Intervention by the Canadian Nuclear Society (CNS)
Before the Canadian Nuclear Safety Commission (CNSC)

Request for Public Comment
June 2017 Government of Canada Discussion Paper
Environmental and Regulatory Reviews[1]

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[1] The Canadian Nuclear Society wishes to express its thanks to Mr. Robert Lyman, a retired federal public servant with many years' experience in carrying out policy and market analysis on energy trade, supply, demand and transportation issues for his assistance with the recommendations of the Expert Panel on National Energy Board Modification, on which the proposals in the discussion paper are based.

The Canadian Nuclear Society (CNS) is Canada's learned society for the nuclear industry. It is a not-for-profit organization representing about 1,000 professionals, scientists and other researchers, engineers and other nuclear professionals engaged in various aspects within Canada's nuclear industry. It does not represent any company or other organization within the industry. The CNS believes that the views of Canada's nuclear professionals, as embodied by its learned society, may provide useful assistance to the federal government in its review of current regulatory processes related to energy and resource projects, as outlined in the June 2017 discussion paper.

The Canadian Nuclear Society has the following comments and concerns with the proposals, which if adopted, will have wide-ranging impacts on energy projects in general, and nuclear projects – from uranium mining to reactor construction and operation to decommissioning –.

Policy Proposal and Discussion

The discussion paper proposes that the Government replace the existing system of environmental assessment for major energy and resource projects with a two-tiered process. The first tier would comprise a strategic review, with consultations focused primarily on indigenous groups and incorporating traditional indigenous knowledge, on the cumulative environmental impacts of the project, principally on climate change and meeting the Government's climate objectives. It is unclear which body would conduct this initial review, but presumably it would be the Canadian Environmental Assessment Agency (CEA), although that doies not rule out the establishment of a new regulatory organization. Following the strategic review and early engagement, a project would be categorized as either "designated" or "non-designated"[2] and subject to impact assessment by the environmental agency, again, presumably CEA and the relevant "life-cycle" regulatory agency, the Canadian Nuclear Safety Commission (CNSC) in the case of nuclear projects, and the proposed successor to the National Energy Board for oil and gas projects. The impact assessment results would then be reviewed by Cabinet, and if found to be in the national interest, the project would proceed to a regulatory decision-making process under the relevant legislation, *i.e.,* the *Nuclear Safety and Control Act* for nuclear projects.

The discussion document, in designing this process, draws heavily from the recommendations of the Expert Panel on National Energy Board Modernization, and its proposals are based on the same assumptions, namely that the public has lost trust in the Canadian regulatory process and regulators, and that the latter are staffed with personnel who are not diverse and lack sufficient expertise in fields such as environmental science, community development and indigenous traditional knowledge.

To resolve this perceived issue, the proposals include a greatly expanded environmental review, broadening the scope of assessment to include analysis of the economic, social and health issues; essentially these considerations would be subsidiaries of the environmental assessment process. It is an open question whether the inclusion of these considerations would grant the courts the power to assess whether the economic assessment had been carried out in a way that met legislative and judicial standards

[2] As nuclear projects would fall under the "designated" category, this paper will not discuss "non-designated" projects and how the proposed regulatory revisions would apply to them.

The Society does not question the value of environmental assessment and review as an integral part of the public policy process and of the regulatory reviews of specific projects. Such reviews are an essential part of the "due diligence" that government officials and political decision-makers should carry out. The Canadian public values environmental quality, and would not accept the abandonment of environmental standards in any regulatory approval process. Indeed, environmental assessment requirements, initially developed in the 1970s on a "best practices" basis, became enshrined in legislation following a series of court judgments, including the standards governing such assessments. Noteworthy is the fact that, of all government policy decisions, environmental assessments are unique in that they require the public to be informed, consulted and given an opportunity to offer its detailed comments..

However, there have also been those who have used the system as a means to delay, hinder and ultimately defeat any project they opposed, because the hearing offered a way indirectly to hold a public plebiscite on the overall acceptability of the project. For this reason, perceiving inefficiencies in the environmental assessment process as a hindrance to economic development, the previous (Conservative) government included provisions in its 2012 Budget implementation bill to replace the former assessment process with a new one set out in the *Canadian Environmental Assessment Act 2012 (CEAA)*, which Parliament passed in June 2012. Under the new *Act*, the environmental effects of a project to be taken into account were, *inter alia*, an effect on aboriginal peoples of a change to the environment directly attributable to a project. At the same time, *Navigation Protection Act* (formerly the *Navigable Waters Protection Act*) narrowed the waters that required an environmental assessment for a proposed project. Finally, CEAA 2012 limited those permitted to participate at hearings to "interested parties"; namely, persons directly affected by the proposed project, as well as those with relevant information or expertise.

