



## Darlington New Nuclear Project Environmental Assessment Hearing Update Archive

April 8, 2011

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Today, a number of organizations and individuals will present as interveners in the hearing process. Organizations scheduled to present include:

- North American Young Generation in Nuclear
- Leeds Country Conserver
- The Blacklab
- Green Party of Ontario
- Durham Region Field Naturalists
- Durham CLEAR (Citizens Lobby for Environmental Awareness)

We expect today's presentations will cover a wide variety of topics with many varying opinions. Public hearings are an integral part of the Environmental Assessment (EA) process. OPG is encouraged by the large number of individuals and groups who are participating in the hearings. The hearings allow all interested parties to share their views on our project. Today's presentation will end with the panel chair's closing remarks to marking the end of the hearings.

- [Human Health and Radiation](#)
- [Emissions \(including tritium\)](#)
- [Aquatic Habitat and Species](#)
- [Seismicity](#)
- [Safe Management of Nuclear Waste](#)

Today's session will conclude with the Panel Chair's closing remarks, and the conclusion of the Darlington New Nuclear Project EA Joint Review Panel Hearings. Presentations by all organizations involved in the hearings, and official transcripts can be found on the [Canadian Environmental Assessment Agency website](#).

April 7, 2011

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Today, a number of organizations and individuals will present as interveners in the hearing process. These organizations include:

- Families Against Radiation Exposure
- Organization of CANDU Industries
- Greater Oshawa Chamber of Commerce
- Transition Oakville Steering Committee

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OPG is proud of the extensive work and thorough studies undertaken as part of our EA work and are confident in our conclusion: that OPG's Darlington New Nuclear Project will not result in any significant adverse environmental effects, given mitigation, to workers, the public or on the surrounding environment.

### April 6, 2011

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### April 5, 2011

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Yesterday, **April 4**, The Canadian Environmental Law Association (CELA) presented at the hearings and called into question whether OPG had met the legal requirements of the Canadian Environmental Assessment Act (CEAA) Environmental Impact Statement (EIS) guidelines. Specifically, CELA argued that alternatives (such as wind, solar and conservation) should be considered within the scope of the current EA process by OPG as possible replacements for the Darlington project.

OPG clarified that our mandate does not include energy alternatives and the Panel agreed OPG is not accountable for developing long-term energy plans. Both the CNSC and the Ontario Ministry of Energy have stated in their hearing submissions that OPG's treatment of "need and alternatives to" nuclear was reasonable and appropriate. The question of whether the EIS adequately met the EIS guidelines was

confirmed on December 14, 2010, when the Panel determined there was sufficient information to proceed to a hearing.

Today, a number of organizations and individuals will present as interveners in the hearing process.

These organizations include:

- Ontario Power Site Committee
- Pickering East Shore Community Association
- Clarington Board of Trade
- Canadian Manufactures and Exporters

Darlington Nuclear has been a part of the community for more than 25 years. We believe being a part of the community is so much more than simply generating electricity there. It's about helping the community thrive, and OPG has been doing just that through support of local not-for-profit initiatives in the communities that host our facilities.

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**April 4, 2011**

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Today, a number of organizations and individuals will present as interveners in the hearing process.

Organizations scheduled to present include:

- University of Ontario Institute of Technology
- York University Faculty of Environmental Studies
- Physicians for Global Survival
- Pembina Institute
- Canadian Environmental Law Association

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#### [April 1, 2011](#)

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Today, a number of organizations and individuals will present as interveners in the hearing process. These organizations include:

- Sierra Club of Canada
- Mouvement Vert Mauricie
- The United Church of Canada
- The Ontario Nuclear Build Council
- The Registered Nurses Association of Ontario
- The Society of Energy Professionals

#### [April 2, 2011](#)

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A number of organizations and individuals are scheduled to speak during the weekend session. Organizations include:

- The Canadian Coalition for Nuclear Responsibility
- Canadian Unitarians
- The Ontario Sustainable Energy Association
- The Canadian Nuclear Association

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### March 31, 2011

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Today, Community Coalition Against Uranium Mining, the International Institute of Concern for Public Health, Nuclear Information and Resource Service and a number of individuals will present information as interveners in the Darlington New Nuclear Project Environmental Assessment (EA) hearings.

