CANADIAN NUCLEAR WORKERS COUNCIL
www.cnwc-cctn.ca

# The Canadian Nuclear Worker

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# Saskatchewan mine flood

*Exposure concerns put to rest*

Lack of information can lead to mistaken assumptions and incorrect conclusions – not to mention unnecessary anxiety and confusion.

That's a key finding of a study commissioned by the CNWC to review the 2003 inflow incident at the McArthur River uranium mine. The study also looked at concerns about radiation exposure, which subsequently aired on national television.

***Communication lacking***

The study, conducted by Intertec Management Ltd. in collaboration with United Steelworkers Local 8914, the McArthur River Heath and Safety Committee and Cameco Corporation, found that the biggest problem was lack of communication.

In particular, mine workers were not told why set points were changed on PRISM monitors – devices that raise alerts when radiation levels in the mineshaft increase to predetermined levels. Nor did they have enough information about the method used to calculate individual radiation dosages, in cases where personal alpha dosimeters (PADs) were not worn during some or all of the inflow containment period.

***Outstanding job***

The incident at Cameco's top-producing mine in Saskatchewan began with the onset of water entry into Bay 12 on April 6, 2003. The inflow was stabilized six days later but wasn't plugged completely for a further 15 months when pumping of the area ceased. The workers did an outstanding job of pulling together to save the mine under very trying circumstances, the study found. Months later concerns about long-term health consequences were raised— in particular, exposures to higher-than-usual levels of radon gas

during the initial days of the emergency. The Intertec report concluded these concerns were magnified by media coverage, in part due to manipulation by anti-nuclear organizations,

***Concise explanation***

The report includes a concise and easy-to-understand explanation of types of radiological exposure, how these were affected by the water inflow, and how exposure dosages were calculated.

Find the full report at www.cnwc-cctn.ca.

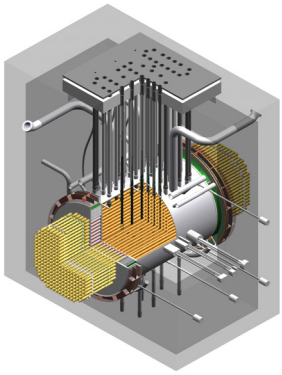
# Advanced CANDU Reactor

*We'll be waiting a little longer*

It's cute and it's little. OK not that cute and perhaps not that little. But AECL Canada Ltd's new Advanced CANDU Reactor-700 is smaller than current models and partly modular for speedy assembly.

The ACR-700 retains proven CANDU safety features along with enhancements to shorten construction times and lower capital costs. Design innovations include a more compact reactor core, "open-top" construction and modularization techniques to reduce capital costs. Parts of the plant will be prefabricated and installed using heavy lift cranes over the open top of the reactor building. Such techniques have been used successfully by AECL in China with two CANDU 6 units.

A lot is riding on this long-awaited, new generation reactor, expected to be "project ready" by 2007-2008. Improved competitiveness in the international marketplace is the driving force, at a time when nuclear energy appears to be gaining ground as a clean, cost-effective and safe alternative.



ACR-700 Core Assembly

# And the winner is... the ACR-700

*New reactor compares favourably with other new build options on cost*

A comparative cost analysis of new build options for electrical power generation found twin ACR-700 reactors to be the most attractive option, taking into account a host of variables.

The analysis and conclusions are contained in a report prepared by the Canadian Energy Research Institute, an independent, non-profit research body, for the Canadian Nuclear Association, released in August.

***Levelised costs***

The report compares lifetime construction, operating and decommissioning costs for new build generation suitable for supplying baseload power by early in the next decade. Comparisons were made using levelised unit electricity costs (LUECs), based on the price needed to recover all costs over a set period. Technologies compared were:

- Scrubbed coal-fired generating plant with net capacity 500 MW
- Combined cycle gas turbine (CCGT) generating plant with net capacity 580 MW
- Twin ACR-700 nuclear reactor with net capacity 1406 MW ('first-of-a-kind' and 'one of-a-kind' scenarios were included)
- Twin CANDU 6 NUCLEAR reactor with net capacity 1346 MW.

