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ENVIRONMENTAL & ENERGY LAW

COURT RETURNS TO PANEL ENVIRONMENTAL ASSESSMENT (EA) FOR NUCLEAR NEW BUILD

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On May 14, 2014, the Federal Court of Canada in a 213 page decision in *Greenpeace Canada et al. v Canada et al)*, returned the environmental assessment (EA) of the Darlington Nuclear New Build Project to "a duly constituted Joint Review Panel" for further consideration and determination. The EA Report was not set aside in its entirety, but until such time as the Panel completed its reconsideration, the Canadian Nuclear Safety Commission (CNSC), the Department of Fisheries and Oceans and Transport Canada had no jurisdiction to issue any authorizations or licences, which would enable the Project to proceed in whole or in part. The reasons for judgment, though based on a federal environmental assessment law which has since been amended in some significant respects, continue to be very important in understanding the respective roles of the reviewing panel, the federal government and its responsible authorities, the methodology for environmental assessment and the place of energy policy in federal environmental assessments.

A. TESTING THE COMPLETENESS OF THE PANEL'S EA REPORT OPG, the proponent, prepared an Environmental Impact Statement (EIS) which did not propose a single reactor design, but four different technologies based on a "bounding approach" or "plant parameter envelope" (PPE). This approach involves identifying salient design elements of the Project and for each of these elements, applying the value with the greatest potential to result in an adverse effect based on the design options being considered. The opponents to the Project argued that the PPE approach was too conceptual since it wasn't based on a specific reactor technology and deprived any meaningful review of potential environmental effects. The Court disagreed, concluding that the *Canadian Environmental Assessment Act SC 1992, c.37 (CEAA)* contained "no prescriptive method for conducting an assessment." (at par. 185). Since assessments were to be conducted as early as is practicable in the planning stages of a project before irrevocable decisions were made, it would always be a question of fact in an individual project whether a Panel had sufficient information to conduct an EA. The key to answering this factual question was whether the Panel's EA could provide the federal Cabinet with a proper evidentiary foundation to decide whether responsible authorities with licensing powers will be permitted to take steps to enable the project to move forward (at par. 232). "The EA under review here represents the only occasion when democratically elected and accountable federal decision makers will directly make a decision on whether the project should proceed." (at par. 233). While the Panel's role was to apply their expertise to the question of environmental impacts of a project, the Cabinet's role was to determine as a matter of public policy, whether the benefits received from a project were worth the environmental risks identified by the Panel.

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Where the necessary thresholds are insufficiently identified and where scientific data is unavailable to arrive at reasonable assessments, the Panel cannot allow licensing authorities like the CNSC to determine at a future time whether certain stages of the Project should proceed. To do so would be to improperly delegate the Panel's responsibility for reporting to Cabinet on the environmental risks with enough information for Cabinet to engage in an informed public policy decision (at par. 382). Under the new CEAA 2012, the two stage process of Panel review and report to elected officials and decision-making by these officials, continues (see Sections 47 and 52).

B. GAPS IN THE PANEL'S REPORT

The Court concluded that there were three parts of the EA Report which didn't meet the above test:

1. HAZARDOUS SUBSTANCES The failure of the Panel to insist on a bounding scenario analysis for hazardous substance emissions, in particular liquid effluent and storm-water runoff to the surface water environment, and for the sources, types and quantities of non-radioactive wastes to be generated by the project; The Panel had recommended industry standard management practices and that OPG conduct a detailed assessment of predicted effluent releases from the Project, monitor ambient water and sediment quality in receiving waters and that prior to construction, the CNSC establish toxicity testing criteria and a test methodology and test frequency to confirm compliance of storm-water discharges with the *Fisheries Act*. The Court noted however, that the recommendations did not demonstrate relevant thresholds or standards. Further, no effort was made to bound the Project's effects. For example, Environment Canada (EC) had observed that OPG had used a bounding approach for hydrazine and ammonia, chemicals used in existing and future generation at the existing Darlington facility, but since the detailed design for the New Build was unavailable, there was no way of verifying these estimates and their impact for the New Build. The Court contrasted the assessment for chemical inventories, effluent and storm run-off with the more thorough and compliant analysis by the Panel for tritium levels in drinking water. After reviewing numerous jurisdictions and studies and applying the precautionary principle, the Panel recommended 20 Bequerels per litre in drinking water. The federal Cabinet, upon review of the Panel's report, wasn't prepared to go this far. With clear cut standards before them, Cabinet decided to accept a limit that was simply consistent with the tritium standards imposed by relevant regulatory authorities. This, according to the Court, represented the appropriate two-stage process whereby the Panel, an expert body, evaluated the evidence regarding the Project's likely effects from tritium in drinking water after applying appropriate thresholds and the political decision makers evaluated whether those likely effects were justified in light of "society's chosen level of protection against risk." (at par. 281)