Regulatory predictability and scientific rigour

The proposed changes would, in effect, reverse the regulatory changes implemented by CEAA 2012. Including do away with the concept of "standing", *i.e.*, that regulatory interventions should only be allowed from those members of the public. Eliminating the "standing" test used by the National Energy Board and other agencies would, as past experience has proven, result in hearings where multiple opponents, not directly affected by the proposed project, would simply repeat the same message, irrespective of scientific accuracy, as was the case, for example, at previous CNSC hearings on Port Hope, which had overseas, non-resident intervenors participate,

Moreover, inclusion of a strategic review and cumulative impact phase which, although not explicitly stated, has no time limit, puts the advancement of projects to the regulatory phase, *de facto,* in the hands of a single environmental agency, with the CNSC regulatory review at a secondary level. As the assessment of potential cumulative effects involve multiple variables where the interactions are poorly understood, their inclusion increases the level of uncertainty and, hence, the potential for exaggerated and unnecessary precautionary requirements.

Moreover, in general, but particularly in the context of research and development, the proposed strategic review and cumulative impact process conflates scientific and indigenous traditional knowledge, as if they are of equal objective weight. These concepts are not, respectfully, compatible. Scientific knowledge is based on empirical observations, reinforced by experiment; each theory advanced to explain experimental results is always one experiment away from failure. This rigorous

connection between theory and experiment enables the development, design and operation of complex systems safely, so that any deviations between calculated and actual operating results can be addressed. Respectfully, traditional indigenous knowledge does not meet this standard of reproducibility. Indigenous knowledge is observational and its dissemination, oral. While observational history is certainly useful in certain environmental contexts, history is not predictability.

The societal purpose of rigorous regulatory regimes in the context of projects that are based on rigorous scientific and engineering concepts, is to ensure public safety with technologies where the risk of failure may be low, but the consequences dire. Regulatory agencies tasked with ensuring public safety from these activities do so by imposing rigorous and evolving technical standards to reduce the risk of system failure to as low a level as possible.

Impact on investment

In the Society's view the proposed process, while having a stated objective of increasing predictability, does not do so. There is the lack of clarity regarding what timelines the government is considering for the strategic review and cumulative assessment phase. It is also unclear whether projects that have completed their environmental assessments but are waiting for Cabinet approval will be subject to the proposed new regime, or be "grandfathered". While the discussion document indicates, in passing, that projects "No project proponent will be asked to return to the starting line", this statement is made in the context of a January 2016 statement of interim principles. It is wholly unclear to which projects this refers, their size, their progress along the regulatory process, or if additional requirements could be placed on approval, such as revising their environmental impact analysis to take into account cumulative (or upstream) impacts on the environment caused by the projects GHG emissions; for example, the Deep Geological Repository at the Bruce site has completed its environmental assessment; however, the project has not started construction, and is awaiting Cabinet approval; the Society would be concerned if projects such as the DGR would be required to revise its environmental assessment under new requirements including, for example, Gender Based Analysis or evidence of the inclusion of Indigenous traditional knowledge.

Also unclear is whether the proposed process would allow, as the current regime for nuclear projects does, the reviews by federal and provincial agencies to be captured under one process; the Society would be concerned if that were not the case, as it is of the view that doing these sequentially, as was the case in the early 1990s, would add considerable uncertainty to what is already, under these proposals, an increasingly lengthy timeframe.

This uncertainty, associated with a lack of transparency in the initial assessment process, will have a detrimental impact on investment interest and the economic viability of projects. The example of the Darlington and Bruce refurbishments, projects that involve billions in private capital, provide thousands of jobs, and will ensure high-quality, reliable base-load energy for Ontario's manufacturing sector and population, are examples of the amount of investment dollars that energy projects require

A major cause of cost overruns in major, multi-million or -billion-dollar projects is uncertainty. A project proponent has to make certain assumptions, including timelines, the availability of labour, current and future, input costs, the cost of capital, and so forth. Any variability in these costs will affect the return on investment of the project, and hence the economic viability of the project. Included in such are estimates of the timelines for regulatory review; if those timelines become delayed, cost estimates,

labour availability and other assumptions come into question, again at the expense of the economics of the project.

