

FALL 2008

ENVIRONMENTAL ASSESSMENT NEWSLETTER

A MESSAGE FROM PATRICK McNEIL

SENIOR VICE PRESIDENT, NUCLEAR GENERATION DEVELOPMENT

On behalf of Ontario Power Generation (OPG), thank you to the many community members who continue to support the OPG new nuclear at Darlington project. Community support was instrumental in the Province's decision to select Ontario Power Generation's Darlington site to host a new two-unit nuclear station. In addition, the Province also announced OPG as the generator of choice for the new units. Our next step is to complete the environmental assessment (EA), which we will submit in 2009.

To re-cap, the project is to site, construct and operate a new nuclear plant on the existing Darlington Nuclear site. The plant would be up to four units and generate up to a maximum of 4,800 megawatts of electricity for the Ontario grid. Site preparation and construction would take approximately 6 to 8 years and would involve moving soil and rock. Construction would include, among other things, installation of the power plant (reactor components, steam generators, turbines, etc.), as well as installation of towers and transmission lines between the power block and the switchyard. Approximately 3,500 construction and engineering workers would be needed.

The reactors are assumed to operate for 60 years with all reactor designs requiring some form of mid-life major component



OPG's Patrick McNeil and Clarington Mayor Abernethy at the opening of OPG's Community Kiosk in the Bowmanville Mall.

replacement activity. The operations stage includes commissioning of the reactors (verifying systems, pressure testing, connecting to the grid, etc.); regular plant operations and maintenance; transfer of wastes and used fuel for interim or long-term storage; and other activities relating to environmental and radiation protection. It is estimated that up to 1,400 workers would be required to operate two units. The final stage would be decommissioning (removal of fuel from the reactors, plant decontamination, dismantling and removal of equipment, etc.) is assumed to occur between 2100 and 2150.

Continued on page 2

COMMUNITY INFORMATION SESSIONS YOU'RE INVITED!

The fourth round of Community Information Sessions for OPG's New Nuclear at Darlington gets underway this fall in Bowmanville. Check out the schedule and more information on page 4. We hope to see you there!

Oct 21Bowmanville
Oct 22 Port Hope
Oct 23Oshawa
Oct 28 Newcastle

Oct 29 Lindsay
Oct 30 Orono
Nov 4 Courtice
Nov 6 Ajax

A MESSAGE FROM PATRICK MCNEIL

On the environmental front, our environmental assessment continues. With the baseline studies complete, the team is now focused on identifying project-environment interactions to determine environmental effects and mitigation measures where necessary. To ensure that the complete range of potential environmental effects is identified, OPG created a number of scenarios to represent the possible site layouts of new reactors being built on the Darlington site. These model plant layouts will be discussed in more detail at the Community Information Sessions this fall. In this newsletter, you can read page 2 and 3 more about the model plant layouts and studies on socio-economic conditions and options for nuclear waste and used fuel management.

Since the opening of our Community Kiosk in the Bowmanville Mall, we have had more than 700 visitors stop by to learn more about the EA and project. We have also attended many community events throughout the spring and summer. These have created a great opportunity for the community to learn more about the project and ask our staff questions.

I invite you to attend one of the upcoming fall Community Information Sessions to discuss the project with our staff and to provide your comments. If you are not able to attend, you can visit the project website www.opg.com/newbuild, contact us toll-free at 1-866-487-6006 or email us at newbuild@opg.com for more information.

As we progress through the EA, we encourage you to be actively involved. We thank you for your involvement throughout the EA Study and look forward to working with you as we progress through the next steps.

Patrick McNeil
Senior Vice President
Nuclear Generation Development

MODEL PLANT LAYOUTS

The EA was carried out as early as possible in the project planning stage even though the specific reactor type to be constructed and operated has not been determined by the Province. To ensure that the complete range of potential project-environment interactions associated with project phases were considered, OPG created three model plant layouts to represent the site development parameters and bound potential environmental effects from the project:

