



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

# Record of Proceedings, Including Reasons for Decision

In the Matter of

Proponent Ontario Power Generation Inc.

Subject Environmental Assessment Scoping Information Document (Scope of Project and Assessment) for the Proposed Darlington Nuclear Generating Station Refurbishment and Continued Operation

Hearing Date October 28, 2011

## **RECORD OF PROCEEDINGS**

Proponent: Ontario Power Generation Inc.

Address/Location: 1908 Colonel Sam Drive, Oshawa, ON L1H 8P7

Purpose: Environmental Assessment Scoping Information Document (Scope of Project and Assessment) for the proposed Darlington Nuclear Generating Station Refurbishment and Continued Operation

Application received: April 28, 2011

Date of hearing: October 28, 2011

Location: Canadian Nuclear Safety Commission (CNSC) Public Hearing Room, 280 Slater St., 14th. Floor, Ottawa, Ontario

Members present: M. Binder, President

Secretary: M.A. Leblanc

Recording Secretary: S. Gingras

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## Introduction

1. Ontario Power Generation Inc. (OPG) has notified the Canadian Nuclear Safety Commission<sup>1</sup> (CNSC) of its intention to refurbish and to continue to operate the four reactors at the Darlington Nuclear Generating Station (DNGS) with a view of extending their operating lives until about 2055.
2. Before the Commission is able to make licensing decisions in respect of the proposed project pursuant to the *Nuclear Safety and Control Act*<sup>2</sup> (NSCA), it must make a decision on an environmental assessment (EA) of the proposal in accordance with the requirements of the *Canadian Environmental Assessment Act*<sup>3</sup> (CEAA). The Commission is a Responsible Authority (RA)<sup>4</sup> for the EA.
3. As a RA under the CEAA, the Commission must first determine the *scope of the project* and the *scope of the assessment for the project*. To assist the Commission in this regard, CNSC staff prepared a draft Environmental Assessment Scoping Information Document (EASID) (formerly EA Guidelines). In this regard, it conducted consultation with other government departments, the public and other stakeholders.
4. The proposed EASID “*Proposed Scoping Information Document – Proposal by Ontario Power Generation for the Refurbishment and Continued Operation of the Darlington Nuclear Generating Station in the Municipality of Clarington, Ontario*” contains draft statements of scope for the approval of the Commission. The draft EASID also contains recommendations and instructions for the approach to be used in completing the EA, including for the conduct of further public and stakeholder consultations.

## Issues

5. In considering the EASID, the Commission was required to decide, pursuant to subsections 15(1) and 16(3) of the CEAA respectively:
  - a) the *scope of the project* for which the EA is to be conducted; and
  - b) the *scope of the factors* to be taken into consideration in the conduct of the EA.
6. The Commission considered whether it would, at this time, recommend to the federal Minister of the Environment, pursuant to section 25 of the CEAA, to refer the project

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<sup>1</sup> The *Canadian Nuclear Safety Commission* is referred to as the “CNSC” when referring to the organization and its staff in general, and as the “Commission” when referring to the tribunal component.

<sup>2</sup> Statutes of Canada (S.C.) 1997, chapter (c.) 9.

<sup>3</sup> S.C. 1992, c.37.

<sup>4</sup> Responsible Authority in relation to an EA is determined in accordance with subsection 11(1) of the CEAA.

to a mediator or a review panel.

7. The Commission considered whether it would, pursuant to subsection 17(1) of the CEEA, delegate the conduct of technical support studies to OPG and the writing of the technical report to CNSC staff or the proponent.
8. Furthermore, the Commission undertook to decide whether or not the Commission's consideration of the completed EA Screening Report (Screening Report) would be by way of a public or closed hearing held by the Commission.

### Hearing

9. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to review the EASID.
10. The Commission, in making its decision, considered information presented for a hearing held on October 28, 2011 in Ottawa, Ontario. The hearing was conducted in accordance with the Commission's process for determining matters under the CEEA. During the hearing, the Commission considered written submissions from CNSC staff (CMD 11-H124) and OPG (CMD 11-H124.1).

### **Decision**

11. Based on its consideration of the matter, as described in more detail in the following sections of this *Record of Proceedings*,

the Canadian Nuclear Safety Commission, pursuant to sections 15 and 16 of the CEEA, approves the Environmental Assessment Scoping Information Document "*Proposed Scoping Information Document – Proposal by Ontario Power Generation for the Refurbishment and Continued Operation of the Darlington Nuclear Generating Station in the Municipality of Clarington, Ontario*".

