both review panels and the government itself have relied heavily on the federal government's in-house science capacity. In my experience, without the very substantial and forthright direct contribution of such ministries as Fisheries and Oceans, Environment, and Natural Resources, neither panel on which I served could have obtained anything like the amount and quality of information we required to make our determinations. And these same ministries, as well as such information gathering agencies as Statistics Canada, have provided the foundation of both baseline information and monitoring programs on broad and continuing scale that are required for effective follow-up. Further, Canada has for a long time developed and maintained an internationally recognized standard of excellence in this regard.

Much of this is currently at risk. This is not the place to document why the federal government's capacity to meet its science obligations in support of the objectives of the CEA Act has declined. But in the absence of that critical support, Canada's system of environmental review will be of decreasing effectiveness, and cannot be relied on to fulfill its critical role in the maintenance and enhancement of environmental quality and sustainability.

It has been suggested to you that the federal government's reduced in-house science capacity should be compensated for by increased support for public participation in major project reviews. Based on my eight years as a panel member, and many more as a participant in major project reviews, I would agree that public participants can indeed make significant contributions to the scientific understanding of project impact. But they cannot be relied on to build up or supply baseline information, or to conduct monitoring and impact assessment, on a continuing basis over broad geographic regions. Nor can they provide the overarching framework for doing so. That is the inescapable job of governments on behalf of their citizens. Private enterprise, academia, and citizens organizations can all contribute, but none can substitute, singly or in combination, for the central role of government.

It is government, on behalf of its citizens, that must design and set the standards for such programs. The private sector, the universities, and citizen organizations can all contribute to that design, and from time to time and in specific places conduct much of the work. But none of those actors have the interest, incentive, or capacity to conduct what are in effect permanent research and monitoring programs on a national basis.

I appreciate that the place of science in federal government activities is a matter that goes well beyond the purview of the CEA Act itself. But if you as legislators want to assure yourselves of the effectiveness of Canada's environmental assessment legislation, then you need to take the current status and direction of federal government science into account and address it.

Finally, I would draw your attention to what appears to be a lack of commitment on the part of successive governments to monitoring and follow-up under the CEA Act, due not only to an apparent unwillingness or inability to devote the necessary scientific resources to the task, but also a continuing failure to implement existing provisions for assessing cumulative impacts. An important example is the Cumulative Impacts Monitoring Program in the Northwest Territories, initiated but not yet implemented by the federal government. This program is intended to provide the framework and overall direction for cumulative effects monitoring in the NWT, but is as yet incapable of doing so. On this matter I would refer you to Chapter 18 of the report of the Joint Review Panel for the Mackenzie Gas Project. This is an example of what I see as a nation-wide failure in major project review and assessment to date, and which I would encourage you to address in your review of the CEA Act.