

BRUCE A RESTART

ENVIRONMENTAL ASSESSMENT

completing the environmental assessment

On Oct. 17, 2005, Bruce Power reached a long-term agreement with the Ontario Power Authority and launched a \$4.25 billion investment program to secure the long-term future of its site, beginning with the restart of Bruce A Units 1 and 2. The two units were laid up respectively in 1997 and 1995 by the site's former operator, Ontario Hydro.

Before Units 1 and 2 return to service, all major life cycle items such as fuel channels and steam generators will be replaced. In addition, all ancillary systems will be upgraded to modern codes and standards. The company anticipates the project work force, which will be primarily hired through local union halls, to peak at more than 1,500 full-time workers during the projected four-year construction period.

Both Units 1 and 2 are expected to be online in 2009, subject to approval by the Canadian Nuclear Safety Commission (CNSC). An environmental assessment for an expanded Bruce A restart is currently underway and a final report is expected to be submitted to the CNSC later this year.

As a planning tool, technical studies in support of the environmental assessment have been conducted over the past year. Bruce Power and its consultants have completed the required EA Study Report based on nine technical study reports and in accordance with the guidelines issued by the CNSC. The EA Study Report incorporates comments received from the public and other stakeholders received from various consultation activities including a Workshop and Open Houses.

Bruce Power submitted its draft EA Study Report to the CNSC and other federal authorities at the end of August 2005. Copies of this report are available to the public on request, at libraries throughout Bruce County (see contact information and list of libraries on back page) and on the project website (www.brucepower.com). In addition the company is holding a series of Open Houses to discuss findings with the community in November and December 2005 (see back page for dates and locations of Open Houses).

The second page of this newsletter provides an overview of the environmental assessment results. Bruce Power welcomes your comments as the EA Study Report is finalized and invites you to speak with representatives at the Open Houses. Your input into the environmental assessment is important to us and to your community.

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what is the purpose of the environmental assessment?

As described on the cover, the environmental assessment studies have been completed and the draft EA Study Report submitted to the government authorities. The purpose of the environmental assessment is to find out whether there may be any significant effects on the environment as a result of the project. The environmental assessment ensures a more environmentally-acceptable project by carefully considering the possible effects and identifying measures that would improve the environment. Effects can be either "adverse" (negative) or "beneficial" (positive). Most effects are either beneficial or small and don't have any significant consequences on the environment. The detailed environmental assessment studies focus on the limited number of adverse effects and opportunities to reduce or avoiding them.

what was considered in the environmental assessment?

The Canadian Nuclear Safety Commission determined the scope of the project to be assessed. It includes all operations and activities that are required to refuel and restart Bruce A Units 1 and 2 and allow them to operate safely for approximately 30 years. The environmental assessment also includes consideration of the effects of the work required to allow the continued operation of Bruce A Units 3 and 4 for a similar time period. Finally, the environmental assessment examines the potential use of a new fuel design, using slightly enriched uranium, in all four reactor units. It is believed the use of new fuel would substantially increase the safety margins of the reactors and allow operations to be maximized at designed capacity.

what are the results of the environmental assessment?

The environmental assessment studies examined well over a hundred possible effects of the project on the surrounding environment. Only ten of these were determined to be sufficiently adverse to be studied in detail. During normal operations these effects were limited to some effects on workers, air, fish and the local economy. No adverse effects were identified on surface water, soil, groundwater, animals, vegetation, birds, land use or cultural and heritage resources.

Effects on workers result from possible higher radiation exposures during reactor retubing activities. Bruce Power's radiation protection practices and radiation protection and safety practices will ensure that these effects are not significant. Effects on air may be caused by dust from cars and trucks and from water-treatment chemicals present in steam releases. Measured levels of dust and contaminants in air are less than regulatory standards or guidelines and are judged not to be significant.

Bruce A operations may effect fish when water from the lake is used for cooling purposes and then released at slightly warmer temperatures. This is not predicted to effect fish populations or the viability of the local fishery. Indeed, there is a positive benefit of warm water discharges on some fish species. Positive effects were also identified in the local economy through jobs, taxes and local spending. Means are identified to reduce adverse effects as workers and tourists may compete for temporary accommodation throughout the construction period.