We expect today's presentations will cover a wide variety of topics with many varying opinions. Public hearings are an integral part of the EA process. OPG is encouraged by the large number of individuals and groups who are participating in the hearings. The hearings allow all interested parties to share their views on our project.

OPG is proud of the extensive work and thorough studies undertaken as part of our EA work and are confident in our conclusion: that OPG's Darlington New Nuclear Project will not result in any significant adverse environmental effects, given mitigation, to workers, the public or on the surrounding environment.

The EA documents all of the work done since the fall of 2006 to methodically assess the wide range of potential Project-environment interactions identified at the beginning of the process. The EA studies were undertaken by a team of more than twenty technical experts, and were subject to independent expert peer reviews prior to being finalized. OPG also sought to ensure that the study approach was grounded in the perspectives, views and values of the community within which the OPG New Nuclear at Darlington Project would be operating.

While the EA is for a new project, we can't lose sight of the fact that the Darlington Nuclear site already hosts a four-unit nuclear generating station that has provided safe, reliable and clean energy for 20 years with minimal environmental impact.

### March 30, 2011

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Today, the Power Workers' Union, the Canadian Association of Physicians for the Environment, the Canadian Nuclear Workers' Council and a number of individuals will present information as interveners in the hearings.

We expect today's presentations will cover a wide variety of topics with many varying opinions. Public hearings are an integral part of the Environmental Assessment (EA) process. OPG is encouraged by the large number of individuals and groups who are participating in the hearings. The hearings allow all interested parties to share their views on our project.

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March 29, 2011

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Today, OPG will present information on plans for the management of conventional and nuclear waste associated with the Darlington New Nuclear Project. To view OPG's presentation, [click here](#).

### **Safe and Responsible Management of Waste**

As in all industry, waste is produced in the production of electricity. OPG is committed to the safe management of all waste, including nuclear materials, in an environmentally, socially and financially-responsible manner. OPG has been safely managing low and intermediate-level waste and used fuel for 40 years to ensure there is no risk to the health and safety of employees, the public or environment.

For more information about OPG's nuclear waste management program, including the transportation of low and intermediate-level waste, please visit our website by [clicking here](#).

### **Planning for the Future**

OPG has an obligation to plan for the eventual decommissioning of our nuclear facilities and the long-term management of our nuclear waste. We believe it is important to ensure that future generations do not have to bear the cost of today's operations. OPG makes annual contributions to special funds dedicated solely for decommissioning and waste management. As of 2011, OPG has accumulated a total of \$11 billion dedicated for this purpose.

### **Deep Geologic Repository**

OPG is at the forefront of worldwide research into new, effective waste storage methods. With the support of the Municipality of Kincardine, OPG has proposed a **permanent underground** storage facility being developed at OPG's Western Waste Management Facility in Kincardine, for low and intermediate waste. The project is known as the Deep Geologic Repository (DGR.)

At 660 metres below the earth's surface, the DGR will be deeper than the CN tower is tall and designed to safely isolate the waste for many thousands of years. The Environment Assessment (EA) for the DGR is currently underway. For more information, [click here](#) to visit our website.

### **Long-term storage of Used Fuel**

The Government of Canada selected Canada's plan for the long-term management of used nuclear fuel in June 2007. The approach, called "Adaptive Phased Management," involves the development of a large infrastructure project in an informed and willing host community. The Nuclear Waste Management Organization (NWMO) is federally mandated to implement this project and is working closely with a number of communities who have indicated potential interest in hosting this facility.

For more information about the work of the NWMO on this project, [click here](#) to visit their website.