Proponents of major energy projects spend millions of dollars in developing proposals that meet existing regulatory requirements with no certainty of the outcome, or indeed if the outcome is not reversed by an incoming government, as was the case, for example, with the Northern Gateway pipeline project. Adding an unquantifiable and opaque requirement at the front end of a proposal, with no clear time limit will undoubtedly make Canada a less inviting country in which to invest. It must never be forgotten that in a world of few, if any, barriers to the movement of capital, both financial and intellectual, Canada has to compete with other jurisdictions, many with fewer and more transparent regimes. If Canadians are to maintain the standard of living which they currently enjoy and aspire to grow, such investments are indispensable and, for the sake of future generations, need to be welcomed.

***Conclusion*:**

The extensive changes to the federal environmental assessment process now under consideration would "turn back the clock" on the changes made in the environmental assessment regime as a result of CEAA 2012.

Broadening the scope of environmental assessment to include analysis of the economic, social and health issues essentially would make these considerations subsidiaries of the environmental assessment process.

The addition of more processes to the ones already included in environmental assessment would also represent an unprecedented change. These include the proposed national interest or policy review, conducted mainly by federal officials but with extensive public consultations and aboriginal engagement; the addition of a potentially lengthy planning stage

It seems evident that these changes, taken together, would considerably lengthen and complicate the environmental assessment process. For project opponents, it would create an extensive new set of opportunities to delay and block almost every major project. For project proponents, it would make the process far costlier, resource-intensive and unpredictable, and act to decrease Canada's ability to compete for significant investments, including those in scientific research and development

ANNEX A

DETAILED DISCUSSION DOCUMENT PPROPOSALS

AND

CANADIAN NUCLEAR SOCIETY COMMENTS AND RECOMMENDATIONS

Discussion Document Proposal: Impact Assessment and Regulatory Processes

Merge the current environmental assessment and regulatory review processes into a new more closely integrated one. Expand the introductory process to perform "Strategic Regional Assessment" and "Early Engagement and Planning" Declare projects under review as "designated" and "non-designated". Designated projects will include major energy transmission projects, nuclear projects and offshore oil and gas projects. The designated project review process would entail, as a first stage, an extended "impact assessment" carried out by the single environmental assessment agency, either alone or jointly with a regulatory body, as a national interest test, with a policy decision by the appropriate Minister or Cabinet to follow. Only after this initial assessment would the actual regulatory review based on the "technical" merits of the project be performed by the responsible regulatory body.

CNS Comments and Recommendation

The proposal does not identify the composition and mandate of the environmental agency that would carry out the impact assessment, or the criteria under which it could do so. It is also unclear what would determine whether the impact assessment was carried out solely by the environmental assessment agency, or jointly with another regulatory body, presumably the "life-cycle" regulatory agency, although this is not stated explicitly. Finally, there is no timeline for the duration of the strategic assessment.

The CNS is concerned that, without a clear mandate for the environmental assessment agency, explicit criteria for the strategic review and early assessment, and legislated timelines for its completion, proposed nuclear projects would become "hostages to fortune" to the detriment of timely investment decisions and project completion. The CNS recommends that existing joint review process between the Canadian Environmental Assessment Agency and the Canadian Nuclear Safety Commission be retained; it has worked well and its procedures have satisfied the courts when challenged.

Discussion Document Proposal: Assessing Cumulative Effects and Early Engagement and Planning

Working with provincial and territorial governments and indigenous peoples, the federal government will develop national environmental frameworks to inform regional assessments (e.g. Pan-Canadian Framework for Clean Growth and Climate Change; Air Quality Management System). The government will conduct strategic assessments that "explain the application of environmental frameworks to activities subject to federal oversight and regulation, starting with one for climate change". The government will prepare regional assessments to guide planning and management of cumulative effects, identify the potential impacts on the rights and interests of indigenous peoples and inform project assessments. The government will establish an "integrated open science and data platform" to inform environmental frameworks and regional assessments.

CNS Comments and Recommendation

It is unclear which agencies within provincial and territorial governments would be involved. Also unclear is how indigenous people would be represented, which organizations would represent them, or how broadly the representation would take place; *i.e.,* provincially, territorially, or Canada-wide. The timeline for the development of the national frameworks, and whether such frameworks would be developed *a priori* to project proposals, or individually for each proposal is also not stated. Finally, it is unclear how "cumulative effects" of inherently non-linear processes, such as greenhouse-gas related climate change can be addressed in the context of a regulatory process over a project with an economic lifespan of multiple decades.