12. The Commission decides that it will not, at this time, refer the project, pursuant to section 25 of the CEEA, to the federal Minister of the Environment for his referral to a mediator or review panel. The Commission notes that it may make such a referral at any time during the course of the EA process if warranted.
13. The Commission decides that it will delegate the conduct of technical support studies to the proponent, OPG.
14. The Commission decides that it will consider the completed EA Screening Report, possibly with licensing information, in the context of a public hearing of the

Commission, taking into consideration the complexity of the project and the expected level of public interest.

## **Issues and Commission Findings**

### **Type of Environmental Assessment Required**

#### *Screening vs. Comprehensive Study, Review Panel or Mediation*

15. The proposed project is not of a type identified in the *Comprehensive Study List Regulations*<sup>5</sup>. Therefore, pursuant to subsection 18(1) of the CEAA, the CNSC is required to ensure that a screening EA of the project is performed and a Screening Report is prepared before a licensing decision to allow the project to proceed can be made by the Commission under the NSCA.
16. Based on information included in CNSC staff's submission, there are, at this point in time, no potential significant environmental effects or public concern associated with the project that would warrant having the project referred to a mediator or a review panel. The Commission concludes that, pursuant to the CEAA, a screening EA of the project is satisfactory.

### **Consultations on the Draft EASID**

17. As part of its review of the adequacy of the draft EASID and, in particular, to assess the level of public concern about the project for the purpose of considering the aforementioned options for mediation or review panel, the Commission took account of the views of the public and other stakeholders. In this regard, the Commission considered whether the consultations carried out thus far by CNSC staff and the proponent provided the public and other stakeholders with adequate opportunity to become informed and express their views about the EASID.

#### *Public Consultation*

18. With respect to public consultation on the draft EASID, CNSC staff reported that it had established a public registry for the assessment as required by Section 55 of the CEAA, including the identification of the EA in the Canadian Environmental Assessment Registry (CEAR) with the following number: 11-01-62516. Based on the public participation criteria and the rationale provided in Appendix A of the proposed EASID, CNSC staff determined that OPG's proposal require a 'high level' of public participation. Public participation is conducted by CNSC staff using the following activities:

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<sup>5</sup> SOR/94-638.

- Posting of a notice of commencement of EA on both the CNSC website and the CEAR;
- Posting of a notice of availability of the draft Scoping Information Document for public review;
- Posting of a notice of availability of participant funding to review the draft EA Screening Report and to participate in the public hearing; and
- Posting of a notice of availability of the draft EA Screening Report.

#### *Government Consultation*

19. CNSC staff reported that, in accordance with the *CEAA Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*<sup>6</sup>, CNSC staff identified Health Canada, Natural Resources Canada and Environment Canada as Federal Authorities for the purpose of providing expert assistance to the CNSC and Fisheries and Oceans Canada (DFO) staff during the EA. CNSC staff noted that DFO has declared itself to be a likely RA for the EA. CNSC staff stated that DFO has reviewed the proposed EASID and provided their concurrence.
20. CNSC staff also consulted the Ontario Ministry of the Environment (MOE) to determine whether there are provincial EA requirements under the *Ontario Environmental Assessment Act* and other provincial legislation that are applicable to the proposal. The MOE confirmed that no provincial EA is required; however, CNSC staff will keep the MOE informed throughout the EA process for the purpose of a technical review, as requested by the MOE.

#### *Aboriginal Consultation*

21. CNSC staff reported that they have identified Aboriginal groups who may have interest in this project and created a distribution list for engagement. CNSC staff subsequently sent notification letters to the identified groups, providing information on the project and the EA process, important dates relating to this process, information on the CNSC Participant Funding Program, and CNSC contact information. The identified groups were also provided, in a separate letter, with the Public Review Notice for the Draft EASID and a copy of the draft EASID. Comments were received from the Mississaugas of Scugog Island First Nation, the Chippewas of Rama First Nation, the Alderville First Nation and the Saugeen Ojibway Nation.
22. CNSC staff intends to continue to engage with the identified Aboriginal groups by

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<sup>6</sup> SOR/97-181.

providing project updates as appropriate throughout the regulatory review process and to encourage groups to participate in future public Commission hearings to voice any issues they may have in relation to this project.