Following OPG's presentation, a number of interveners will present. These include:

- Northwatch
- Nuclear Waste Watch Advisory Associates
- Beyond Nuclear
- Citizens' Clearing House on Waste Management
- Greenpeace
- Just One World

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### March 28, 2011

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This morning, Safe and Green Energy and Lake Ontario Waterkeeper will present information as interveners in the hearing process. We expect this morning's presentations will bring about discussion of OPG's studies and programs on aquatic habitat.

#### **OPG's Aquatic Studies and Programs**

OPG has conducted many comprehensive studies and analyses of our potential effects on aquatic environment. OPG has concluded the Darlington New Nuclear Project will not result in significant effects on aquatic habitat or species, and found the following:

- Near shore aquatic habitat is not unique.
- Impingement and entrainment losses are dominated by invasive species and lake-wide populations will not be affected.

In addition, OPG has many years of operating experience with "once-through lake water cooling" systems, which is OPG's recommended technology for use in the Darlington New Nuclear Project. The system is designed to minimize potential adverse effects on fish and other organisms.

In the afternoon, OPG will present information on Aboriginal issues associated with the Environmental Assessment. To view OPG's presentation, [click here](#).

#### **OPG's Aboriginal Interest Program**

OPG is committed to building long term mutually beneficial working relationships with aboriginal communities proximate to its present and future operations. OPG is committed to developing these relationships on a foundation of respect for the languages, customs, and political, social and cultural institutions of aboriginal communities. Whether managing current operations or planning new projects, close consultation with community members and leaders is an essential part of the process.

Following OPG's presentation, a number of Aboriginal groups including the Williams Treaties First Nations, the Mississauguas of New Credit First Nation and the Saugeen Ojibway Nations will present as interveners in the EA process.

The Green Party of Canada will conclude today's session with their intervener presentation.

### March 25- 26, 2011

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#### **March 25, 2011**

Today, a number of agencies will present their findings following their review and analysis of the Darlington New Nuclear Project Environmental Assessment (EA) studies, in their area of interest or expertise. These organizations include:

- Emergency Management Ontario
- Ontario Ministry of Labour
- Ontario Ministry of Energy

- Natural Resources Canada
- Ontario Ministry of Natural Resources
- Canadian Transportation Agency

Emergency Management Ontario will present findings of their review of OPG's studies on emergency planning with regard to the Darlington New Nuclear Project EA.

There is nothing more important to OPG than safety and security at our nuclear stations. An important aspect of making safety a priority is for OPG to proactively plan for the unlikely case of an accident at one of our stations. To do this, OPG staff practice our response in co-ordinated station drills to ensure we are ready to respond in any emergency situation. We work collaboratively with other emergency service agencies, including Emergency Management Ontario, Durham Emergency Measures Office and local police, fire and emergency response personnel.

OPG's nuclear plants have been recognized internationally for worker and environmental protection as well as fire prevention training and systems.

In support of the EA, a study was recently completed using an internationally recognized consulting firm which demonstrated that, in the highly unlikely event of an incident at the Darlington station, evacuation could be accomplished in a timely manner. The evacuation time estimates were calculated based on current and projected growth rates for Durham Region, and the study was based on "worst case" scenarios, including traffic and weather impacts. The results show that effective evacuation could be accomplished in the following timeframes:

- In 2006: 4.5 to 6.5 hours; and
- In 2025: 6 to 8 hours.

The results of this study are summarized in our EA studies. [Click here](#) to view the results.

### **March 26, 2011**

Today, a number of community groups and organizations are scheduled to present. These include:

- Pickering Nuclear Community Advisory Council
- Durham Strategic Energy Alliance
- Whitby Chamber of Commerce
- City of Pickering
- Canadian Association of Nuclear Host Communities
- Cottagers against Uranium Mining and Exploration
- Promotion Nuclear Ltd.
- The Society of Energy Professionals

We anticipate the discussion may prompt comments on uranium mining and the uranium fuel life cycle. Mineral exploration is a matter of federal responsibility and is beyond the scope of OPG's responsibility and EA study. However, OPG notes that uranium mining and milling are subject to similar legislation and regulatory requirements as are nuclear power plants, including approvals under the Nuclear Safety and Control Act and federal Environmental Assessments under the Canadian Environmental Assessment Act.