Detailed information on the environmental assessment studies will be available at the upcoming open houses or in the community library repositories (see back page for times and locations) and the company's website www.brucepower.com.

preparation and approval process

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| Step 1 | Announce project and environmental assessment studies |
| Step 2 | Describe the project and identify interactions with the environment to focus analysis on relevant aspects |
| Step 3 | Collect data, describe the existing environment and identify potential environmental effects |
| Step 4 | Assess environmental and cumulative effects on the natural, social and economic environments; identify and consider mitigation measures and describe residual effects |
| Step 5 | Determine significance of residual effects and effects on human health; develop monitoring program |
| Step 6 | Prepare and submit draft environmental assessment study report to Canadian Nuclear Safety Commission staff |
| Step 7 | Canadian Nuclear Safety Commission and Federal and Provincial staff review draft environmental assessment study report and direct revisions as required |
| Step 8 | Canadian Nuclear Safety Commission staff prepares draft environmental assessment screening report and seeks public comment |
| Step 9 | Canadian Nuclear Safety Commission staff considers comments, revises screening report and refers final screening report for consideration and decision |
| Step 10 | Canadian Nuclear Safety Commission determines acceptability of environmental assessment screening report |

We
are
here

PUBLIC INPUT

Newsletters

Open Houses

Stakeholder Meetings

Website

Workshops

Toll-free
Information Line
1-877-51-BRUCE

brucearestart@brucepower.com

Public Comment
Period

some key questions we have heard

What kind of wastes will be created by the project? Where will they be managed?

The Bruce A Refurbishment Project will generate both low- and intermediate-level radioactive wastes. Ontario Power Generation plans to receive these wastes from Bruce Power and other nuclear generating stations in Ontario.

Ontario Power Generation recently submitted their environmental assessment study report for their Refurbishment Waste Storage Project to the Canadian Nuclear Safety Commission. This study encompasses all of the upgrades they will need to do onsite to prepare for the long-term storage of refurbishment wastes. For more information on this project, refer to their project website at www.opg.com/ops/RWS1.asp.

Why are the steam generators being replaced?

The steam generators are at or close to the end of their useful service life. The tubing in the steam generators erode and corrode over time. The tubing was considered the life limiting feature of the steam generators and a business decision was made to replace the entire steam generators at this time (rather than shortly after restart). The new steam generators will operate safely for up to 30 years of additional life.

some key questions we have heard

Why do you need to do an environmental assessment for a plant that already exists and was in operation previously?

Federal laws under the Canadian Environmental Assessment Act and the Nuclear Safety and Control Act require that an environmental assessment be done before the Canadian Nuclear Safety Commission can make a decision on an application to restart Bruce A Units 1 and 2. Bruce Power welcomes the opportunity provided by the environmental assessment to study the effects of the project. If significant adverse effects are found, the project will be redesigned to reduce or avoid them.

How do changes in lake water levels affect Bruce A operations?

The Bruce Power stations use lake water for cooling; however, because the lake water intake is through a tunnel extending out into deeper water, changes in Lake Huron water levels would have very little effect, if any, on the continued use of lake water for cooling. After use, the cooling water is returned to Lake Huron. Effects of lower lake levels might be seen in the effects of discharges on the near-shore environment, including fish and waterfowl. The environmental assessment considers the effects of lower lake water levels on the near-shore environment. No significant adverse effects are predicted.

What is new fuel?

New fuel is a new fuel bundle design that increases the safety and efficiency of the reactor. The fuel bundle includes a central dysprosium fuel pencil and slightly enriched uranium. More information on new fuel is available at www.brucepower.com.

How long will the refurbishment process take?

It is anticipated that Units 1 and 2 will be returned to service before the end of 2009. Unit 3 will undergo a similar refurbishment with new steam generators and fuel channels when needed, while Unit 4's steam generators will be replaced as required.

you are invited

As part of our ongoing stakeholder and community consultation program, Bruce Power is holding a third round of Open Houses in the community in November and December. We will present the findings of the environmental assessment studies and would very much like to receive your input and comments on these studies. Open House times are 5 p.m. till 9 p.m. with a formal presentation at 7 p.m.

The dates and locations of the Open Houses are as follows:

Kincardine – Nov. 22 (Best Western Governor's Inn);
Brockton – Nov. 23 (Walkerton Legion);
Huron-Kinloss – Nov. 24 (Lucknow Legion);
Arran-Elderslie – Nov. 29 (Chesley Community Centre);
Saugeen Shores – Nov. 30 (Lakeshore Recreation in Port Elgin); and
Owen Sound – Dec. 1 (North Grey Public Library)

Library repositories

Information on this environmental assessment is being placed in the following libraries as it becomes available. Ask the librarian to see the

Bruce A Refurbishment Project file.

- Kincardine Library, 727 Queen Street
- Port Elgin Library, 708 Goderich Street
- Tiverton Library, 56 King Street
- Southampton Library, 215 High Street
- Walkerton Library, 253 Durham Street East
- Paisley Library, 274 Queen's Street North
- Hanover Library, 451 10th Avenue
- Owen Sound Library, 824 First Avenue West

Contact us

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Come and see: The Bruce Power Visitors' Centre is open Monday to Friday, 9 a.m. to 4 p.m., but closed statutory holidays.