# PowerForThePublic.com

*Media campaign supports Point LePreau refurb*

The International Brotherhood of Electrical Workers, Local 37, launched a media and advertising campaign in August, supporting refurbishment of New Brunswick's Point LePreau Nuclear Generating Plant.

After many months of discussion and consultation, the New Brunswick government is expected to make a decision about the plant's future this fall. The 640 MW station is the province's only nuclear power plant and supplies 30 per cent of the province's electricity.

The "It's about the future" campaign focuses on safety and environmental protection, as well as the limitations of other energy sources in meeting increased demand. It points out, for instance, that 1750 windmills would be required to replace Point LePreau's generating capacity at a cost of between 2 and 3 billion dollars – not to mention the amount of land that would be needed, with attendant environmental impacts.

Local 37, which represents NB Power's 2100 unionized employees, developed the campaign with support from community-based citizens' groups, and financial assistance from the Atlantic Utilities Council, which represents IBEW members throughout the Atlantic region.

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# Nuclear worker study shows cancer rates lower than public average

A new health study of nuclear plant workers in the United States has shown that nuclear plant workers live longer and have significantly lower cancer rates compared to the general population. The study by researchers from Columbia University and Canada found a fatal cancer incidence of 65 per cent and a non-cancer mortality rate of 34 per cent of the general population. The authors noted an apparent finding of a higher rate of heart disease but observed that this result appeared in only one of the two analyses of the data and was likely the result of other factors and not a significant result.

The results of the U.S. study were closely reflected in a study of Canadian nuclear plant workers conducted by a number of the same authors earlier this year.

Cancer fatalities among the Canadian workers were almost 25 per cent lower than for a comparable group in the general public. The non-cancer fatality rate was also 29 per cent lower. The authors cautioned that results of the Canadian and U.S. studies differed somewhat because of baseline differences between the two groups of nuclear workers and the general populations studied.
Radiation Research 161, 2004

# International network a reality

CNWC President, Dave Shier, returned from Brussels in August with good news – the International Nuclear Workers' Union Network (INWUN) is now a reality. And to add to glad tidings, Dave was elected as its first President!

INWUN represents unionized Nuclear Workers in the USA, Canada, UK, Belgium, France, Japan and Romania, and grew out of discussions of the International Federation of Chemical, Energy, Mine and General Workers' Union (ICEM), headquartered in Belgium.

The Network's mandate is to ensure that the views of nuclear worker unions are heard by international labour and nuclear organizations. Its aims can be summarized as follows:

· to promote solidarity and cooperation with the trade unions worldwide;

· to ensure that the views of unionized nuclear workers are included in the worldwide debate on the use of nuclear energy for the production of electricity and other peaceful purposes;

· to promote awareness and understanding of the strategic importance of nuclear power in electricity production; and

· to encourage and support the formation of national, regional, and other nuclear union networks.

# Possible refurbs for Bruce

Ontario is set to negotiate refurbishing the two remaining out-of-service reactors at the Bruce nuclear plant, Energy Minister Dwight Duncan announced September 8, 2004.

Six of Bruce's eight units are currently online, operated by Bruce Power, a private company contracted to run them until 2018. Cost to refurbish the two units is estimated at $2 billion. Duncan noted that the refurb could add 1,540 MW to the province's generating capacity, enough to power over 1 million homes.

# Support for Kyoto grows

Support for the Kyoto Protocol, which calls for reductions in greenhouse gas emissions, has risen steadily in the past two years – to the point where 82 per cent of Canadians support the targets set for 2010. This was a key finding of a poll conducted by Ekos Research Associates for the federal government in March-April 2004. Gas-fired generation plants are a major producer of greenhouse gases.

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