The CNS recommends that environmental and other reviews by federal and provincial agencies continue to be captured under one process, and that in conducting environmental assessments of cumulative environmental impacts due weight be given to the inherently inexact nature of forecasts based on long-term modelling results.

Discussion Document Proposal: Public Participation

Eliminating the "standing" test for those wishing to participate in assessments. Improve participant funding programs and engage Canadians in a "two-way dialogue" on environmental assessment and regulatory processes through better use of social media and other tools. Increase transparency on reasons for environmental assessment and regulatory decisions.

CNS Comments and Recommendation

The CNS is concerned that elimination of the existing "standing" test will result in excessive regulatory delay through interventions by individuals and organizations that are unaffected by proposed projects. This would create additional uncertainty to project proposals beyond that already taking place, increase economic uncertainty for project proponents, including the increased likelihood of cost overruns, and undermine public confidence in the science-based methods currently used by "life-cycle" regulators, including the CNSC.

The CNS recommends that the "standing" continue to be limited to those directly affected by a proposed project.

Discussion Document Proposal: Science, Evidence and Indigenous Knowledge

Move toward an open science and data platform containing knowledge that supports environmental assessment and regulatory processes. Incorporate indigenous knowledge alongside other sources of evidence. Introduce peer reviews of science and evidence in the assessment phase.

CNS Comments and Recommendation

The CNS respectfully notes that traditional indigenous knowledge and the scientific and technical knowledge required to design, build and operate nuclear facilities are not compatible, except in the narrow sense of that required for traditional indigenous activities related to harvesting. Harvesting is an indigenous right protected by Section 35 of the Constitution, but as Supreme Court decisions have made clear, S. 35 rights do not grant, or imply a veto. The CNS would be concerned if the

incorporation of traditional indigenous knowledge would limit the ability of "life-cycle" regulators, including the CNSC, to effectively regulate in a manner that ensures public safety.

The CNS recommends that incorporation of traditional indigenous knowledge be limited to those areas where that knowledge has shown to be probative for the environmental assessment of indigenous activities, such as harvesting and use-of-the-land.

Discussion Document Proposal: Impact Assessment

Broaden the scope of assessment to include environmental, economic, social and health issues, as well as Gender-Based Analysis Plus (GBA+). Establish a single government agency responsible for impact assessments and for coordinating consultations with indigenous peoples. Use joint reviews by the environmental assessment agency and the responsible regulatory body for all major energy transmission, nuclear and offshore oil and gas projects.

CNS Comments and Recommendation

The CNS wishes to note that the Canadian Nuclear Safety Commission is already required to regulate in the interest of preventing unreasonable risk to the health of Canadians. The CNS is concerned that a regulatory process that requires the regulator, not the proponent, to determine the economics of a proposed project would not merely place an unacceptable burden on the resources of the regulator, lead to potentially economically unsustainable outcomes, but also could be at variance with Canada's obligations under its trade agreements.

The CNS recommends that environmental and other reviews by federal and provincial agencies continue to be captured under one process, and, further, that the scope of regulatory assessments be limited to those factors directly attributable to the proposed project.

Discussion Document Proposal: Partnering with Aboriginal Peoples and Cooperation with Jurisdictions

Being more responsive to indigenous rights, jurisdiction and decision making, with "space created" for increased indigenous involvement and indigenous-led assessments. Share administrative authority and management responsibility with indigenous peoples. Ensure that processes better recognize indigenous jurisdiction laws, practices and governance system. Allow Ministerial approvals of exceptions to legislated timelines.

CNS Comments and Recommendation

The CNS notes that indigenous rights, jurisdiction and decision-making are guaranteed under Section 35 of the Constitution, and subsequent interpretation of S. 35 by the Supreme Court of Canada. The CNS would be concerned, however, if "administrative authority and management responsibility" were to be interpreted as superseding the authority and management responsibility of the project managers and the "life-cycle" regulator, the CNSC. Finally, the Society is concerned that allowing Ministerial approvals of exceptions to legislated timelines would not merely increase the uncertainty over what is already, as proposed, an uncertain timeline, but would invite *post hoc* litigation to reverse approvals that had already been allowed under the proposed process.

The CNS recommends, therefore, that any Ministerial discretion be strictly limited to issues having immediate and irreversible impacts on the health and safety of Canadians.