The Canadian Nuclear Safety Commission's (CNSC) guide on the licensing processes for new nuclear power plants states that the EA must examine the five phases in the life cycle of the plant (i.e. siting, construction, operation, decommissioning and abandonment); it does not include the uranium fuel life cycle.

For more information on uranium mining in Canada, visit the CNSC website by [clicking here](#).

March 24, 2011

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This morning, OPG will present information on our land use studies, including lake infill, site layout and potential traffic system impacts from the Darlington New Nuclear Project. To view OPG's presentation, [click here](#).

Following OPG's presentation, the Ontario Ministry of Municipal Affairs and Housing will report their conclusions based on a thorough review of OPG's Environmental Assessment submissions.

A number of interveners, including The Municipality of Clarington, the Region of Durham and the Municipality of Kincardine will then make presentations as interveners in the hearing process.

During the afternoon session, OPG will present information on Human Health and Safety. To view OPG's presentation, [click here](#).

### **Human Health**

For OPG, nothing is more important than the safety of staff, the public and the environment. It guides our focus for every task we do, each and every day. In the four decades that nuclear energy has served Canada's energy needs, no member of the public has ever been harmed as a result of a radiation emission from a nuclear power plant or waste storage facility.

Continuous monitoring of our station emissions assures OPG and the public that we are operating well below limits specified in our operating licence. In fact, as a company, we voluntarily set more stringent operating targets for ourselves than those which are required by law.

The data from routine testing and monitoring of plant operations, employee doses, plant emissions and environmental levels of radiation are compiled and provided to the public in annual reports. This is a regulatory requirement of the Canadian Nuclear Safety Commission (CNSC.)

To view OPG's Radiological Environmental Monitoring Reports, [click here](#).

As well, third party studies confirm there is no impact on the health of residents who live near OPG's nuclear generating stations. In 2007, the Region of Durham health and epidemiology specialists completed a thorough report, "Radiation and Health in Durham Region." For more information on independent health testing done in the communities surrounding our stations, [click here](#).

### **Tritium**

One topic we expect to be discussed at today's hearing session is tritium, a by-product of our normal station operations. The lakes and groundwater around OPG's nuclear stations are safe. In its operation history, OPG has never exceeded regulatory limits on radioactive releases into the environment, including tritium.

At all of OPG's nuclear stations, the rate and quantity of tritium emissions from airborne and waterborne effluents are continuously monitored to ensure that emissions do not exceed the CNSC's approved emission limit. The results of our ongoing monitoring activities are publicly available in the annual Radiological Environmental Monitoring Program report. Sampling and measurements of tritium concentrations in the lake water, well water and drinking water from nearby water supply plants are routinely taken under this program.

The CNSC also conducts independent health studies in the area of tritium. For more information on these studies, visit the CNSC website by [clicking here](#).

March 23, 2011

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This morning, OPG will present information on emissions to air, water and groundwater. To view OPG's presentation, [click here](#).

### **OPG's Robust Emissions Program**

OPG is committed to the health and safety of the public, employees and the environment. OPG takes precautions to ensure we have as little impact as possible resulting from our operations. OPG has a comprehensive emissions monitoring program in place, the results of which are made public.

Continuous monitoring of our station emissions assures OPG and the public that we are operating well below limits specific in our operating licence. In fact, as a company, we voluntarily set more stringent operating targets for ourselves than those which are required by law.

All Darlington Nuclear emissions (conventional and radiological) are significantly below the regulatory limits. Impact on the environment is minimal. Darlington Nuclear has implemented Environmental Action Levels, which are approximately 10% of the regulatory limits. Any emissions above the Environmental Action Levels would require notification to the Canadian Nuclear Safety Commission (CNSC.) This step has never needed to be taken as emissions have been so low.

The data from routine testing and monitoring of our plant operations are compiled into a report and provided to the public and the CNSC, our regulator. All of our emission data is publicly available through our annual Radiological Environmental Monitoring Program reports, available by [clicking here](#).