#### *Conclusion on the EASID Consultation*

23. CNSC staff noted that all comments received during the above consultations were taken into consideration in the preparation of the draft EASID. Information on the disposition of each comment was attached as Appendix D of CMD 11-H124.
24. The Commission is satisfied that the public and other stakeholders have been adequately consulted during the preparation of the draft EASID. The Commission is satisfied that CNSC staff has taken an active role in consulting the public. The Commission is satisfied that, for the purpose of considering whether to refer the project to the Minister for a review panel or mediation, it had sufficient information to assess the current level and nature of public concern about the project.

#### **Process for Environmental Assessment Screening Report**

25. The Commission determines the process to be followed for the EA Screening Report, including if the EA studies would be delegated to OPG and if the Screening Report would be reviewed in the context of a public hearing or a closed session of the Commission.
26. CNSC staff recommended that, pursuant to subsection 17(1) of the CEAA, the technical studies required by CEAA be delegated to OPG. CNSC staff recommended that the EASID for the project be issued to OPG for use in carrying out the EA studies. OPG would then be required to submit an Environmental Impact Statement (EIS) detailing the studies and results. CNSC staff, DFO and identified Federal Authorities will subsequently review the EIS and prepare technical review comments to be addressed by OPG. CNSC staff and DFO will then prepare an EA Screening Report and conduct an anticipated 30-day minimum public review on this document. Comments received will be analyzed, the EA screening report revised as necessary and submitted to the Commission for approval.
27. The Commission decided that the EA Screening Report for this project will be reviewed in the context of a public hearing.

#### **Scope of the Project**

28. “Scope” under the CEAA is expressed in two parts: the *scope of the project* (i.e., the physical works and activities proposed) and the *scope of assessment* (i.e., the scope of the factors to be considered in assessing the effects of the project). This section



addresses only the issues relating to the *scope of the project*. The issues related to the *scope of assessment* are discussed below in the section entitled Scope of the Assessment.

29. OPG proposes the following refurbishment activities, as described in details in the proposed EASID:
- Site preparation and construction of storage (e.g., interim storage of low and intermediate-level wastes) and support buildings/structures;
  - Refurbishment activities at each of the four reactor units;
  - Interim storage of low and intermediate-level irradiated component refurbishment waste at the Darlington Waste Management Facility (DWMF) or immediate transport off-site to the Western Waste Management Facility (WWMF) or another approved licensed facility for centralized storage in a certified container;
  - Transport off-site to the WWMF or another approved licensed facility for centralized storage of low and intermediate-level miscellaneous refurbishment waste;
  - Transport of materials, labour force and replacement components to the site; and
  - Refuelling and restarting the reactors.
30. CNSC staff explained that the scope of project for this EA will include the assessment of all waste management-related activities including waste reduction activities and decontamination. CNSC staff also noted that the scope of project will also consider the following activities related to the continued operation of the refurbished power reactors until about 2055 and the subsequent achievement of a safe state of closure, including:
- Continued operation of the refurbished reactor units and ancillary support systems;
  - Management of operational low and intermediate-level radioactive waste;
  - Construction of additional storage capacity at the DWMF Darlington Used Fuel Dry Storage Facility (DUFDSF) for the used nuclear fuel to be produced from the proposed continued operation of the DNGS units;
  - Interim storage of used fuel at the DUFDSF and the refurbishment waste at the DWMF;
  - Conduct of ongoing maintenance and repair, which may include the replacement of steam generators if necessary;
  - Management of ongoing operational non-radioactive waste;

- Transport of routine operational low and intermediate-level waste to the WWMF or long-term waste management facility;
  - Operational activities required to achieve a safe state of closure prior to decommissioning; and
  - Assessment of all waste management-related activities, including waste reduction activities and decontamination.
31. Based on the information received, the Commission accepts CNSC staff's recommendations concerning the *scope of the project* and approves the definition of the project scope as set out in the proposed EASID without change.

### **Scope of the Assessment**

32. The other part of "scope" under the CEAA is the *scope of the assessment* – otherwise described in the CEAA as the scope of the factors that will be considered in assessing the environmental effects of the project.
33. The scope of a screening assessment under the CEAA must include the factors set out in paragraphs 16(1)(a) to (d) of the CEAA. Other factors may be included at the discretion of the Commission under paragraph 16(1)(e) of the CEAA.
34. The mandatory factors in subsection 16(1) of the CEAA are:
- the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
  - significance of these effects;
  - the comments from the public that are received in accordance with the CEAA and its Regulations; and
  - measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project.
35. As allowed by paragraph 16(1)(e) of the CEAA, CNSC staff recommended that the following additional factors be included in the EA:
- The purpose of the project; and
  - A preliminary design and implementation plan for a follow-up program.
36. CNSC staff also noted that additional or more specific factors or issues to address in the EA may be identified during the conduct of the EA.