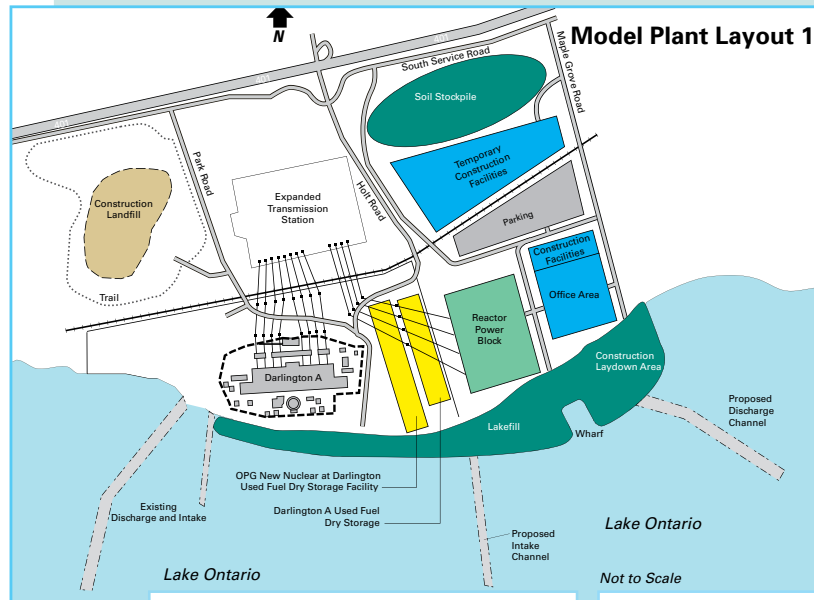
- Layout 1 is up to four reactor units with once-through lake water cooling. This option provides the most space for the reactors.
- Layout 2 is up to two reactor units with mechanical draft atmospheric cooling. A very large land area is required for mechanical draft cooling towers.
- Layout 3 is up to two reactor units with natural draft atmospheric cooling. A

large land area is required for natural draft cooling towers.

In all cases, soil would need to be excavated to allow construction of the new reactor units and associated facilities. Depending on the layouts, reactor chosen and cooling option, up to 12 million cubic meters of soil and rock would need to be excavated and moved. This fill could be moved to:

- Areas south of the South Service Road on the Darlington site (similar to the existing northwest mound)
- An area along Darlington site shoreline, filling in portions of the lake

In all of the layouts, facilities for used fuel storage and low and intermediate level waste storage would be constructed in the centre of the Darlington site between the existing reactors and new reactors. Also the layouts include access and egress routes for the new station.



The exact layout will be determined by the successful vendor through the Infrastructure Ontario process. Using the model plants layouts provides OPG with conservative bounding assumptions of the potential environmental effects of the layouts to complete the EA.



Larger Model Plant Layouts will be shown at the upcoming Community Information Sessions.

YOU ASKED US ABOUT NUCLEAR WASTE AND USED FUEL MANAGEMENT



At our community events and information sessions, people ask us how we currently manage nuclear waste and used fuel from our reactors, and how they will be managed at a new station. In response to those questions, we've dedicated this section of the newsletter to give you some answers.

Used Fuel

Used nuclear fuel consists of fuel that has been used by a nuclear power plant to generate electricity. OPG has safely managed used nuclear fuel for nearly 40 years. The used fuel is managed in a two stage process:

1. Wet storage which allows for initial cooling of the used fuel and shielding, followed by
2. Dry storage for longer term interim storage.

Used fuel from the new station will also be managed using a two-stage wet and then dry storage process. Technologies already exist to safely manage used fuel from different reactor types. From EA planning purposes, two interim on-site storage options will be considered depending on the reactor chosen and reactor fuel type:

- A. Expand the existing Darlington Waste Management storage structures to accommodate pressurized hybrid heavy and light water reactor used fuel
- B. Build an additional used fuel dry storage processing facility on the site for pressurized water reactor used fuel

Used fuel and nuclear waste facilities have been included in the model plant layouts.

Nuclear Waste

Low-level radioactive waste includes materials such as mop heads, rags, paper towels, floor sweepings and protective clothing. Intermediate-level radioactive waste includes materials such as used reactor components, refurbished components, and resins and filters used to remove the impurities from the reactor fluids. For the last 40 years, low and intermediate-level waste from OPG's Darlington and Pickering stations have been safely transported, processed and stored at OPG's Western Waste Management Facility near Kincardine, Ontario.

Low and intermediate-level waste will be managed in a similar manner for a new station in a way that minimizes the volume of waste produced and stored. The EA will include two alternative means of managing low and intermediate-level waste:

1. Manage the waste on the new build site in an above-ground storage facility or
2. Transport waste off-site in licensed transport containers to an appropriately licensed facility

OPG is conducting a separate EA on the potential construction and operation of a Deep Geologic Repository (DGR) for the long-term management of low and intermediate-level nuclear waste on the OPG lands adjacent to the Western Waste Management Facility in Kincardine, Ontario. For more information about this project, please visit www.opg.com/dgr.



Low level waste containers inside a licensed facility.