Darlington Nuclear is certified to the international standard ISO-14001, demonstrating our compliance to an environmental management system that includes controlling and monitoring emissions, and a commitment to the environment and biodiversity. As well, OPG has been recognized with numerous biodiversity and environmental awards including the Wildlife Habitat Council's (WHC) "Corporate Habitat of the Year" Award at both our Darlington and Pickering Nuclear stations, and the 20<sup>th</sup> Anniversary "Signatures of Sustainability" and "CEO: Conservation, Education, and Outreach" awards also from the WHC.

Following OPG's presentation, Environment Canada and the Ontario Ministry of the Environment will present their conclusions based on a detailed review of OPG's EA submissions.

In the afternoon session, OPG will present our findings on Aquatic Habitat and Biota. This includes information on the effects on aquatic habitat and the condenser cooling options we studied in the EA. [Click here](#) to view the presentation.

### **Aquatic Habitat and Condenser Cooling Options**

Through our work on the EA studies, OPG has conducted many comprehensive analyses of potential effects on aquatic environment and concludes that, like current operations, the Darlington New Nuclear Project will not result in significant effects on aquatic habitat or species populations, given mitigation.

OPG has many years of operating experience at our nuclear stations. Normal station operations require the use of lake water as a means to cool station equipment – "condenser cooling." The lake water intake structure at the existing Darlington station is designed to minimize potential adverse effects on fish and other organisms. OPG is proposing to use the same lake water intake structure in the Darlington New Nuclear Project that is in place at the existing Darlington station.

OPG has stated its preference for the "once-through lake water cooling" method of condenser cooling for a number of reasons, including:

- Our extensive experience with this technology at existing facilities and the high performance level of such a system at Darlington, including management of fish entrainment and impingement. As well, the system allows the ability to return the water to the lake after use via an extensive

discharge and diffuser pipe that runs approximately 1,560 meters offshore in order to minimize any impact on the lake from the slightly warmer water; and

- The perceptions and opinions within the local communities regarding the social stigma of use of cooling towers.

At the conclusion of OPG's presentation, Fisheries and Oceans Canada and Transport Canada will present their conclusions based on detailed study and analysis of OPG's EA submissions.

### March 22, 2011

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Today, staff from the Canadian Environmental Assessment Agency (CEAA) and the Canadian Nuclear Safety Commission (CNSC) will report their conclusions following a review of OPG's Environmental Assessment studies. For more information on CEAA and the hearing process, click [here](#). For more information about the CNSC, click [here](#).

In the afternoon, OPG will present information in support of our application for a "Licence to Prepare Site" (LTPS.) The LTPS is the first of a number of licences required in the federal approvals process for new nuclear power plants and is required prior to any physical construction activity for the new nuclear facility. The authorities must be satisfied that the proposed site can accommodate a facility that will meet all health, safety, security and environmental protection requirements.

To view OPG's overview presentation of the application for "Licence to Prepare Site," [click here](#).

Following OPG's presentation, there will be a question and answer period based on OPG's application.

### March 21, 2011

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Today marks the opening day of the Darlington New Nuclear Project Joint Review Panel Hearings. During the afternoon, the Panel will attend to procedural matters in preparation for the first hearing session.

The evening session will begin with opening remarks from the Panel Chair. OPG will then make an opening overview presentation to the Panel. The session will conclude with a question and answer period.

To view OPG's overview presentation, [click here](#).

### **Want to attend the hearings?**

For members of the public interested in attending the hearing sessions, they are taking place at Hope Fellowship Church, 1685 Bloor Street in Courtice. Telephone lines are also available for those who wish to listen live to the proceedings. The toll-free number is **1 877-413-4815**, identification number **5760957**. The proceedings will also be webcast via the Canadian Nuclear Safety Commission's website. To view the webcast, [click here](#).

For a full set of hearing documents, including presentation materials from all interveners, visit the [Canadian Environmental Assessment Agency website](#).

To view the daily hearing schedule, [click here](#).

OPG NEW NUCLEAR AT DARLINGTON

