



Atlantic Chapter Energy Committee  
Robert M. Ciesielski, Chair  
2511 Harlem Road  
Cheektowaga, New York 14225

December 3, 2012

The Honourable Peter Kent  
Minister of the Environment  
Les Terrasses de la Chaudière  
10 Wellington St. 28<sup>th</sup> Floor  
Gatineau, Quebec  
K1A 0H3

The Honourable John Baird  
Minister of Foreign Affairs  
125 Sussex Drive  
Ottawa, Ontario  
K1A 0G2

Dear Ministers Kent and Baird,

Sierra Club Canada, Ontario Chapter and State of New York Sierra Club Atlantic Chapter write to express our extreme disappointment at the failure of your government to act to reduce radioactive air and water pollution from the Darlington Nuclear Generating Station. The location of the Darlington site, on the north shore of Lake Ontario, is approximately 60 km from Appleton, New York, if measured from shore to shore.

Sierra Club Canada (SCC) and the Ontario Chapter of SCC filed submissions<sup>1</sup> with the Canadian Nuclear Safety Commission (CNSC) about the many inadequacies of the Environmental Impact Statements (EIS) prepared for the *Darlington Nuclear Generating Station Refurbishment and Continued Operation Project* and the *Darlington New Nuclear Power Plant Project* proposed by Ontario Power Generation Inc. (OPG). Both Environmental Impact Statements failed to consider the likely and significant transboundary air pollution that would result from these two proposed projects.

<sup>1</sup>Submissions can be found from "How NOT to Extend the Life of Aging Nuclear Reactors in Ontario", SCC, 2012, <http://www.sierraclub.ca/en/node/5357> and "Sierra Club Canada Submission To The Darlington New Nuclear Power Plant Project Joint Panel", SCC 2011, <http://www.sierraclub.ca/en/publications/sierra-club-canada-submission-darlington-new-nuclear-power-plant-project-joint-panel>

Not only did OPG fail to consider these likely impacts but the CNSC failed to direct an assessment of transboundary air pollution in the requirements for the EIS, contrary to domestic and international obligations.

## **1. Canada – US Air Quality Agreement**

- 1.1 Under the 1991 *Canada–U.S. Air Quality Agreement*, the objective of the parties is to control transboundary air pollution between the two countries and is made operational, in part, by Article V where all parties agree to undertake environmental impact assessment and, as appropriate, avoid or take mitigation measures concerning proposals that could cause significant transboundary air pollution. Since 1994, the parties have been notifying each other of pollution sources within 100 kilometers (km) or 62 miles of the border.
- 1.2 Canadian assessment and prior notification obligations under the Agreement are made effective in domestic law under the then 1992 *Canadian Environmental Assessment Act* (CEAA), sections 46-47, which remains applicable. Consequently, we petition you to conduct an independent EIS of the two proposed projects that would consider the likely adverse transboundary impacts within 100 km of the site before the CNSC takes any decision. The current scope of OPG's regional study areas only extends 1 km into Lake Ontario, which is unacceptable.

## **2. OPG Admits Transboundary Pollution**

- 2.1 There is overwhelming evidence that the operation of Canada Deuterium Uranium (CANDU) reactors for the production of nuclear energy results in the emission and discharge of conventional and radioactive contaminants into the air, land and surface and groundwater. We focus our attention on tritium - a radioactive carcinogen - because of its particular transboundary, hazardous and inter-generational properties and impacts.
- 2.2 Tritium is a known carcinogen. It causes birth defects. Tritium replaces ordinary non-radioactive hydrogen and travels throughout the body, going wherever water goes. It interacts with human DNA – and that's where it does its damage, from close range and across generations. The guideline for Canada is 7,000 becquerels per litre (Bq/L) for exposure to tritium in drinking water. By contrast, the European Union guideline is 100 Bq/L. California's Public Health Goal calls for an exposure limit of 14.8 Bq/L. In 2009, the Ontario Drinking Water Advisory Council recommended an exposure limit of 20 Bq/L.
- 2.3 OPG admits that tritium is present in the waters of the Great Lakes from atmospheric deposition, as well as emissions from Darlington and other reactor sites; see section 3.3-14 of OPG's Refurbishment EIS. OPG also states that Tritium and gross beta are emitted

from DNGS in liquid effluents and could be ingested by people that get their drinking water from Lake Ontario; see section 4.7.5.1

For example, a 2009 spill of tritium-contaminated water into Lake Ontario resulted in a release of 44,807,000 Bq/L (1,211 µCi/kg) of tritium; see 4.6.4. Tritium concentrations in precipitation were found at a maximum concentration of about 2,000 Bq/L inside the Protected Area. Groundwater concentrations attributable to the infiltration of precipitation are of the same magnitude. In OPG's EIS of the proposal for new reactors, the Regional study area failed to consider the impact of the project on the Atmosphere; see section 4.3.1. CNSC failed to require the assessment.

- 2.4 OPG also refuses to consider Nuclear Accidents involving out-of-core criticality which may result in an, "acute release of radioactivity into the environment". Why? According to OPG: "Out of core criticality events are not considered credible scenarios", see 7.3.1.
- 2.5 It is the position of the Sierra Club Atlantic Chapter and Sierra Club Ontario that any release of tritium into the environment is contrary to the public interest. The goal of non-exposure to tritium is consistent with the precautionary principle and responsible public policy. It should serve as a baseline in an independent assessment of the OPG's EIS.

### **3. Great Lakes Water Quality Agreement**

- 3.1 Both the *Great Lakes Water Quality Agreement* and the 1997 Bi-national Toxic Strategy call for the virtual elimination of toxic substances such as tritium from the Great Lakes. Holding 20% of the planet's surface fresh water, the Great Lakes are the drinking water supply for 40 million people in Canada, the United States and a large number of First Nations. In spite of the bilateral significance of this resource, it is unknown how many new nuclear and extension licenses are being sought in and approved by jurisdictions within the Great Lakes region.
- 3.2 Sierra Club and Sierra Club Canada support the call to achieve a proper reference regarding nuclear issues to the International Joint Commission from the US and Canadian governments in a special report on nuclear issues and a new IJC Nuclear Task Force to produce such a report.
- 3.3 We also recommend the Task Force compile an inventory of proposed and under review licensing applications for new and extended nuclear facilities, that is updated on a public registry, to assist with meaningful cumulative impact and risk assessment.

### **4. Obligation to Act**

- 4.1 Because of the close proximity of the Darlington nuclear power plants to the United States border, and the predominant wind directions, we anticipate that the new built and refurbishment proposals, if approved, would result in significant transboundary environmental impacts.
- 4.2 Given obligations under the *Canada–US Air Quality Agreement* and the *Canadian Environmental Assessment Act*, we believe the Government of Canada is obliged to undertake an independent, comprehensive and public assessment of the transboundary environment impacts as they relate to these proposals. We request your assurance that you will act in accordance with your clear duties in light of these legal obligations. We look forward to receiving your response within 30 days, which will provide time for your departments to consult with representatives at the CNSC on how to best fulfill the Government of Canada’s domestic and legal obligations.

If your office has any questions or comments with respect to any of the above, please feel free to contact the Chairs of Sierra Club Canada, Ontario Chapter and Sierra Club Atlantic Chapter, as set out below.

Yours sincerely,

*Robert Ciesielski*

Sierra Club Atlantic Chapter  
Energy Committee Chair

cc.

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