SOCIO-ECONOMIC STUDY

To study how the project could affect the social and economic environment, OPG considered population, economic base, community infrastructure and services, municipal finance and administration, and residents and communities. Research, surveys, and interviews were conducted in the local study area (within 10km) and regional study area (within 50km). OPG studied demographics; income; employment; tourism; business; housing and property values; municipal infrastructure, cost and revenues; social, educational, health and recreational services and facilities;



community character and cohesion; as well as, recreational use and enjoyment of the Darlington property.

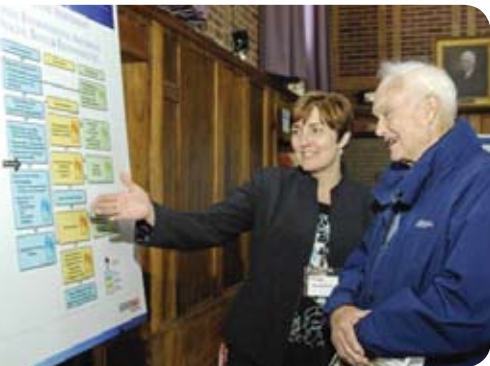
Project interactions with the socio-economic environment are likely in all phases of the project. Construction may require up to 3,500 workers and operations may require up to 1,400 staff per year for each set of two units. In addition to job creation, there will likely be increased local purchasing and improvements to infrastructure. There will likely be changes in the demographics, as well as, increased demand for community and municipal services.

During the site preparation and construction, Darlington's recreational facilities will likely be affected. OPG will be looking at ways to mitigate the possible recreation user effects such as moving or replacing recreational facilities (i.e. soccer fields, wildlife viewing and walking trails).

A report describing the existing social and economic environment, project-environment interactions and potential effects will be completed for the environmental impact statement.

INFORMED COMMUNITY

Since OPG began the project, we have spoken with more than 5,000 community members and local stakeholders and hosted three rounds of Community Information Sessions. OPG has been participating in local community events, stakeholder briefings and presentations to councils and local community groups. We are out again this fall and we'll be busy with a series of stakeholder briefings, and regular updates to your



local municipal council. Through these briefings and other public consultation activities, we are seeking your input on the project and EA.

COMMENTS WANTED

Recently, the Canadian Nuclear Safety Commission and the Canadian Environmental Assessment Agency released for public review and comment, the Draft Environmental Impact Statement Guidelines, and Draft Panel Agreement and Terms of Reference. They are available on the Canadian Environmental Assessment Registry (CEAR Reference number 07-05-29525). We encourage you to review these and provide comments to the Canadian Environmental Assessment Agency. The website is www.ceaa.gc.ca.

OPG OPENS BOWMANVILLE COMMUNITY KIOSK

OPG's new Community Kiosk in the Bowmanville Mall is busy with community members wanting to learn more about OPG new nuclear at Darlington. The Community Kiosk is a resource centre where you can learn more about the new nuclear project, the EA and the federal approvals process. We are available to answer your questions and to hear from you about the project and EA. The Community Kiosk is one of the many ways OPG is getting input on the new nuclear project. For more information, stop by the Kiosk, located at the Bowmanville Mall, 243 King Street East; open Tuesday to Saturday.

YOU ARE INVITED

We invite and encourage you to attend one of the Community Information Sessions below, where staff will be on hand to discuss the OPG New Nuclear at Darlington EA and answer your questions.

The sessions will be held from 5 p.m. – 9 p.m. with a presentation at 7 p.m. on the dates and locations listed below.

BOWMANVILLE October 21, 2008	Garnet B. Rickard Recreation Centre 2440 King Street
PORT HOPE October 22, 2008	Town Park Recreation Centre 62 McCaul Street
OSHAWA October 23, 2008	Northview Community Centre 150 Beatrice Street East
NEWCASTLE October 28, 2008	Newcastle Town Hall 20 King Street West
LINDSAY October 29, 2008	Victoria Park Armoury 210 Kent Street
ORONO October 30, 2008	Orono Arena 2 Princess Street
COURTICE November 4, 2008	Courtice Community Centre 2950 Courtice Road North
AJAX November 6, 2008	Ajax Community Centre 75 Centennial Rd

WE WANT YOUR INPUT!

Local knowledge is important in helping us shape our environmental studies. During this round of Community Information Sessions, we would like your views on:

- ✓ Mitigation measures to address potential effects of the project
- ✓ Cumulative effects between new nuclear and other community projects
- ✓ Criteria to assess significance of effects

OPG NEW NUCLEAR AT DARLINGTON



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