

BACKGROUNDER:

What has Greenpeace Canada and the Canadian Environmental Law Association (CELA) asked the Federal Court to do?

On September 17, 2012, Greenpeace Canada and CELA, represented by lawyers from Ecojustice and CELA, commenced a legal proceeding asking the Federal Court to review whether the Canadian Nuclear Safety Commission (CNSC) erred in law or jurisdiction in issuing a licence to Ontario Power Generation (OPG) to begin preparing its Darlington site for the construction of new reactors. This legal proceeding is called a judicial review application.

Why have Greenpeace Canada and CELA done this?

Under federal law, OPG should only be given approval to proceed with building new reactors at Darlington if an environmental assessment that complies with the *Canadian Environmental Assessment Act* (CEAA) has been completed.

Greenpeace Canada and CELA believe that the environmental assessment of OPG's proposal to build new reactors at Darlington does not comply with the requirements of CEAA. It is also their position that in issuing the licence, the CNSC violated the *Nuclear Safety and Control Act*, related regulations, and the rules of fairness.

In 2011, Greenpeace Canada, CELA, Lake Ontario Waterkeeper and Northwatch, represented by lawyers from Ecojustice and CELA, filed a judicial review application asking the Federal Court to review whether the environmental assessment conducted by the Joint Review Panel (JRP) regarding new reactors at Darlington complies with CEAA. The Federal Court has yet to set a court date for this earlier JR application.

Even though the legality of the JRP environmental assessment remains a live issue before the courts, the CNSC issued OPG a licence on August 17, 2012 to permit OPG to prepare the Darlington site for the construction and operation of new reactors.

Why do the groups feel the environmental review of building new reactors at Darlington doesn't comply with federal law?

Among other reasons, the groups argue that the JRP, which carried out the environmental assessment of new reactors at Darlington, failed to meet its obligations to gather and publicly disclose sufficient information, at an appropriate level of detail, about the project's need, alternatives, and likely environmental effects, including cumulative effects.

For example, the environmental assessment failed to consider a specific reactor design, the long-term environmental effects of radioactive waste, or alternatives to new reactors, such as green energy.

Aside from the failure to carry out an adequate environmental assessment, why do the groups believe that issuing OPG a licence to prepare a site contravenes federal law?

Aside from the question of whether the CEAA has been complied with in this case, Greenpeace Canada and CELA believe that the CNSC's decision to issue the site preparation licence to OPG was illegal because it failed to ensure that the project, as proposed, will adequately protect the environment, human health and safety as required by the *Nuclear Safety and Control Act* and related regulations.

What do the groups believe should be done?

To respect federal law, Greenpeace Canada and the other groups believe that no approval should be given to OPG to proceed with new reactors at Darlington until an environmental assessment is fully completed. The groups' position is that the environmental assessment should also determine the likelihood and nature of any significant adverse effects likely to flow from the project in order to determine whether such effects can be mitigated and/or justified as required under federal law.

How was the new reactor proposal at Darlington assessed by the federal government?

In 2008, federal Minister of the Environment John Baird referred OPG's project proposal to a federal review panel. The JRP was subsequently formed with one member appointed by the Ministry of the Environment and two by the CNSC.

In September 2009, OPG submitted its Environmental Impact Statement and Application for a Licence to Prepare a Site to the JRP.

Following a review period, the JRP held public hearings beginning on March 21, 2011.

In August 2011, the JRP issued its Report on the Darlington new build proposal, saying that despite numerous gaps in information and analysis needed to assess the project, no significant adverse environmental effects were likely, provided that OPG's commitments and mitigation measures, and the JRP's 67 recommendations, were followed.

If the JRP began its public hearings on the Darlington new build project on March 21 2011, how was it able to integrate lessons from the Fukushima disaster, which started on March 11, 2011, into its environmental review?

The groups argue that the JRP failed to adequately consider lessons learned from the Fukushima disaster.

On the first day of the JRP hearings in March 2011, many public intervenors, including Greenpeace Canada and CELA, requested that the hearings be delayed so that lessons from

Fukushima could be properly understood and applied to the OPG's new reactor proposal. The JRP refused this request.

Does the Fukushima disaster raise questions about the likelihood and nature of environmental effects that should be considered within the environmental assessment?

Yes. The groups involved contend that the JRP did not assess the impacts of severe nuclear accidents leading to large radiation releases at Darlington because the CNSC views such events as having such a low probability they do not require consideration.

With Fukushima, however, we are witnessing a severe nuclear accident approximately once a decade somewhere in the world.