37. In section 2.3 of the proposed EASID, CNSC staff described the spatial (site, local and regional study areas) and temporal boundaries of the assessment (which establish over what period of time the project-specific and cumulative effects are to be considered).

*Conclusion on the Scope of the Assessment*

38. Based on the above information and considerations, the Commission concludes that the scope of the assessment, as described in sections 2.2 and 2.3 of the draft EASID, is appropriate for the purpose of the EA of the proposed project.

**EA Methodology**

39. CNSC staff provided a detailed description on the project-specific information requirements. CNSC staff explained that the EIS should include information related to:
- Project overview and schedule;
  - Proponent organization;
  - Purpose of the project;
  - Physical components and activities of the project, including:
    - Site preparation and construction of new structures;
    - Refurbishment activities;
    - Normal operations, general information and design characteristics;
    - Potential malfunctions and accidents;
    - Decommissioning.
  - A summary of the discussion and approach to ensure compliance with existing federal and provincial environmental legislation;
  - Description of the existing environment;
  - Constituents of potential concerns;
  - Valued ecosystem components;
  - Assessment and mitigation of environmental effects;
  - Cumulative environmental effects;
  - Significance of residual effects;
  - Follow-up program.
40. CNSC staff summarized the methodology of the assessment of the effects caused by the project. This methodology is performed following four steps: identify interactions between the project and the environment; identify likely changes to the environment; describe potential mitigation measures; and residual environmental effects that will likely occur. Finally, an assessment of the effects of the environment on the project should be done.
41. Based on the above information and considerations, the Commission is satisfied that the structure, approach, and other instructions for conducting the EA , as described in

the EASID attached to CMD 11-H124, are acceptable.

### **Public Concern on the Project**

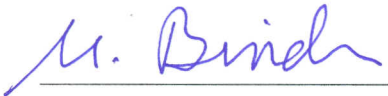
42. CNSC staff reported that 30 requests for the Draft EASID were received. In total, 20 different groups submitted comments. CNSC staff provided a list of the comments, as well as CNSC staff's and, as a likely RA, DFO's response to these comments. CNSC staff noted that the comments focused on concerns related to:
- public participation opportunities;
  - inadequacy of a screening level EA for this project and the need for a review panel;
  - significance of effects and lack of mitigation and justifiability for those effects;
  - consideration of the need and alternatives for the project;
  - effects from the Darlington New Build;
  - consideration of events from Fukushima, including the choice and methodology regarding severe accidents, emergency response, and impacts to drinking water;
  - consideration of malevolent acts;
  - radioactive waste and used nuclear fuel management;
43. CNSC staff and DFO responses to those comments are included in Appendix D of CMD 11-H124.
44. Based on the above information and considerations, the Commission is satisfied that the concerns regarding the project, as expressed by the intervenors and summarized in this section, have been properly responded to by CNSC staff and considered by the Commission as part of its review of the matter.

### **Conclusion**

45. The Commission has considered the submission of CNSC staff as presented for reference on the record for the hearing.
46. The Commission, pursuant to sections 15 and 16 of the CEAA, approves the *Proposed Scoping Information Document: Proposal by Ontario Power Generation for the Refurbishment and Continued Operation Of the Darlington Nuclear Generating Station in the Municipality of Clarington, Ontario*, presented in CMD 11-H124.
47. The Commission concludes that, at this time, it will not refer the project to the federal Minister of the Environment for referral to a mediator or review panel in accordance with the provisions of the CEAA.
48. The Commission decides that, pursuant to subsection 17(1) of the CEAA, the

conduct of technical support studies will be delegated to OPG.

49. Furthermore, the Commission decides that it will consider the completed EA Screening Report in the context of a public hearing of the Commission.
50. The Commission requests CNSC staff to report to the Commission on any issues arising during the conduct of the EA that could warrant the Commission giving further consideration to the above scope and process decisions.



OCT 28 2011

Michael Binder  
President,  
Canadian Nuclear Safety Commission

Date