2. SPENT NUCLEAR FUEL The Panel's treatment of the issue of spent nuclear fuel; Three of the four reactor designs under consideration would use enriched fuel in contrast to the natural uranium fuel used in all currently operational CANDU reactors. This introduced elements of criticality control for storage as well as potential heat load issues for dry storage and eventual long -term management. The Court was concerned that while there was a separate federal approvals process for the long term management of such waste under the *Nuclear Waste Management Act S.C. 2002 c.23*, the process of considering waste from the proposed nuclear new build designs had not begun. Perhaps more importantly, the mere creation of the waste was an aspect of the project which should be placed before the federal Cabinet with the benefit of a proper record in regards to the likely environmental impacts.

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The following conclusion by the Court appears however, to be unduly harsh:

> i. "The Panel provides no analysis of the feasibility of storing and managing used nuclear fuel at Darlington in perpetuity." (at par. 309)

An important part of the record before the Panel was *OPG's 2009 Technical Support Document for Nuclear Waste Management* see *http://www.ceaa-acee.gc.ca/050/documents_staticpost/cearref_29525/0104/nwm.pdf at par*. 6.7.3 The Report stated, in regards to the storage of enriched fuel that:

> ii. "Criticality events are prevented by the absence of a moderator and provision of sufficient poison in the basket even if the internal fuel orientations are changed by events. The lack of moderator in the cask is significant since at enrichments below 5% unmoderated criticality is not physically possible under any conditions in the absence of other neutron sources. *NRC 2007*. In the absence of moderation, experiments and calculations have demonstrated that criticality is not possible at the enrichments currently used in light water reactor fuel.*(NRC 2007)*"

3. **SEVERE COMMON CAUSE ACCIDENTS The Panel's analysis of the effects of a severe common cause accident at the facility was not, but should have been, required at this stage.**

The Panel had not analyzed cumulative effects of the existing four reactor units at Darlington and the proposed new nuclear facilities for malfunction and accident scenarios because such effects were considered hypothetical and to have a very low probability of occurring. The Panel simply recommended that prior to construction the CNSC should require OPG to evaluate the cumulative effect of a common-cause severe accident involving all of the nuclear reactors in the site study area to determine if further emergency planning measures were required. The Court concluded that this evaluation should not have been deferred but rather "it had to be conducted as part of the EA so that it could be considered by those with political decision-making power in relation to the Project." (at par.334)

C. NEED FOR AND ALTERNATIVES TO THE PROJECT – ALTERNATIVE ENERGY CHOICES

In the EIS Guidelines the Minister of the Environment set out in section 7.1 that OPG should, as the proponent "describe *the purpose* of the project by defining what is to be achieved by carrying out the project." In 7.2 the directive went on to exclude any assessment of provincial energy policy or alternatives that are contrary to Ontario's formal plans or directives on energy. In the 2012 amendments to CEAA, the "need for and alternatives to the project" are no longer included amongst the scope of factors which the Panel must consider if it determines them to be relevant. However, the successor section 19 (1) (f) CEAA still includes within the mandatory scoping factors "the *purpose* of the designated project." The opponents to the Project had argued that the Panel had declined its jurisdiction by erroneously following the EIS Guidelines as dispositive of the need issue under CEAA. While the new scoping factors are more limited it could still be argued that a Panel should give more consideration to the *purpose* of the Project. The Federal Court though, at par. 372 has effectively silenced any such argument:

> "The electricity supply mix in Ontario is a matter of provincial jurisdiction. A federal EA should not become an alternative forum for deciding that issue or a back door means of economic regulation: *Sharp v Canada (Canadian Transportation Agency above)*, 1999 CanLII 9356 (FCA), [1999] 4 FC 363 (FCA at para. 28) *Grand Riverkeeper, Labrador Inc. v. Canada (Attorney General)*, 2012 FC 1520 (CanLII), 2012 FC 1520 above at paras.53-54."