But the Canadian nuclear industry says Canadian reactors are safer than other designs and no earthquake or tsunami would happen to trigger an accident like Fukushima.

The Japanese government's Independent Investigation Commission concluded that the Fukushima disaster was man-made. It was not as a result of an earthquake and the subsequent tsunami.

The Japanese Commission also found that the nuclear industry's significant political influence over Japan's safety regulator is a barrier to effective safety regulation.

Reviews of past nuclear accidents, such as Chernobyl and Three Mile Island, have concluded that the failure of government institutions to take nuclear risks seriously is what actually caused those accidents.

Were the environmental effects from building and operating new reactors at Darlington adequately addressed?

The groups do not believe that the environmental review of the environmental effects of new reactors at Darlington complies with CEAA.

OPG did not provide detailed information on what type of reactors it would build, or what cooling water technology it would use with new reactors. This raises significant questions about the environmental effects of the project. Important questions about what will be done with radioactive waste generated by the project also remain unanswered.

The existing Darlington nuclear station kills millions of fish annually and harms aquatic ecosystems because it uses water from Lake Ontario to cool the station's four reactors and releases chemicals and excess heat into the Lake.

The four existing Darlington reactors drain up to 9,000,000 liters of water from Lake Ontario every minute. New reactors would drain up to 15,000,000 liters each minute. Together this would amount to 21.6 billion liters every day.

What exactly is OPG is requesting to undertake at the Darlington site?

In 2006, Ontario's Dalton McGuinty government directed OPG get approval to build new reactors at the Darlington site, 70 km east of Toronto.

OPG subsequently asked the federal government for approval to build up to four reactors at the Darlington site. This triggered an environmental review under CEAA.

These reactors would be in addition to the four existing reactors already at the Darlington site. OPG is currently seeking permission to rebuild and extend the life of these reactors under a separate environmental assessment.

Does Ontario need to build new reactors at Darlington?

Greenpeace Canada, CELA and many other organizations and individuals requested that the JRP consider whether there is a demonstrable need for new reactors and whether there are less expensive and less environmentally harmful alternatives, such as renewables, to meet Ontario's future energy demands. These groups maintain that the JRP did not adequately consider the need for, and alternatives to, building new reactors.

Documents acquired by Greenpeace Canada further reveal that the Ontario government instructed the federal government specifically not to consider the need and alternatives to building new reactors.

Since the Fukushima disaster in Japan, many countries have abandoned plans for new reactors and are even phasing out their existing nuclear stations and investing instead in renewable energy.

Why has Province of Ontario not conducted an environmental assessment on the Darlington project?

The original construction of the current Darlington nuclear power plant was exempted from Ontario's Environmental Assessment Act. More recently, Ontario again exempted its proposed long-term energy plan (and any nuclear facilities required for the plan) from a provincial environmental assessment in 2006 when it directed OPG to begin planning for the construction of new reactors.

Given the Ontario government "suspended" its procurement of new reactors in 2009 because of the reported high cost, is the Ontario government still pursuing the construction of new reactors at Darlington?

Yes. In the summer of 2012, the Ontario government allowed OPG to pay Westinghouse and SNC-Lavalin \$26 million to provide cost estimates for building two new reactors at Darlington.

Westinghouse is proposing construction of its AP-1000 reactor design. SNC-Lavalin is proposing to build its “Enhanced” Candu-6 reactor design.

The companies are expected to provide their cost estimates to OPG and the government of Ontario in the summer of 2013.

What reactor designs were considered within the environmental review?

OPG identified no single reactor design for review. Instead OPG suggested three potential reactor designs be considered conceptually instead of in detail.

These reactors designs were:

- Atomic Energy of Canada Limited’s (AECL) Advanced CANDU Reactor (ACR-1000). AECL’s reactor division is now owned by SNC-Lavalin.
- AREVA’s US European Pressurized Reactor (EPR), a pressurized water reactor (PWR).
- Westinghouse’s AP1000, a Pressurized Water Reactor (PWR).

Late in the environmental assessment process, and after interested groups had made submissions focusing on these three design options, a fourth reactor design option – the CANDU 6 – was added to the review. The groups argue that this late disclosure – and lack of detailed information – on the reactor to be built at Darlington prevented the public and the JRP from adequately considering the likelihood, nature and severity of the project’s environmental impacts as required under CEAA. The Panel’s Environmental Assessment Report even seems to leave the door open to other unidentified reactor designs to be chosen so long as they fit in the conceptual “envelope” of design options assessed.